Are Human Resource Management (HRM) Systems Good or Bad for Employee Well-being?

An Investigation of the Well-being Paradox from the Mutual Gains and Critical Perspectives

by
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List of Articles

Article 1

Human resource manage (HRM) Systems, Employee Well-being, and Firm Performance from the Mutual Gains and Critical Perspectives: The Well-being Paradox

Authors: Ho, H., & Kuvaas, B.

Submitted to Personnel Psychology, under review

Article 2

Are Human Resource Management Systems (HRM) Good or Bad for Employee Well-Being? A Metal-Analysis of the Workers' Verdict

Authors: Ho, H., & Kuvaas, B.

Manuscript accepted for presentation as a Showcase symposium, on How to improve employee health and well-being at work: The role of HR practices, at the 2018 Academy of Management Annual Meeting, August 10-14 in Chicago

Article 3

The devil is in the details: Performance implications of internally consistent commitment HRM systems

Authors: Kuvaas, B., & Ho, H.

Manuscript accepted for presentation as a Showcase symposium, on Moving HR Systems Research Forward, at the 2018 Academy of Management Annual Meeting, August 10-14 in Chicago

Summary

Recently, there has been a lively debate in the human resource management (HRM) literature concerning whether HRM systems have a positive or negative effect on employee well-being. Regarding these issues, some HRM scholars argue that HRM systems benefit both employers and employees. Meanwhile, others argue that HRM systems only benefit employers, not employees. In this dissertation, I label the former, "the mutual gains perspective" and the latter "the critical perspective." Unfortunately, the nature of relationship between HRM systems and well-being cannot be resolved by existing empirical evidence; that is, some studies support the mutual gains perspective while others support the critical perspective.

Furthermore, one of the long and widely-held assumptions uncritically accepted in most of the HRM literature is that individual HRM practices in isolation have limited effects, but can create larger effects when being bundled into coherent systems. This is because the individual practices that make up the systems can support each other to enhance specific workforce characteristics, thereby creating synergistic effects that are substantially greater than those of individual best practice. In other words, HRM systems need to contain internally consistent HRM practices that enhance and complement each other; a concept also referred to as horizontal fit. Conversely, HRM systems which are comprised of inconsistent practices will most likely result in no, or even negative, performance outcomes. However, this assumption has not been rigorously tested. As such, we currently do not know whether the systems investigated in prior empirical research do actually represent practices that create synergies, and whether the level of internal consistency matters for organizational performance. This is because there is no agreed upon conceptualization or definition of HRM and there is no list of what HRM practices to include in empirical studies. Often, HRM systems can consist of whatever researchers wish, and possibly may be the convenience result of their samples and datasets.

Based on the above problematization, this PhD consists of three individual studies, addressing the following issues as detailed.

Study 1: HRM Systems, Employee Well-being, and Firm Performance, from the Mutual Gains and Critical Perspectives: The Well-being Paradox

The objective of Study 1 is to examine the HRM/well-being relationship. Unlike past studies that assume a linear relationship between HRM systems and employee well-being, I argue that the relationship may be nonlinear. To test this nonlinearity, I use the Workplace Employment Relations Survey 2004. Based on a sample of 1,292 workplaces and 15,937

employees, I find that, at low levels of implementation, HRM systems are associated with lower employee well-being, while at high levels, HRM systems are associated with higher employee well-being. These results have both theoretical and practical implications. For future research, the study suggests that HRM systems may have a plateau effect. When HRM practices are implemented at low levels, it can result in negative well-being; a finding consistent with the prediction of the critical perspective. When HRM practices are implemented at high levels, it can result in positive well-being; a finding consistent with the prediction of the mutual gains perspective. Furthermore, the study also indicates that HRM systems can enhance employee well-being by increasing job satisfaction and organizational commitment. Concurrently, the systems can also undermine well-being by increasing work intensification; thus indicating that HRM systems do not have equivalent effects on employee well-being, "whereby one aspect of employee well-being improves but another aspect of employee well-being decreases" (Grant et al., 2007, p. 51). In other words, these results suggest that the conflicting findings in the literature may be attributable to the possible nonlinear associations between HRM systems and well-being, and the tradeoffs among the well-being dimensions.

Essentially, the study suggests that assuming linearity may lead to wrong interpretations of the effectiveness of HRM systems. Regarding its practical implications, it suggests that more precise estimates of the effects of HRM systems on employee well-being can prevent missteps in applying HRM practices.

Study 2: Are Human Resource Management (HRM) Systems Good or Bad for Employee Well-being? A Meta-Analytical Investigation of the Worker's Verdict

The objective of Study 2 is to shed light on the HRM/well-being relationship from a new perspective. It involves a meta-analysis which asks: Do HRM systems, in the form of HRM bundles, benefit employers, employees, or both? Importantly, I explore this question from the workers' view by investigating their perceptions of HRM bundles. This is because theoretically, well-being is assumed to be the result of employees' experiences of the work environment, as well as the HRM practices and bundles adopted by the organization, rather than how these contexts are perceived by management. Based on 72 studies and 89,027 employees, I find that employee perceptions of HRM bundles are associated with positive well-being, but not with negative well-being, and that positive well-being mediates the relationship between employee perceptions of HRM bundles and overall performance. In addition, positive well-being is associated with an increase in overall performance and negative well-being with a decrease.

The results have both theoretical and practical implications. For future research, the study sheds a new light on the HRM system/well-being relationship regarding whether HRM systems are good or bad for employee well-being, also known as the "good vs bad" debate. While my study may not settle the debate, it does not support the critical scholars who argue that HRM leads to worker exploitation. It also contributes to the wider debate in the HRM literature by providing the first evidence to the proposition that employee well-being may be one of the missing links between HRM and performance. Finally, it also sheds new light on the decades-old debate of the happy-productive worker thesis by providing evidence of a positive relationship. This finding posits that happy workers are more productive than unhappy workers, thus challenging prior findings that suggest there is no relationship between happy workers and productivity. Regarding the practical implications, the study suggests that firms should take employee well-being seriously as it may have a significant impact on overall employee performance and thus indirectly on the profitability of organizations.

Study 3: The Devil is in the Details: A Meta-analysis of the Level of Internally Consistent High Commitment HRM and Organizational Performance

The objective of Study 3 is to test whether commitment-based HRM systems with a high level of internal consistency are more strongly related to organizational performance than those with a low level of internal consistency. Based on a meta-analysis of 97 studies, covering 23,796 firms, I find that firms with a high level of internally consistent commitment-based HRM systems outperform those with a low level of internally consistent HRM systems. This study increases our understanding of the more specific nature of internally consistent HRM and assists practitioners in avoiding the implementation of less consistent or internally inconsistent HRM systems.

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Chapter 1
Introduction

Although the intellectual seeds of human resource management (HRM) were planted at the beginning of the twentieth century (Kaufman, 2012), the majority of scholars and recent reviews set the date of birth of the field in the 1980s (Jackson, Schuler, and Jiang, 2014; Marchington, 2015). For example, Mansour, Heath, and Brannan (2015) argue: *"The concept of HRM is generally accepted to have emerged from US business schools in the mid- to late 1980s* in specific response to the relative decline of US economic and industrial performance" (p. 2014, emphasis added). Meanwhile, it is also widely accepted that the emergence of HRM follows directly from the demands of a number of environmental and organizational factors such as globalization and international competition, deregulation, advances in information technology, employment legislation, decreased unionization, demographic changes, and the shift from manufacturing to a knowledge and service-based economy (Becker & Huselid, 1998; Boudreau & Lawler, 2014; Ruona & Gibson, 2004; Ulrich & Dulebohn, 2015). The convergence of these environmental and organizational factors serves as the impetus behind the dramatic shifts in perceptions and roles of HRM. To compete, firms must emphasis human resources more than the traditional sources of competitive advantage such as quality, technology and economies of scale which have become easier to imitate, and hence no longer provide an advantage. Therefore, the emphasis on human resources "has increased the strategic importance of HRM" (Becker & Huselid, 1998, p. 54)

Before presenting the objective of my PhD, a brief review of the evolutional developments in HRM is necessary. A review of the HRM literature suggests that research on HRM went through three general waves, namely: the theorization of HRM (the 1980s), empiricism (the 1990s), and criticism and reflection (present). Each wave signifies different focuses and debates.

Wave 1

I label the first wave the theorization of HRM. This wave is characterized by efforts to develop "a general theory of HRM which could be used for explanation and prediction, and to direct practitioners and researchers towards understudied or overlooked aspects of the employment relationship" (Marciano, 1995, p. 225). For example, in the USA, one of the most influential efforts at theorizing HRM is the model of Beer, Spector, Lawrence, Quinn Mills, and Walton (1984); often called the Harvard model in academic research. Beer et al. (1984)

outline four HRM policy choices: (1) employee influence; (2) human resource flows; (3) reward systems; and (4) the employed work systems. These, in turn, lead to the four HRM outcomes of commitment, competence, congruence, and cost-effectiveness. Beer et al. (1984) further suggest that long-term consequences (both benefits and costs of HRM policies) should be evaluated at three levels: individual well-being, organizational effectiveness, and societal well-being. Another influential work from the USA is the model developed by the Michigan School scholars (Tichy, Fombrun, & Devanna, 1982). Unlike Beer et al. (1984), Tichy et al. (1982) put forward the idea of strategic HRM, emphasizing the integrating of HRM activities with a company's business objectives (Kaufman, 2014).

Meanwhile, in the UK, much efforts on HRM theorizing were centered on the nature of HRM. For example, the question of whether HRM is different from personnel management has been actively debated by UK scholars (e.g., Guest, 1987; Legge, 1989; Storey & Sisson, 1989; Turnbull, Blyton, & Turnbull, 1992). On the one hand, Storey (1989) argues that HRM is a new paradigm. On the other hand, Legge (1989) claims that it is simply re-labelling and re-packing personnel management; a sort of 'the emperor's new clothes.'

Wave 2

The second wave is the empirical wave, referring to the efforts of empirically establishing a link between HRM and firm performance. In this wave, there was an explosion of research which aimed at testing the link between groups/"bundles" of HRM practices (which have commonly been termed HRM systems, high performance work systems, or high-commitment systems) and firm performance, "mostly [by] using [the] statistical analysis of cross-sectional survey data" (Harley, 2015, p. 399). This was evidenced in the works of Arthur (1994), Delery and Doty (1996), Osterman (1994), MacDuffie (1995), Huselid (1995), Ichniowski et al. (1997), and Appelbaumet al. (2000).

According to Boselie, Dietz, and Boone (2005) and Kaufman (2015), searching for a causal relationship between HRM and firm performance is a research agenda that has occupied much academic thought for the past three decades. Such research has been described as the HRM-performance paradigm (Legge, 2001), the holy grail for the field (Boselie et al., 2005; Legge, 2001), or the field's raison d'eˆtre (Becker & Huselid, 1998; Jackson et al., 2014). As Jackson et al. (2014) assesses: "The relationship between HRM systems and financial performance has been *the primary focus of strategic HRM research during the past three decades*" (p. 19, emphasis added).

By the mid-2000s, there appeared to be consensus among scholars that "the holy grail had been found [although] many theoretical and empirical questions still remain unanswered" (Harley, 2015, p. 400). For example, based on their meta-analysis of HRM-performance link, Combs, Liu, Hall, and Ketchen (2006) conclude that "our results lay to rest any doubt about the existence of a [positive] relationship" (p. 524).

Although emphasis on the link between HRM and corporate financial performance has been considered as the field's raison d'eˆtre, HRM scholars quickly realized that being able to provide a statistical relationship between HRM systems and business performance is, although important, not enough. To turn the field into a "science," an understanding of how and why HRM systems positively contribute to organizational effectiveness must be gained. Without such as a theoretical foundation, any statistical relationship between HRM systems and business performance would be meaningless (Becker & Gerhart, 1996); an issue commonly referred to as the "black box" problem (Legge, 2001). Increasingly, research shifted from simply demonstrating a link between HRM and performance, to attempts to unlock the back box, exemplified by the works of Becker, Huselid, Pickus, and Spratt (1997), Guest (1997), Purcell and Hutchinson (2007), Sun, Aryee, and Law (2007); Takeuchi, Lepak, Wang, and Takeuchi (2007), and Beltrán-Martín, Roca-Puig, Escrig-Tena, and Bou-Llusar (2008).

Wave 3

The third wave is the reflection wave, referring to the evaluation of the status of HRM as a field of scientific inquiry by using scientific standards criteria (e.g., causality, reliability, validity, rigor, replication, cumulative progress, and usefulness). This is evidenced in major contemporary reviews such as Beer, Boselie, and Brewster (2015), Boselie et al. (2005), Guest (2011), Jackson et al. (2014), Kaufman (2012, 2015), Paauwe (2009), and Wall and Wood (2005). Although using the standards and metrics of the natural sciences, HRM scholars have failed to reach an agreement regarding the achievements and progress of the field after 30 years of continued HRM research. At the risk of generalization, there are three different views.

The first is, what I call, the *optimistic* view. According to this view, research on HRM has made significant progresses over the past 30 years (Guest, 2017). The most frequently cited progress is the accumulative knowledge of the HRM-performance link, as it is now conventional wisdom that HRM has a positive effect on performance (Becker & Huselid, 1998; Combs et al., 2006; Jackson et al., 2014). In addition, there appear consensus that there is little point in conducting yet more research to provide further verification of this. For example, Paauwe, Wright, and Guest (2013) state: "While there are still many gaps to be filled…, we can

be more certain that research findings demonstrate that an association exists. *On this basis, we can generally recommend that a full use of HRM is good for organizations*…" (p. 204, emphasis added). Further, Becker and Huselid (1998) note:

> "While still a nascent field of inquiry, both the theoretical and empirical work in this area is broadly consistent with the conclusion that *there is a strong relationship between the quality of a firm's HRM system and its subsequent financial performance"* (p. 54, emphasis added).

The second view is, what I label, the *pessimistic* view. According to this view, there is little or no progress in the 30 years of HRM research as much of this research is of a low quality, and focuses on trivial and unpractical issues (Beer, 2017; Dipboye, 2007). Consequently, "much of our research has limited utility and applicability in organizations" (Stone, 2007, p. 95). For example, based on his review of the literature after 30 years of research, Kaufman (2012) suggests that research on HRM deserves a failing grade.

Finally, the third view, which I label *critical realist*, recognizes that while important advances have been made over the past 30 years, some gaps still need to be filled (Paauwe, 2009).

Research Gaps

Despite impressive progress over the past decades (Huselid & Becker, 2011), significant methodological and theoretical challenges exist (Paauwe, Wright & Guest, 2013; Wright & Gardner, 2003). Below, I briefly highlight some of the most pressing issues which remain unsolved and regularly discussed in the literature.

Issue 1: Configuration/Measurement of HRM

Although the concept of an HRM system is central to the field, there is little consensus about how to conceptually categorize a set of HRM practices or HRM systems (Guest, 1997). According to Paauwe (2009), "there is no single agreed, or fixed, list of HR practices or systems of practices that are used to define or measure human resource management" (p. 136), and "sometimes even as to whether a practice is likely to be positively or negatively related to high performance" (Becker & Gerhart, 1996, p. 785). For example, in their definition of high performance work systems, Huselid (1995) and MacDuffie (1995) strongly emphasis variable pay, whereas Arthur (1994) considers it as high-control HRM systems. Clearly, this is an old issue, yet, researchers continue observing this anomaly (Gerhart, 2013; Guest, 2011; Heavey et

al., 2013; Jackson et al., 2014). Therefore, this is a critical issue as researchers have cautioned that the inconsistent conceptualization and measurement of HRM systems make it difficult "to accumulate and compare findings across studies" (Becker & Gerhart, 1996; Jackson et al., 2014, pp. 28-9), hence impeding "the growth of knowledge in HRM field and the degree to which organizations adopt these systems" (Ismail, Abdul-Majid, & Joarder, 2017, p. 163).

Issue 2: Measurement Error

Gerhart, Wright, and McMahan (2000a), Gerhart, Wright, MAHAN, and Snell (2000b), Huselid and Becker (2000), and (Wright et al., 2001) recently debated the presence and implications of measurement error in measures of HRM practices. According to Gerhart et al.'s (2000a) observation, the majority of research on relationships between HRM practices and firm performance has used a single rater to assess HRM practices for an entire organization. This, essentially, can generate significant levels of measurement error (unreliability); a problem exacerbated as organizations become more complex (i.e., multiple businesses, multiple physical locations, multiple geographical locations, etc.) (Gerhart et al., 2000b). Consequently, the effect of size presented in prior work in this line of empirical research may be misleading as there can be considerable bias (downward if random error or upward if systematic error) (Gerhart et al., 2000a, b). Three empirical studies that directly look into the reliability of measures taken from the use of single-rater designs (Gerhart et al., 2000a, b; Wright et al., 2001) consistently show that single respondent measures of HRM practices "contain unacceptably high levels of measurement error. This error exists regardless of the size or complexity of the organization" (Wright et al., 2001, p. 900). Thus, future researchers should take measurement error seriously if they do not want to "run the risk of building a set of substantive findings whose validity may later prove to be open to question" (Gerhart et al., 2000a, p. 805). Solutions for this issue include attempting to gather data from multiple respondents and ensuring that the most knowledgeable raters are used (Huselid & Becker, 2000; Wright et al., 2001).

Issue 3: Causality

According Becker and Huselid (1998) and Jackson et al. (2014), the field's raison d'eˆtre is to establish a causal relationship between HRM and firm performance. However, despite 30 years of continued research, our ability to infer causality remains quite limited (Bainbridge, Sanders, Cogin, & Lin, 2017). From a philosophy of science perspective (Cook & Campbell, 1979), inferring causality must satisfy three criteria: covariation between the presumed cause and effect (i.e., whenever we find A, we also find B, and we have a certainty that this conjunction will continue to happen); the temporal precedence of the cause (i.e., the cause must

occur before the effect); and the ability to control or rule out alternative explanations for a possible cause-and-effect connection (i.e., any events that might cause B have been identified and ruled out in favor of A causing B).

Based on their literature review, Wright, Gardner, Moynihan, and Allen (2005) conclude that existing research designs fail to satisfy the conditions for inferring causality. Their analysis on 66 studies examines the relationship between a set of HRM practices and organizational level performance, showing that the most prevalent design within the literature is labeled as "post-predictive design." This measures HRM practices after the performance period, hence "presenting a logical inconsistency for arguing that HRM practices cause performance" (Wright et al., 2005, p. 412). Wright et al.'s observation has been reinforced by a recent review which highlights that although there is a marginally significant growth in the proportion of longitudinal designs over time, most studies used a cross-sectional design, providing weak information on causality (Bainbridge et al., 2017). In other words, despite the many years which have passed, there has been little improvement in the field's capacity to establish a causal relationship between HRM practices and firm performance. As causal claims are the field's raison d'eˆtre, it is therefore necessary for HRM scholars to appropriately address issues of causality.

Issue 4: Employee Well-being

Employee well-being has been and remains one of the most controversies in the field. On the one hand, Beer (2017, in press) argues that "o*utcomes such as individual and societal well-being have by and large been ignored*, in particular by US based academics" (emphasis added). On the other, Jackson et al. (2014) claim that "*the concerns of employees have not been ignored*, although their concerns and those of customers have attracted somewhat less attention" (p. 19, emphasis added). That said, it is widely accepted that, compared to financial- and market-based measures of organizational performance, employee well-being does not receive equivalent attention by HRM scholars, and this is an unfortunate development for two reasons. First, the concern of employees is an ethically correct approach (Guest, 2017). Second, job strain, depression, and anxiety have imposed huge costs on society as well as firms (Cooper & Dewe, 2008; Danna & Griffin, 1999). As such, if we want to accurately quantify the benefits of HRM practices, we need to move beyond focusing on financial outcomes to also include employee well-being.

Issue 5: Usefulness

Of greater concern for HRM critics is that our research has relatively little value for practitioners (Beer, 2017; Cascio & Aguinis, 2008; DeNisi, Wilson, & Biteman, 2014). This is because it typically focuses "on trivial issues, and do[es] not always make important contributions to applied problems (Stone, 2007, p. 95); often referred to as the "research–practice gap." For example, Denisi et al. (2014) observe that: "For quite a number of years, there has been a concern that practice does not follow the best information from research, *and that researchers study issues of interest to other researchers rather than of interest to practitioners*" (p. 219, emphasis added).

No doubt, discrepancies between the topics considered in HRM scholarship and the topic interests of practitioners constitute a serious issue (Beer, 2017; Denisi et al., 2014). In other words, if the field is to become a "science" (Stone, 2007) or to be as influential as other disciplines such as economics and psychology, HRM scholars should focus on the topics that not only have real impacts on scientific theories, but also on practice. In its current state, the research–practice gap is unacceptably big (Beer, 2017; Kaufman, 2012).

Objective of the Present Research

The literature review above shows that there are a number of pressing issues that need to addressed if the field is to make significant advances. The objective of my dissertation is to address *some* of these issues. Specifically, my PhD consists of three studies that focus on two issues: (1) employee well-being (issue 4) and (2) in/consistencies in the measurement of high commitment HRM (issue 1).

Why Employee Well-being?

There are many reasons why it is important to look more systematically at the effect of HRM practices on employee well-being. First, the concerns of employees have long been regarded as the field's raison d'eˆtre (Jackson et al., 2014). Second, extensive evidence on both sides of the Atlantic indicates health and well-being are too expensive for employees, organizations, and society to be ignored. For example, for the UK working population, approximately 175 million working days are lost each year because of sickness absence, which is equivalent, if estimated in cost, to £20.2 billion in 2006 (Cooper & Dewe, 2008). A similar picture can be observed in the US. According to Danna and Griffin (1999), US industry loses approximately 550 million working days annually to absenteeism, and 54% of these absences are stress-related, with an estimated cost of $12 billion. Third, a small body of evidence suggests that while HRM practices enhance firm performance, they do so at the expense of employee

well-being (Ramsay et al., 2000). Therefore, incorporating the concerns of employees into HRM research, for Guest (2017), is not only ethically correct, but also financially justified, and, for Jackson et al. (2014, pp. 33-4), "an obvious, and nearly mandatory, next step for the field." Yet, for many years, HRM researchers have been oriented almost entirely to the short-term goals of shareholders and senior managers to the neglect of employee well-being (Beer, 2017; Kaufman, 2015a; Marchington, 2015).

Recently, researchers, spurred in part by critical writers in the area (e.g., Keenoy, 1990; Legge, 1995), have begun to focus more directly on worker outcomes as research into the impact of HRM practices on employee well-being is beginning to grow fairly rapidly (Danna & Griffin, 1999; Peccei, van de Voorde, & Van Veldhoven, 2013). Unfortunately, research in this area is not accumulative as "existing findings are often inconsistent and/or inconclusive" (Peccei, 2004, p. 1; Peccei et al., 2013). Thus, my interest in employee well-being is not because it has been ignored, but because "there is still considerable debate about the precise nature of the relationship between HRM, well-being and organizational performance" (Peccei et al., 2013, p. 15).

To detail, Studies 1 and 2 were designed to shed light on the nature of the relationship between HRM and employee well-being that has been – and remains – mysterious (Peccei et al., 2013). Particularly, Study 1 addresses the HRM/well-being relationship from the WHY question: Why does research on the effects of HRM on well-being produce conflicting results, with some studies indicating positive associations with employee experience of work, and others negative? On the other hand, Study 2 addresses the relationship from the WHAT question: What is the impact of HRM on employee well-being, good or bad?

Why the Consistency of High Commitment HRM?

One of the long and widely-held assumptions in the HRM literature is that individual policies or practices in isolation have limited effects, but can create larger effects when bundled into coherent systems (Becker & Gerhart, 1996; Macduffie, 1995; Wright, McCormick, Sherman, & McMahan, 1999). The notion of bundles/systems requires attention to alignments/consistencies both within HRM systems (internal fit) and with strategic objectives (external fit). That is why Becker and Gerhart (1996) argue that without a clear understanding of how HRM practices align or pair with each other, we cannot "grasp the precise mechanisms by which the interplay of human resource practices and policies generates value" (p. 782).

Conceptually, the relationships among HRM practices can be expressed in three ways: additive, substitutive, and synergistic. HRM practices are said to have an additive relationship

with each other when they have independent, non-overlapping effects on the outcome; and using more of these practices should result in better outcomes than using either one alone, but "not more than the sum of the individual effects of each practice" (Delery 1998, p. 292; MacDuffie 1995). For example, both a work sample test and a cognitive ability test measure different knowledge, skills, or abilities, and, therefore, together they may improve the overall skill level of the work force, but by no more than the sum of effects due to each alone Delery (1998). HRM practices are said to have a substitutive relationship with each other when they produce identical results and using either practice should be effective. If one practice is already in use, adding the second will "add nothing except the expense associated with its implementation. Alternatively, if neither is present, adding one of the practices should increase the desired outcome" (Delery 1998, p. 293). For example, "either employee stock ownership or profit sharing may create employee identification with the employers" (Ichniowski et al. 1996, p. 310). Finally, HRM practices are said to have a synergistic relationship with each other when the use of one HRM practice enhances the effectiveness of others (Delery & Doty, 1996; Ichniowski et al., 1997). Furthermore, the synergistic relationship can be positive or negative. Positive synergy is said to exist when two HRM practices, together, result in a substantially different effect than the sum of their individual effects (powerful connections) (Becker et al., 1997). For example, in their study of US petro-chemical refineries, Wright et al. (1999) find that the impact of selection, compensation, and performance appraisal on performance is strong when participation is high, but the same practices have a negative effect on performance when participation is low. On the other hand, negative synergy is said to occur when two HRM practices work against each other (deadly combinations) (Becker et al., 1997). For example, a combination of teamwork with individual incentives.

Although the notions of synergy, external and internal fit, bundles, complementarities, alignments, consistencies, and so forth are reasonably well-accepted propositions, empirical evidence that synergy occurs in HRM systems is fragmented and disappointing (e.g., Chadwick, 2010; Gerhart, 2007). Huselid (1995) is probably the first person to recognize this paradox as noted:

> *"But despite the compelling theoretical argument that better internal and external fit will increase firm performance, I found only modest evidence of such an effect for internal fit and little evidence for external fit*…However, the theoretical arguments for internal and external fit remain compelling, and research based on refined theoretical and psychometric development of these

constructs is clearly required before such a conclusion can be accepted with any confidence." (pp. 668-9, emphasis added)

I agree with Huselid that the ideas of synergy, external and internal fit, bundles, consistencies, and so forth are important and need further work (Chadwick, 2010). As a result, Study 3 was designed to address these issues by examining the effects of different levels of internal consistency of high committed HRM systems (high vs low internal consistency) on firm performance.

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Chapter 2
Human Resource Management Systems, Employee Well-Being, and Firm Performance: The Well-Being Paradox (Study 1)

Abstract

In this study, we explored the possible nonlinear, non-additive relationships among human resource management (HRM) systems, employee well-being, and firm performance. Based on a sample of 1,292 firms and 15,937 employees, we obtained three main findings. First, HRM systems are positively associated with firm performance, and this association is attributable to positive well-being. Second, at low levels, HRM systems are negatively correlated with employee well-being as well as higher levels of work intensification and anxiety. However, at high levels, HRM systems are positively associated with employee well-being as well as lower levels of work intensification and anxiety. Third, there are tradeoffs between different dimensions of employee well-being, characterized by improvement in one aspect of employee well-being and a concomitant decrease in another aspect of employee well-being. To close, we present research implications and future directions after discussing our results.

Introduction

Concern for employee well-being was first voiced in the early HRM literature, for example, Beer, Spector, Lawrence, Quinn Mills, and Walton (1984) suggested that employee well-being should be the long-term consequence considered when designing an HRM system, and Legge (1989) argued that HRM may result in morally problematic issues in cases where it lead to the exploitation of workers. However, following these early concerns, employee well-being has not become a central research agenda within the field, as HRM scholars has mainly focused on the link between HRM and performance, often known as HRM-performance paradigm (Boselie, Dietz, & Boon, 2005).

More recently, there has been heated debate regarding the impact of HRM systems on employee health or well-being (Boxall & MacKy, 2009; Guest, 2017; Harley, Sargent, & Allen, 2010; Van De Voorde, Paauwe, & Van Veldhoven, 2012), as HRM scholars have increasingly recognized that taking caring of employee well-being is ethically correct (Guest, 2017) and that there is empirical evidence suggesting that employee well-being may have positive implications for firm performance (Daniels & Harris, 2000).

Two competing views have emerged. Proponents of one view argue that HRM systems benefit both employers and employees (e.g., Kochan & Osterman, 1994; Levine, 1995; Pfeffer, 1998), denoted by labels such as "shared capitalism" (Kruse, Blasi, & Park, 2010), "high-involvement" (Lawler, 1992), "mutual gains" (Kochan & Osterman, 1994), or "high commitment" (Walton, 1985). Following Kochan and Osterman (1994), we label this view "the mutual gains perspective," for it conveys a key message that both employers and employees benefit from HRM systems. Proponents of the other view argue that HRM systems benefit employers but not employees (Delbridge & Turnbull, 1992; Godard, 2001; Legge, 2005). We label this view "the critical perspective."

Unfortunately, the nature of the relationship between HRM systems and well-being is not accurately demarcated by existing empirical evidence because such evidence has not conclusively confirmed or ruled out either the mutual gains perspective or the critical perspective (Harley et al., 2010). On the one hand, some studies have documented positive associations with employee experience of work (e.g., Appelbaum, Bailey, Berg, & Kalleberg, 2000; Butts, Vandenberg, DeJoy, Schaffer, & Wilson, 2009; Castanheira & Chambel, 2010; Guest, 2002; Harley, Allen, & Sargent, 2007; Macky & Boxall, 2007). On the other hand, some have revealed negative associations (e.g., Godard, 2001; Jensen, Patel, & Messersmith, 2011;

Kroon, Voorde, & Veldhoven, 2009; Landsbergis, Cahill, & Schnall, 1999). In addition, some studies have indicated a mixture of both positive and negative consequences (e.g., Berg, Appelbaum, Bailey, & Kalleberg, 1996; Ramsay, Scholarios, and Harley 2000).

We suspect that such conflicting findings, which we refer to as the *well-being paradox*, are attributable to two main reasons. The first is that past studies have measured well-being as a single dimension (Peccei, van de Voorde, & Van Veldhoven, 2013) although there is wide scientific consensus that well-being has multiple dimensions (Diener, 1994; Wright, 2014) and that there are often trade-offs between these dimensions "whereby one aspect of employee well-being improves but another aspect of employee well-being decreases" (Grant, Christianson, & Price 2007, p. 51). In the current study, we examine multiple dimensions of well-being, including both positive and negative aspects of the construct. A second reason is that past studies assume a linear relationship among HRM systems, well-being, and performance, whereas logic suggests that the relationship may be nonlinear. For example, Cappelli and Neumark (2001) argued that HRM systems have both value-creating and cost-enhancing effects. That is, at higher levels, the positive effects of HRM systems on well-being and performance may be neutralized or even diminished as the costs associated with the adoption of these systems substantially increase. Initial evidence indicates a nonlinear relation between HRM systems and well-being (Godard, 2001). Yet, the extant literature mostly tested the HRM, well-being, and performance relationship in a linear fashion, thus providing incorrect inferences.

Accordingly, the overall objective of this study is to contribute to HRM research by trying to shed light on the current well-being paradox. We do this by (a) examining multiple dimensions of well-being, including both positive and negative aspects of the construct, and (b) examining both linear and nonlinear relationships among HRM, well-being, and performance.

Defining Key Concept

Employee Well-Being

Employee well-being is an elastic concept, meaning "any number of things to various people" (Danna & Griffin, 1999; Wright & Huang, 2012, p. 1188). In a broad fashion, employee well-being "refers to people's evaluations of their lives" (Dienerr, Suh, Lucas, & Smith, 1999, p. 213), or "all the things that are important to how we think about and experience our lives" (Rath & Harter, 2010, p. 137). In a narrow fashion, it restricts to one dimension such as job satisfaction (Cropanzano & Wright, 2001; Grant et al., 2007). At the operational level, variation

in conceptualization is also evident. Earlier conceptualizations of employee well-being, particularly within the psychological tradition (e.g., Andrews & Withey, 2012; Bradburn, 1969; Campbell, 1981; Diener, 1984), focused exclusively on pleasant emotional experience as a fundamental of dimension of employee well-being, often described in academic research as "subjective well-being" (Diener, 1994), or "psychological well-being" (Wright, Cropanzano, & Bonett, 2007). According to this view, high psychological well-being is said to occur if a person "experiences frequent positive emotions such as joy and happiness and infrequent negative emotions such as sadness and anger" (Bakker & Oerlemans, 2011, p. 179; Diener & Larsen, 1993). Consequently, employee well-being is operationalized as the presence of dispositional positive affect and the absence of dispositional negative affect (Cropanzano & Wright, 2001; Diener; 1994). Over the years, additional dimensions have been added to the psychological well-being such as social (Keyes, 1998; Larson, 1996), self-validation (Warr, 2011), and physical health (Danna & Griffin, 1999). However, the most accepted and comprehensive conceptualization of employee well-being today is the one suggested by Grant et al. (2007), who define well-being as "the overall quality of an employee's experience and functioning at work" (p. 52), which can be assessed in terms of three dimensions: psychological, physical, and social. The psychological dimension is related to subjective experience at work, composing of two aspects: pleasure (or hedonic) and fulfillment of potential (or eudaimonic). In organization science, the hedonic aspect has been frequently studied in terms of job satisfaction and organizational commitment (Grand et al., 2007; Peccei et al., 2013), whereas the eudaimonic aspect in terms of meaning and engagement (Grant et al., 2007). The physical dimension is concerned with physiological indicators and subjective experiences of bodily health (Grant et al., 2007). In organization science, physical health has often been studied in terms of injuries, diseases (Danna & Griffin, 1999) and job-related anxiety, stress, burnout and exhaustion (Grant et al., 2007; Peccei et al., 2013). Finally, the social dimension addresses the quality of relationships at work, which has been widely studied in terms of trust, social support, reciprocity, leader-member exchange, cooperation, coordination, and integration (Grant et al., 2007; Guest, 2017).

Our focus is on Grant et al.'s (2007) psychological and physical dimensions, which we called positive and negative well-being, respectively in our study. More precisely, we defined well-being in terms of two dimensions, positive and negative. We define positive well-being as the overall positive quality of an employee's experience and functioning at work, measured by job satisfaction and organizational commitment (corresponding to Grant et al.'s psychological dimension). We define negative well-being as the overall negative quality of an employee's

experience and functioning at work, measured by work intensification and anxiety (corresponding to Grant et al.'s physical dimension). Theoretically and methodologically, there are compelling reasons to operationalize employee well-being in terms of positive and negative dimensions. First, according to Viswesvaran & Ones (1995), constructs must be driven by theory (i.e., theory-construct fit). In our study, the HRM-performance relationship is examined from the mutual gains and the critical perspectives, which are conceptually mutually exclusive, with the positive implications of HRM on employee well-being precluding the negative ones. Consequently, to achieve theory-construct correspondence, we conceptualized positive and negative well-being as bipolar, with the relative presence of positive well-being indicating the relative absence of negative well-being and vice versa, for example, experiencing positive and negative aspects of well-being such as job satisfaction and work intensification cannot co-exist at the same time. In other words, our measure is rooted in theoretical frameworks. Second, our unipolar conceptualization of well-being, positive vs. negative, is consistent with the general view in the well-being literature (Diener, 1994) that "psychologically well people are more prone to experience positive emotions and less prone to experience negative emotions" (Wright & Cropanzano, 2000, p. 84). Third, job satisfaction, organizational commitment, work intensification and anxiety are "among the most common indicators of employee health and well-being" in the literature (Ogbonnaya, Daniels, & Connolly, 2017, p. 102-103; Van De Voorde et al., 2012). Furthermore, our review of 1079 studies using bibliometric methods also indicated that these four indicators of employee health and well-being have been frequently studied in the HRM literature (results available upon request).

Theory and Hypotheses

The Mutual Gains Perspective

Central to the mutual gains perspective is the idea that, if properly implemented, HRM systems have positive implications for both employers and workers (Appelbaum et al., 2000; Butts et al., 2009; Kochan & Osterman, 1994; Pfeffer, 1998). According to Pfeffer (1998), the belief that HRM systems improve performance is not based on "some mystical process" (p. 33) but rather on a set of practices grounded in sound social-science principles that are supported by a great deal of evidence. Several mechanisms cause the performance effects discussed in the mutual gains literature, but these can be categorized into two main mechanisms. First, HRM systems improve performance, in part, because they make organization structures efficient.

HRM systems are often associated with teamwork, delegation of decision-making, information sharing, and employee involvement (Appelbaum et al., 2000; Osterman, 1994; Pfeffer, 1998). These participative, non-authoritarian policies are believed to be more effective in terms of utilizing human capabilities than traditional systems (Argyris, 1957; Mayo, 1945; McGregor, 1960; Pfeffer, 1994; Walton, 1985). For example, teams allow employees to pool and exchange their ideas and come up with better and more creative solutions to problems (Pfeffer, 1998). This is a critical point as employees are assumed to have valuable knowledge that members of higher management do not have, such as how to make jobs more efficient (Ichniowski, Kochan, Levine, Olson, & Strauss, 1996). Similarly, the delegation of decision-making and employee involvement are also effective practices to tap the knowledge and expertise in employees' minds (Lawler, 1992). In addition, sharing information on aspects such as financial performance, strategy, and operational measures allows employees to make right decisions (Ichniowski et al., 1996). Without such pieces of information, employees do not know how "to act in ways that support organizational effectiveness . . . even if they want to do the right thing" (Lawler, 1992, p. 205; see also Levine, 1995). Finally, instituting teams in combination with the delegation of decision-making reduces overhead labor costs (Levine, 1995). For example, self-directed teams do their own support tasks, even those typically done by middle- and upper-level management. Thus, self-directed teams lead to less hierarchical layers, leading to significant cost reductions (Lawler, 1992; Levine, 1995; Pfeffer, 1998). Second, HRM systems improve performance, in part, because they make employees work harder (Pfeffer, 1998). Organizational scholars have long recognized the close link between the nature of the task individuals are asked to perform and their motivation (Argyris, 1957; Mayo, 1945; McGregor, 1960; Walton, 1985). For example, Lawler (1992) argued that work designs with close supervision and control can result in alienated dissatisfied employees. However, work designs with little supervision and direction can result in highly motivated satisfied employees. Under HRM systems, employees enjoy a higher degree of control over their work (Appelbaum et al., 2000). In other words, HRM system may lead employees to worker harder simply because their jobs are interesting and enjoyable, which "comes from having more control over the work environment" (Pfeffer, 1998, p. 60; see also Appelbaum et al., 2000; Ichniowski et al., 1996). Finally, contingent compensation may also elicit higher effort from employees insofar as they know that they "will share in the results of their work" (Pfeffer, 1998, p. 85). Therefore, we hypothesize:

Hypothesis 1: HRM systems are positively related to firm performance.

HRM systems are also assumed to enhance employee well-being. Although the link between HRM systems and well-being are rarely specified in the literature, it is generally accepted that "greater well-being arises from greater autonomy, higher problem-solving demands, lower monitoring demands, higher production responsibility, and a more positive social climate" (Jackson & Mullarkey, 2000, p. 234; see also Walton, 1985). This is because the relation between individuals' well-being and the nature of the task they are asked to perform is, in reality, dialectical and interrelated (Hackman & Oldham, 1976; Lawler, 1992; Marx, 1975); individuals engage in work for needs satisfaction, such as the need for self-development or self-actualization (Bakker, 2015). However, this dialectical relation becomes "broken" under the traditional system, which is based on Frederick Taylor's principles (Schein, 1980). Under the traditional system, work is fragmented into meaningless acts for which any relation to the final product is obscured for workers. This fragmentation is intensified by the division of labor head and hand as well as that of mental and manual labor (Marx, 1975; Slater, 1997). As a result, the traditional system produces alienated and unhappy workers (Maslow, 1954; McGregor, 1960; Schein, 1980). It is argued that HRM systems rebuild this dialectical relation by instituting a set of multiple empowerment or involvement-enhancing practices, including autonomous work teams, suggestion schemes, information sharing, and greater autonomy and discretion. Such empowerment-enhancing practices allow "workers to use their capacities or enable them to see relationships between what they are doing and the total organizational mission" (Schein, 1980, p. 68), making work interesting and intrinsically rewarding (Appelbaum et al., 2000). Enhanced well-being is followed as a second-order consequence. Thus:

> *Hypothesis 2*: HRM systems are positively associated with organizational commitment and job satisfaction (the two measures of positive well-being).

Finally, the mutual gains literature also implicitly assumes that well-being mediates the relationship between HRM systems and firm performance. Drawing on social exchange theory (Blau, 1964), Shaw, Diener, and Fang (2009) argued that HRM practices represent the conceptual dimensions of social exchange, namely the resources of exchange between employers and employees. For example, HRM practices such as training, benefits, job security, work-life balance, information sharing, delegation of decision-making, and employee share-ownership schemes collectively signal to employees that their organizations care about their well-being and that they are valued and trusted. If HRM practices signal to employees that their organizations value their contributions and care about their well-being, employees increase their

commitment to their organizations (Eisenberger, Huntington, Hutchison, & Sowa, 1986), which, in turn, will increase performance (Meyer & Allen, 1997). As Walton (1985) claimed, "*the common thread of the policies of [HRM systems] is first to elicit employee commitment and then to expect effectiveness and efficiency to follow as second-order consequences*" (p. 49, emphasis added). Therefore:

> *Hypothesis 3*: Organizational commitment and job satisfaction mediate the relationship between HRM systems and firm performance.

The Critical Perspective

Critical perspective scholars have proposed an alternative view of the implications of HRM systems. Underlying the critical perspective is the idea that HRM systems lead to work intensification, often accompanied by increased responsibility levels, increased involvement, and work monitoring (Barker, 1993; Peccei et al., 2013). This may increase performance but can have negative implications for workers (Peccei et al., 2013).

Proponents of this approach argue that performance increases, to some extent, as a result of work intensification (Delbridge, Turnbull, & Wilkinson, 1992; Legge, 2005). Such scholars agree with the mutual gains scholars that the hallmark of HRM systems is teamwork, delegation of decision-making, more involvement, more responsibilities, and contingent compensation. However, unlike the mutual gains scholars, who construe this innovative form of management as a movement toward "humane people oriented employment management" (Keenoy, 1990, p. 375), critical scholars see it as a technique for controlling and intensifying labor processes (Delbridge & Turnbull, 1992). For example, increased responsibilities do not equal increased decision latitude but rather more work (Delbridge et al., 1992) as "the level of employee participation in decision making is suggested to be very limited" (Parker, 2003, p. 621). Thus, the expansion of workers' duties and responsibilities may therefore not be desirable for employee well-being because HRM systems may result in more intensive work conditions and constrained autonomy (Godard, 2001; Keenoy, 1990). Moreover, contingent compensation systems (performance-related pay, profit sharing, and ownership sharing) can lead to work intensification by stimulating peer pressure, for "teams are intolerant of their members who are absent from work without a justifiable reason or who fail to produce work that is up to specification" (Jackson & Mullarkey, 2000, p. 234). Thus, contingent compensation systems may induce a "disciplinary effect" associated with work intensification (Hyman & Mason, 1995, p. 99). In other words, according to critical perspective scholars (e.g., Delbridge et al., 1992;

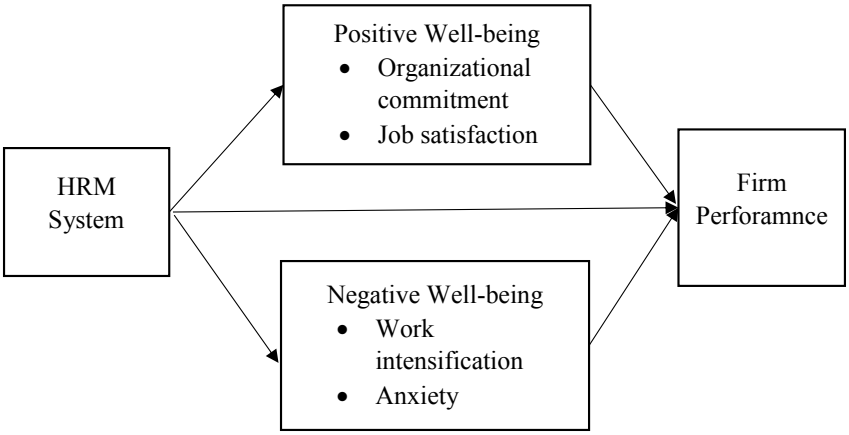
Legge, 2005) increased performance is more the result of work intensification than the result of "working smart" as assumed by mutual gains scholars (e.g., Ichniowski et al., 1996, p. 301).

Additionally, Marchington and Grugulis (2000) warned that the economic forces underpinning HRM systems can lead to an intensified labor process. Although investment in HRM systems yields economic benefits, it also entails costs to firms (Bryson, Forth, & Kirby, 2005; Cappelli & Neumark, 2001). These costs may arise from investment in sophisticated selection tools, continuous investment in training programs, job security guarantees, fringe benefits, and competitive wages (Bryson et al., 2005; Chi & Lin, 2011; Godard, 2004). They may also stem from "the initial disruption of work processes as work organisation is reconfigured and employees get used to their new working arrangements" (Bryson et al., 2005, p. 464) and the increased bureaucratic costs associated with negotiating, monitoring, and evaluating. For example, instituting results-oriented appraisals and performance-contingent pay systems requires continuous monitoring of performance outcomes, which becomes costly, especially when task uncertainty and complexity are high. Given that firms' ultimate aim is profit maximization (Danford, 2003), higher returns are required to justify the maintenance of systems (Godard, 2004; Kroon et al., 2009; Whitfield & Poole, 1997). Consequently, HRM systems result in greater pressure, more demands, closer monitoring, increased job stress, and increased workloads (Barker, 1993; Jensen et al., 2011; Kroon et al., 2009; Ramsay et al., 2000). Thus, unlike mutual gains scholars (e.g., Kochan & Osterman, 1994; Levine, 1995), who view HRM systems as humane systems, critical perspective scholars (e.g., Dankbaar, 1993; Tsutsui, 2001) see HRM systems as intensified mass production or neo-Taylorism, for any productivity gains are achieved at the cost of employee work intensification (Kroon et al., 2009; Parker, 2003). That is, in the latter group of scholars' view, HRM systems are exploitive in nature (Legge, 1995; Willmott, 1993) because they cannot escape the "capitalist logic of maximizing profits" (Danford, 2003, p. 73) and profit maximization cannot go hand in hand with caring for employees (Ramsay et al., 2000). Therefore, critical scholars are skeptical of the claim that HRM systems are good for both employers and employees. Critical scholars consider this a lie (Sikula, 2001), mere rhetoric used to mask the harsh reality, or labor exploitation (Legge, 1995; 2005). Drawing on the critical perspective, we hypothesize the following two outcomes:

Hypothesis 4: HRM systems are positively associated with work intensification and anxiety (the two measures of negative well-being).

Hypothesis 5: Work intensification and anxiety mediate the relationship between HRM systems and firm performance.

Figure 1. Conceptual Model



Nonlinear Effects

Most empirical studies examining an HRM/well-being or HRM/performance relationship have been based on an assumption that the relationship is linear. There are, however, at least two compelling reasons to believe that the relationships between HRM, well-being, and firm performance are nonlinear. First, the concept of HRM systems, one of the most important concepts in the HRM literature, is based on the assumption that individual HRM policies or practices "have limited ability to generate competitive advantage in isolation, but in combination . . . they can enable a firm to realize its full competitive advantage" (Barney, 1995, p. 56). This is because bundling individual HRM practices in a mutually supportive way creates synergistic effects that are substantially greater than those of individual HRM practices in insolation (Becker, Huselid, & Pickus, 1997; Delery, 1998; Macduffie, 1995). The idea that bundling practices may have effects exceeding the sum of the parts suggests nonlinear effects that occur at particular thresholds (Godard, 2001; White & Bryson, 2011). In other words, HRM systems suggest that implementing a wide range of practices, particularly ones bundled into a coherent HRM system, "will yield higher returns than an application comprising fewer such practices" (Becker et al., 1997; Bryson et al., 2005, p. 491). In addition, complementarities and synergies indicate that HRM practices are more effective when bundled with other practices than when implemented as individual practices (i.e., in isolation). For example, Ichniowski,

Shaw, and Prennushi (1997) showed that the adoption of a coherent system of work practices such as work teams, flexible job assignments, employment security, training in multiple jobs, and extensive reliance on incentive pay produce substantially higher levels of productivity yet have no effect on productivity when adopting these individual work practices in isolation. Second, economic theory suggests that firms are more greatly benefited by large-scale deployment of an HRM system than small-scale deployment of the same system entailing limited practices, for "the fixed portions of an HRM practice's administrative expenses are spread out over larger proportions of an organizational work force" (Chadwick, 2007, p. 502), which explains the marginal value added relative to the cost of isolated HRM practices.

Drawing on the perspectives of bundling and economics of scale, we propose increasing marginal returns to scale such that positive major impacts occur at high levels of implementation. White and Bryson (2013) found evidence of increasing marginal returns to scale, showing that HRM practices are negatively correlated with job attitudes (in terms of organizational commitment and intrinsic job satisfaction) at low levels of HRM practices but positively correlated with them at higher levels. Therefore, we hypothesize that:

> *Hypothesis 6*: The relationship between HRM systems and (a) organizational commitment, (b) job satisfaction, (c) work intensification, (d) anxiety, and (e) firm performance are nonlinear, with small positive relationships at low levels of implementation but large positive relationships at high levels.

Finally, scholars have pointed out that although HRM systems increase the widespread economic benefits, it also increases costs (Bryson et al., 2005; Cappelli & Neumark, 2001; Godard, 2004). The costs stem from complicated selection and recruitment practices, continuous investment in training programs, higher wages, job security guarantees, and other supporting practices (Chi & Lin, 2011; Godard, 2004). These costs may offset the benefits of HRM systems (Cappelli & Neumark, 2001; Godard, 2004), indicating that there is an optimal point at which further investments in HRM systems are not as valuable (Chadwick, 2007; Chi & Lin, 2011; Godard, 2004). Economists label this optimal point "diminishing returns to scale." Godard (2001) provided empirical evidence of diminishing returns to scale of HRM systems. He found that at moderate levels, alternative work practices were associated with increased belongingness, empowerment, task involvement, and, ultimately, job satisfaction, esteem, commitment, and citizenship behavior. At higher levels of adoption, however, these associations declined in magnitude and even became negative. Similarly, Chi and Lin (2011) found that high-performance work systems are positively correlated with firm performance at

low levels of implementation, but that this relationship became weaker at higher levels for high-technology firms. However, most HRM theories assume more HRM→ higher performance (i.e., Δ performance/Δ HRM> 0), which "violates the law of diminishing returns" (Kaufman, 2012, p. 24). Drawing on the idea of diminishing returns to scale, we propose that returns from investments in a HRM system decline or become negative at higher levels of implementation due to the significant magnitude of the additional costs associated with overimplementation. More precisely, we hypothesize that:

Hypothesis 7: The relationship between HRM systems and (a) organizational commitment, (b) job satisfaction, (c) work intensification, (d) anxiety, and (e) firm performance is nonlinear, with greater positive relationships at low levels of implementation but smaller positive relationships, no, or even negative relationships at higher levels.

Method

Data

The data used to test the relation between HRM systems, employee well-being, and firm performance were provided by the Workplace Employment Relations Survey 2004 (WERS, 2004). WERS 2004 is the fifth survey in a series that aims to provide a nationally representative account of the state of employment relations and working life in British workplaces.

WERS comprises two data sets. The first includes management—mainly senior managers who are responsible for industrial relations—employee relations, and personnel matters in the workplace; these surveys measure HRM systems and firm performance. The second includes data from employees answering surveys measuring well-being in both small and large organizations. The management survey was collected from 2,295 workplaces from an in-scope sample of 3,587 addresses, representing a response rate of 64%. The employee survey was collected from 1,733 workplaces, which provided 22,451 responses and a response rate of 61%. After filtering to only include workplaces and individual employees for which there was sufficient information on all study variables and control variables, our sample included 15,937 employees and 1,292 firms.

Measures

HRM systems were measured using the scale developed by Ogbonnaya et al. (2017), which has been shown to have strong psychometric properties. Ogbonnaya et al. (2017) used

WERS 2004 to measure HRM systems. This measure consisted of 10 HRM practices: four from the management survey (teamwork, performance-related pay, selective hiring, grievance systems), and six from the employee survey (job autonomy, staff training, flexible work, participative decision-making, information sharing, and supportive management). All HRM practices were measured using multiple-item scales, except staff training. Furthermore, five HRM variables (team work, performance-related pay, flexible work, selective hiring, and grievance systems) were measured using binary items. The use of binary items is a common practice in the field (e.g., Bryson & White, 2008; Guest & Conway, 2007). In line with Ogbonnaya et al.'s (2017) recommendation, we aggregated the six HRM variables from the employee survey (i.e., job autonomy, staff training, flexible working, participative decision-making, information sharing and supportive management) as mean scores that proxy organizational-level HRM practices. The remaining four variables were derived from the management survey, so they serve as proxies for organizational-level measures. Prior to aggregation, we computed the intraclass correlation (ICC)—both ICC1 and ICC2—to examine interrater reliability. ICC1 values ranged from .05 to .28 and ICC2 values from .56 to .91, which are similar to those reported in Ogbonnaya et al. (2017), for which the observed values were 0.07 to 0.20 for ICC1 and 0.53 to 0.78 for ICC2. These results offered sufficient justification for data aggregation (see the Appendix for a full description).

Employee Well-Being

We measured employee well-being in two dimensions: positive well-being and negative well-being. The former refers to the overall positive quality of an employee's experience and functioning at work, whereas the latter refers to the overall negative quality of an employee's experience and functioning at work. Two variables—organizational commitment and job satisfaction—were used as proxies for positive well-being, which is closely related to Grant et al.'s. (2007) happiness or psychological well-being. Two variables—work intensification and anxiety—were used as proxies for negative well-being, which is closely related to Grant et al.'s (2007) health or physical well-being. These variables are "among the most common indicators of employee health and well-being" in the literature (Ogbonnaya et al., 2017: 102–103; Van De Voorde et al., 2012). Next, we conducted two sets of confirmatory factor analyses (CFAs) to confirm the factor structures of well-being. The initial measurement model had two latent factors, positive (organizational commitment and job satisfaction) and negative (intensification and anxiety). We estimated a model with two-factor model as well as a one-factor model. To judge the goodness of fit of the measurement model, we relied on the root mean square error of

approximation (RMSEA, Hu &Bentler, 1999), the comparative fit index (CFI, Bentler, 1990), and the non-normed fit index (TLI, Hu &Bentler, 1999). According to Hu and Bentler (1999), RMSEA $\leqslant$ .06 or CFI $\geqslant$ .95 or TLI $\geqslant$ .95 indicates a good fit.

The two-factor model failed to fit the data (χ^2 = 27531.585; *df* = 76; *RMSEA* =.16; *CFI* = 0.721; *TLI* = 0.666; *SRMR* = 0.122; *AIC* = 502247.288). The one-factor model was also insufficient (χ^2 =47424.108; *df* = 77; *RMSEA* = 0.206; *CFI* = 0.519; *TLI* = 0.432; *SRMR* = 0.146; *AIC*= 522137.811). Therefore, we decided to examine the four indicators of well-being separately. In what follows, we provide a detailed description of the four variables; we also conducted a pilot study to verify the construct validity (convergent and discriminant validity) of the measures of organizational commitment and work intensification. The data in the pilot study provided evidence for the construct validity of both commitment and work intensification by demonstrating both convergent and discriminant validity.

Organizational commitment (alpha = .85) was measured by means of three items adapted from the well-established scale by Allen and Meyer (1990): "employees share the organization's values," "employees feel loyal to the organization," and "employees are proud to tell people about the organization."

Job satisfaction (alpha = 0.87) was measured by means of five items, reflecting five facets of work: "employee satisfaction with influence," "employee satisfaction with achievement from work," "employee satisfaction with using initiative," "employee satisfaction with job security," and "employee satisfaction with the work itself."

Work intensification (alpha = 0.73) was assessed by means of three items measuring the perception of work pressure based on Karasek's (1979) definition of job demands: "the extent to which employees felt that their jobs required them to work very hard," "whether they felt they had enough time to get their work done," and "whether they worried about work outside working hours."

Anxiety (alpha = 0.84) was assessed by means of three items measuring negative emotional states based on Warr's (1990) measure: "thinking of the past few weeks, how much of the time has your job made you feel tense," "thinking of the past few weeks, how much of the time has your job made you feel uneasy," and "thinking of the past few weeks, how much of the time has your job made you feel worried."

Performance

We measured organizational performance using four items based on the information provided by managers who had primary responsibility for employment relations. These

managers were asked to rate the performance of their own workplaces compared to that of other workplaces in the industry in terms of financial performance, labor productivity, quality of product service, and the percentage of absence. Ratings were based on a 5-point scale (*far above average* to *far below average*). Available evidence indicates that managerial assessments correspond closely to internal objective performance indicators (Dess & Robinson, 1984; Wall, Michie, Patterson, Wood, Sheehan, Clegg, & West, 2004) and external secondary data (Venkatraman & Ramanujam, 1987). An exploratory factor analysis indicated that these four variables comprised a single factor. Consequently, we combined these variables into a global measure to reduce the complexity of the analysis (alpha = 0.77).

Control Variables

In the analysis, we included control variables at the workplace and employee levels. At the employee level, the five control variables were gender (1 = *female*, 0 = *male*), age (eight dummies), type of job (1 = *permanent*; 2 = *temporary or fixed*), and union membership (1 = *yes*, 2 = *no*), and hours per week. At the workplace level, the three control variables were industry (12 dummies), age of firm (the number of years of operation), and firm size (1 = *fewer than 50 employees*; 12 = *100,000 employees or more*).

Analysis

We tested Hypotheses 1 to 5 using a single multilevel path-analysis model in which the relationship between HRM systems and firm performance (both measured at Level 2) is mediated by employee well-being (measured at Level 1). The ICC1 and ICC2 values for employee-level variables were significantly different from zero, indicating a significant between-firm variance and that the multilevel approach is justified. For job satisfaction, *ICC1* = 0.11 and *ICC2* = 0.58; for well-being, *ICC1* = 0.08 and *ICC2* = 0.50; and for recessionary action, *ICC1* = 0.19 and *ICC2* = 0.72.

We estimated the model using STATA (version 14) and followed the one-stage process developed by Croon and van Veldhoven (2007), which simultaneously estimates the unique contributions of direct and indirect pathways (employee well-being) in explaining firm performance. A full information maximum likelihood (MLR) estimator was used for all analyses. According to Preacher, Zyphur, and Zhang (2010), the MLR estimator is useful for multilevel mediation analysis and can accommodate large survey data and provide robust standard errors in multilevel analysis (Asparouhov & Muthen, 2006). Mediation effects were based on the calculation of the coefficients of $\alpha\beta$, where α represents the coefficient for the relationship between the independent variable and the mediating variable and β the coefficient

for the relationship between the mediating variable and the dependent variable (MacKinnon, Fritz, Williams, & Lockwood, 2007). Confidence intervals (95%) for the αβ coefficients were "based on the distribution of the product method" (MacKinnon et al., 2007, p. 384). Finally, to test nonlinear effects, we followed Chadwick's (2007) method: We first created an HRM index to present HRM systems and then converted this index into its quadratic and cubic form.

Results

Hypothesis 1 predicted a positive relationship between HRM systems and firm performance. As shown in Table 2, HRM systems are significantly positively related to firm performance; Hypothesis 1 was thus supported. Support was also found for Hypothesis 2, in which we predicted a positive relationship between HRM systems and organizational commitment and job satisfaction. In Hypothesis 3, we posited that organizational commitment and job satisfaction mediate the relationship between HRM systems and firm performance. Table 2 shows that the paths from HRM systems to firm performance via organizational commitment and job satisfaction were significant. Hypothesis 3 was thus supported. Furthermore, we computed the effect size of indirect effects as the ratio of the indirect effect to the total effect (Preacher & Kelley, 2011). For organizational commitment, 17% of the total effect is mediated [.09: .24] and 8.2 % for job satisfaction [.04: .12]. In Hypothesis 4, we proposed a positive relationship between HRM systems and work intensification and anxiety. Table 2 shows that HRM systems were significantly positively associated with work intensification but significantly negatively associated with anxiety. Hypothesis 4 was thus partially supported. For Hypothesis 5, we predicted that work intensification and anxiety mediate the relationship between HRM systems and firm performance. However, the paths from HRM systems to firm performance via work intensification and anxiety were not significant (Table 2). Hypothesis 5 was thus not supported. Next, we predicted that the relationship between HRM systems, well-being, and performance are nonlinear. That is, in Hypothesis 6, we proposed that the relationship between HRM systems and (a) organizational commitment, (b) job satisfaction, (c) work intensification, (d) anxiety, and (e) firm performance will be increasing returns to scale, with small positive relations at low levels of implementation but high positive relations at higher levels. For firm performance and job satisfaction, there is no evidence of nonlinearity as the quadratic and cubic terms are both nonsignificant (Table 3). Hypotheses 6b and 6e were thus not supported. For organizational commitment, the quadratic

term was negative and significant (Table 3), indicating that organizational commitment declines as more intensive implementation is reached (i.e., decreasing returns to scale), which is the opposite of what was hypothesized. A plot of the relationship shows that the relationship was initially positive but declined as the number of HRM practices increased (Figure 2.1). Hypothesis 6a was thus not supported. For work intensification and anxiety, the cubic terms are negative and significant (Table 3), indicating that work intensification and anxiety decline as HRM implementation moves from lower to higher levels (i.e., increasing returns to scale). A plot of the relationships showed that the relationships were initially positive but declined and became negative as the number of HRM practices increases (Figures 2.2 and 2.3). Hypotheses 6c and d were thus supported. In contrast to what we proposed in Hypothesis 6, in Hypothesis 7 we proposed that the relationship between HRM systems and (a) organizational commitment, (b) job satisfaction, (c) work intensification, (d) anxiety, and (e) firm performance exhibit decreasing returns to scale, with greater positive relationships at low levels of implementation and small positive relations, no, or even negative relationships at higher levels. The results showed that only organizational commitment exhibited a relationship of decreasing returns to scale such that the organizational commitment was initially increased but then declined and flattened as more HRM practices were adopted (Table 3 and Figure 2.1). Hypothesis 7a was thus supported, though Hypotheses 7 b, c, d, and e were not.

Table 1

Means, Standard Deviations, and Correlations of Study Variables

Variable		M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1.	Performance	3.72	0.59	1											
2.	HRM system	19.47	2.80	.10*	1										
3.	Org. commitment	3.64	0.85	.10*	.23*	1									
4.	Job satisfaction	3.69	0.75	.09*	.16*	.61*	1								
5.	Anxiety	2.43	0.88	-.01	-.01	-.15*	-.28*	1							
6.	Work intensification	3.24	0.79	.01	.06*	.04*	-.03*	.54*	1						
7.	Firm size	7.93	3.04	-.01	.05*	-.06*	-.12*	.03*	-.00	1					
8.	Firm age	1.34	0.48	-.09*	-.01	-.02*	-.04*	.01	.01	.03*	1				
9.	Female	0.47	0.5	.03*	.11*	.08*	.08*	-.01	.00	.03*	-.07*	1			
10.	Age	5.42	1.47	-.03*	-.05*	.08*	.10*	-.02*	.08*	-.01	.09*	-.08*	1		
11.	Member of union	0.26	0.44	-.09*	-.08*	-.10*	-.12*	.03*	.01	.26*	.12*	-.10*	.16*	1	
12.	Hours work/pr. week	36.9	12.26	.01	-.05*	.00	-.00	.17*	.19*	-.10*	.03*	-.37*	.08*	.07*	1
13.	Permanent job	0.93	0.25	-01	-.00	.01	.04*	.05*	.10*	.02	.03*	-.02	.14*	.08*	.18*

Note: Firm size coded 1 =less than 50 (reference), 2=50-99, 3=100-149, 4=150-249, 5=250-499, 6=500-999, 7=1,000-1,999, 8=2,000-4,999, 9=5,000-9,999, 10=10,000-49,000, 11=50,000-99,999, 12=100,000 or more. Gender coded 1=female, 0=male (reference). Age coded 1=16-17 (reference), 2=18-19, 3=20-21, 4=22-29, 5=30-39, 6=40-49, 7=50-59, 8=60-64, 9=65 or more. Member of trade union/Permanent job coded 1=yes, 0=no (reference). HRM=human resource management. For ease of presentation, we omitted industry, and sector. Please write to the first author for a complete correlation matrix.

*$p < .01$.

Table 2

Two-Level Direct and Indirect Effects Model: Paths and Standardized Regression Coefficients

	Coefficient	SE	Ratio Indirect to Total Effect	95% Confidence Interval For The Ratio
HRM system→Overall subjective firm performance	.14***	.04		
HRM system→Job satisfaction	.27***	.01		
HRM system→Organizational commitment	.33***	.01		
HRM system→Anxiety	-.04**	.02		
HRM system→Work intensification	.04*	.02		
Organizational commitment→Overall subjective firm performance	.06***	.01		
Job satisfaction→Overall subjective firm performance	.04***	.01		
Anxiety→Overall subjective firm performance	-.01	0.1		
Work intensification→Overall subjective Firm performance	.02	.01		
HRM system→Organizational commitment→Overall subjective firm performance	.02***		.1701888	[.09, .24]
HRM system→Job satisfaction→Overall subjective firm performance	.01***		.0819082	[.04, .12]
HRM system→Anxiety→Overall subjective firm performance	.00	.00	.0011808	[-.00, .01]
HRM system→Work intensification→Overall subjective firm performance	.00	.00	.0041823	[-.00, .01]

Note: All analyses include controls as described in the text. SE = standard error of estimate.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Table 3

Non-linear Effect Results

	Overall subjective firm performance	Organizational commitment	Job satisfaction	Anxiety	Work intensification
HRM system (Linear)	.16 (.06)*	.34 (.02)***	.26 (.02)***	.01 (.02)	.08 (.02)**
HRM system (Quadratic)	.01 (.03)	-.03 (.01)*	-.01 (.01)	-.02 (.01)	-.01 (.01)
HRM system (Cubic)	-.00 (.02)	-.01 (.01)	.01 (.01)	-.02 (.01)**	-.02 (.01)*

Note: Cell entries are the estimated coefficients with standard error of estimate in brackets. All analyses include controls as described in the text.

*$p < .05$.

**$p < .01$.

***$p < .001$.

Figure 2.1. The Curvilinear Relationship between HRM System and Organizational Commitment

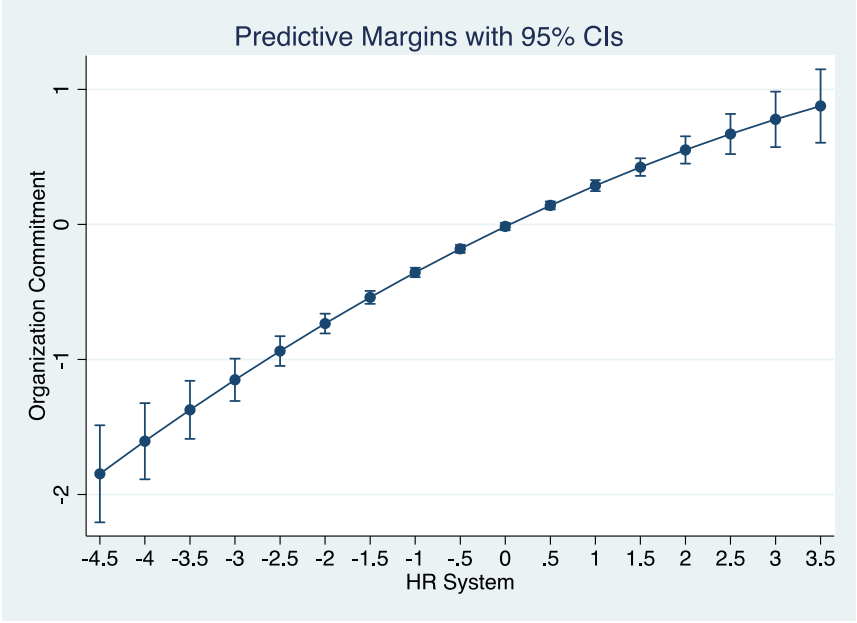


Figure 2.2. The Curvilinear Relationship between HRM System and Anxiety

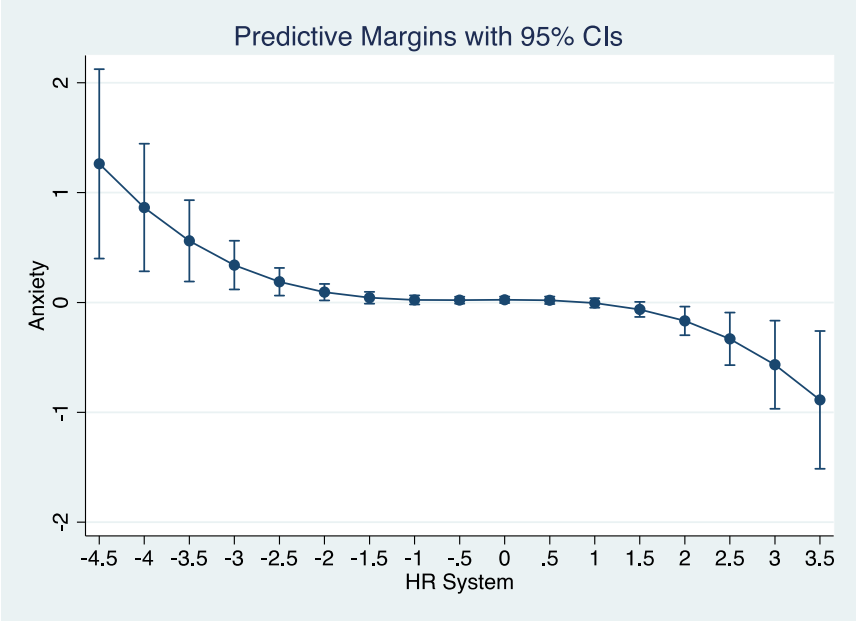
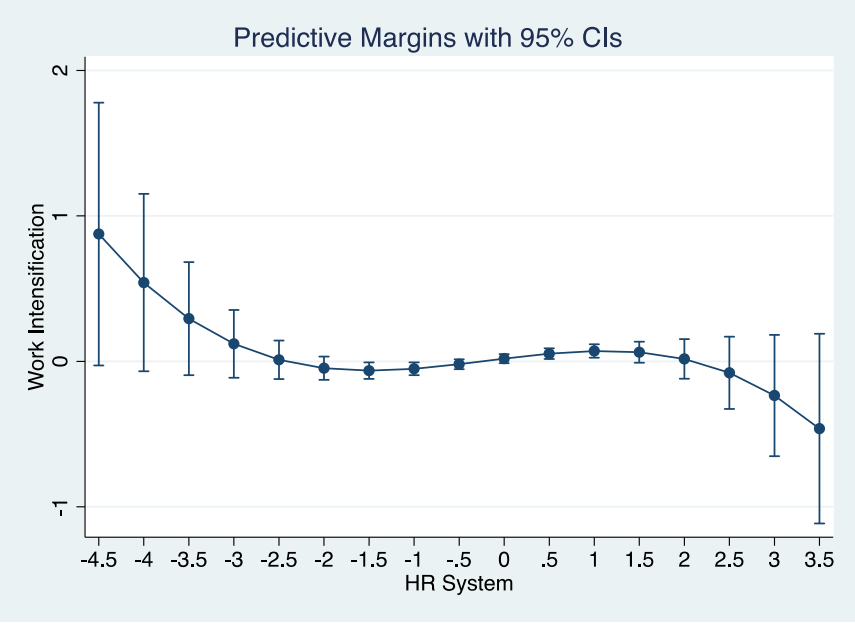


Figure 2.3. The Curvilinear Relationship between HRM System and Work Intensification



Discussion

In the current study, we tested two competing theoretical perspectives of HRM: the mutual gains perspective and the critical perspective; thus, we extended previous mediating models of HRM systems' relationship with firm performance (e.g., Becker, Huselid, Becker, 1998; Delery & Shaw, 2001). We found that HRM systems were positively associated with firm performance, and that the positive HRM-performance association was partly explained by higher levels of job satisfaction and organizational commitment. Taken together, these linear findings support the mutual gains perspective that both employers and employees benefit from HRM systems, for higher profit is associated with higher employee well-being. This conclusion is, however, tempered by our nonlinear analyses. Specifically, we found that, at low levels of implementation, HRM systems were negatively correlated with employee well-being, and they were correlated with higher levels of work intensification and anxiety. However, at high levels, HRM systems were positively associated with employee well-being, and they were associated with lower levels of work intensification and anxiety.

These results have both theoretical and practical implications. Theoretically, our findings suggest that HRM systems have plateau effects. When HRM practices are implemented at low levels, they result in negative well-being, a finding consisting with the prediction of the critical perspective. When HRM practices are implemented at high levels, they tend to result in positive well-being, which is consistent with the prediction of the mutual gains perspective. In other words, the results suggest that the conflicting findings in studies examining the HRM systems/well-being relationship may be attributable to the fact that prior research has failed to account for a possible nonlinear association between HRM systems and well-being. Additionally, our results imply that assuming linearity may lead to inaccurate interpretations of the consequences of HRM systems. For example, we found some dimensions of well-being (e.g., organizational commitment) follow the law of diminishing returns to scale (i.e., nonlinearity) in that more HRM practices decrease well-being (i.e., Δ well-being/Δ HRM < 0). In terms of practical implications, our study suggests that more precise estimates of the effects of HRM systems on employee well-being can prevent missteps in the application of HRM practices, as we believe "managers can practice their craft more effectively if they are routinely guided by the best logic and evidence" (Kaufman, 2012, p. 12).

In the well-being literature it is generally uncritically accepted that "psychologically well people are more prone to experience positive emotions and less prone to experience negative emotions" (Diener, 1994; Wright & Cropanzano, 2000, p. 84). In other words, well-being scholars tend to place both the positive and negative well-being on a single axis, assuming that as positive well-being increases, negative well-being decreases (Diener, 1984; Wright, 2014). Our result challenges this conventional knowledge, indicating that HRM systems can enhance employee well-being by increasing job satisfaction and organizational commitment, but they can also undermine employee health by increasing work intensification. This suggests that positive and negative well-being are independent unipolar constructs, which can potentially arise simultaneously. In other words, some dimensions of well-being are too distinct from one another to be merged into one composite score; if bundling them together, we obscure the different foci of individual dimensions of well-being, leading to inaccurate interpretations of theoretical and practical consequences. We believe that this result might also explain the previously raised inconsistencies in studies examining the relationship between HRM systems and well-being; that is the inconsistencies may be attributable to the fact that prior research has not paid sufficient attention to the complexities of the concept of well-being. Grant et al. (2007) have long observed that HRM practices "frequently create tradeoffs between different

dimensions of employee well-being, whereby one aspect of employee well-being improves but another aspect of employee well-being decreases" (p. 51); our results confirm their observation.

Our research extends and differs from that of White and Bryson (2013), which also tested nonlinearity and used the same data set, in four important ways. First, White and Bryson examined the association between HRM systems and positive well-being (organizational commitment and job satisfaction), whereas we examined the relations among HRM systems, positive well-being (organizational commitment and job satisfaction), negative well-being (anxiety and work intensification), and firm performance. Second, White and Bryson tested the HRM systems/well-being relationship in quadratic terms, whereas we considered the relationship among HRM systems, well-being, and firm performance both in quadratic and cubic terms. Statistically speaking, quadratics are polynomials that have the second order (x^2) as their highest order, whereas cubics are polynomials that have the third order (x^3) as their highest order. The fact that we found that the cubic term described the relationship between HRM systems and the two measures of negative well-being, anxiety, and work intensification better than the quadratic term (see Figures 2.2 and 2.3) suggests that assuming only the quadratic term would lead to inaccurate interpretations of the observed relationships. This is a critical issue because precise estimates of the effects of HRM systems on employee well-being not only advance our scientific understanding through precise predictions but also sharpen our recommendations for managerial practice. Third, White and Bryson demonstrated an increasing return to scale for the HRM system–organizational commitment relationship, with a positive relationship at higher levels of HRM. We showed a decreasing return to scale for this relationship, with a negative relation at higher levels of HRM. This is an intriguing result, for we used the same measure of organizational commitment as White and Bryson. It seems that the conflicting findings may be attributable to the differences in our measurement of HRM systems. Only further research can confirm or deny this explanation for the disparity. Fourth, we tested two competing theoretical perspectives of the relationship among HRM, well-being, and firm performance, the mutual gains and critical perspectives, whereas White and Bryson examined the relationship from the single perspective. According to Chamberlin (1965), simultaneous evaluation of multiple working hypotheses increases scientific understanding because it combats bias in science, namely "the tendency to fall in love with any one of several carefully constructed hypotheses" (Raup & Chamberlin, 1995, p. 349). Similarly, Klayman and Ha (1987) claimed that researchers often adopt what they call *a positive strategy*, selectively examining instances or cases that they expect to be confirmed. In light of researchers' disposition toward a single, popular hypothesis, they "should try to develop tenable hypotheses

for the phenomenon of interest from as many conceivable perspectives as possible" (Miller & Tsang, 2010, p. 142-3; see also Chamberlin, 1965). The history of natural science demonstrates that testing competing hypotheses is an effective means for advancing scientific understanding (Losee, 2005). Although some HRM researchers (e.g., Delery & Doty, 1996; Ramsay et al., 2000) have given equal weight to competing or alternative hypotheses, this is usually not the case. Our study is therefore among the few to adopt the method of multiple working hypotheses.

Limitations and Future Research

We acknowledge that our research has several limitations. First, although our conceptual model implies causality, with HRM systems preceding well-being, which, in turn, precede firm performance, the cross-sectional nature of our data precludes such causal conclusions. For example, the reverse order of the relation may be possible (Cappelli & Neumark, 2001), such that high-performing firms may have the financial resources to invest in HRM systems, resulting in higher well-being and higher firm performance. Even though we cannot rule out the possibility, we do not think reverse causality is a great concern here. The fact that we tested competing mechanisms with intervening variables arranged in a specific order in conjunction with multilevel analysis allowed us to reduce the problems of reverse causality and alternative explanations (Shadish, Cook, & Campbell, 2002). Still, a recent longitudinal study that tested the causal associations between HRM systems and performance using a large longitudinal data set with three time points revealed that the association is probably reciprocal; past HRM systems have positively contributed to later productivity, and the reverse has been true (Shin & Konrad, 2017).

Second, we did not examine whether moderating conditions affect the relationships studied. Previous research has suggested that the relationship between HRM systems and well-being may be moderated by a range of individual, organizational, and institutional factors. For example, broader institutional and legislative contexts set limitations on the agency of managers with regard to how they deal with human resources policies and practices as well as employment relations (Paauwe, 2004). This, in turn, may affect well-being. Another example can be found in Jensen et al. (2013), who determined that HRM systems lead to work intensification. However, this relationship was contingent on employees' perceptions of job control; that is, employees with low levels of perceived job control reported higher work intensification than those with higher levels of perceived job control. Therefore, we encourage future research to systematically examine these possible moderator effects to develop a more complete understanding of the relationship between HRM systems, well-being, and firm

performance.

Third, we collected data on HRM systems from managers, not employees. On one hand, research has shown that managers and employees have different perceptions of the presence or absence of given HRM practices, (e.g., Khilji & Wang, 2006; Kuvaas, 2008; Liao, Toya, Lepak, & Hong, 2009). On the other, using two sources of data eliminates the problem of common-method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). Nevertheless, we encourage researchers to explore the differential effects of HRM systems on well-being and firm performance both from the perspectives of managers and employees to advance our understanding of HRM processes. Furthermore, doing so will shed light on an important methodological issue that remains largely unresolved: Are managers or employees the most reliable source of information on HRM practices?

Conclusion

Researchers have long been split regarding the impact of HRM systems on employee well-being and such systems' implications for firm performance. At one end of the spectrum, researchers have argued that employers and employees both benefit from HRM systems (i.e., the mutual gains perspective). On the other, researchers have argued that employer—not employees—benefit from HRM systems (i.e., the critical perspective). Both approaches have been successful with respect to accumulating evidence, yet they seem fundamentally incompatible. We considered this paradox in the current study, and our findings suggest that HRM systems reduce well-being at low levels of implementation but enhance it at higher ones, and that there are "tradeoffs between different dimensions of employee well-being, whereby one aspect of employee well-being improves but another aspect of employee well-being decreases" (Grant et al., 2007, p. 51). In other words, our results suggest that the consistently contradictory findings in the literature may be attributable to the extant literature's failure to account for the possible nonlinear associations between HRM systems and well-being as well as to pay sufficient attention to the complexities of well-being construct. We hope that our results stimulate further debate and research on this important topic.

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Wright, T. A., Cropanzano, R., & Bonett, D. G. (2007). The moderating role of employee positive well being on the relation between job satisfaction and job performance. *Journal of Occupational Health Psychology*, *12*(2), 93.

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Appendix

Variables	Observed items	Response scale
Job autonomy	How much influence do you have over what tasks you do? How much influence do you have over the pace at which you work? How much influence do you have over how you do your work? How much influence do you have over the order in which you carry out tasks?	1= none to 4= a lot
Team work	Team members depend on each other's work to be able to do their job. Tasks or roles rotate among the members of the team.	0= no to 1= yes
Staff training	Training either paid for or organized by your employer during the last 12 months?	0= have had no training to 1 = have had some training
Performance-related pay	Do any employees in this establishment get paid by results or results?	0= otherwise to 1= merit results
	What proportion of employees are paid by merit or results?	0= otherwise to 1= 40% or more
	What measures of performance are used to determine payments by merit or results?	0= otherwise to 1= individual, team, workplace or organization measures
Flexible working	Are flexi-time arrangements available to you? Are job sharing arrangements available to you? Are chances to reduce your working hours available to you?	0= no to 1= yes
Selective hiring	Individuals' skill is important when recruiting new employees.	0= not selected to 1= selected
	Individuals' qualification is important when recruiting new employees.	

	Individuals' experience is important when recruiting new employees.	
Grievance systems	Grievance procedures cover pay issues. Grievance procedures cover redundancy issues. Grievance procedures cover organization of work issues. Grievance procedures cover health and safety issues.	0= not selected to 1= selected
Supportive management	Managers understand employee responsibilities outside of work. Managers encourage staff to develop their skills.	1= strongly disagree to 5= strongly agrred
Information sharing	Managers keep employees informed about the way job is done. Managers keep employees informed about financial matters.	1= very poor to 5= very good
Participative decision-making	Managers seek employee views. Managers respond to employee suggestions. Employees influence final decisions.	1= very poor to 5= very good

Data Transparency Appendix

We confirm that this is our first use of the data, WERS 2004. And we have not used it for other manuscripts. Since WERS 2004 is a publicly available database, the data has been used in published research by other author teams. We therefore provide you additional information to help you assess how distinct our manuscript is from the four papers recently published from this dataset.

WERS 2004				
	Response		Sector included	
	Firms	Employees	Private	Public
Our study	1,292	15,937	x	
Guest et al.(2008)	656	N/A	x	x
Ogbonnaya et al.(2017)	1,733	22,451	x	x
White & Bryson (2013)	1,140	11,854	x	
Wood et al. (2012)	1,177	14,127	x	x

Please note that the sample of our manuscript was confined to **private** sector, whereas the sample of the other studies (except White & Bryson, 2013) included **both private and public** sectors.

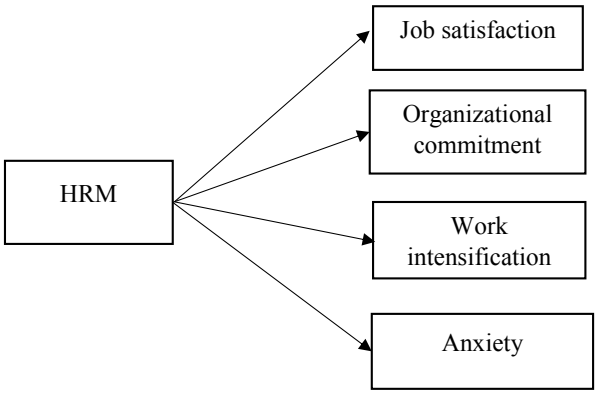
Methods					
	Testing **competing/ alternative** hypotheses?	Testing **linearity** of HRM-well-being relationship?	Testing **nonlinearity** of HRM-well-being relationship?	How to test **nonlinearity**?	
				Quadratic	Cubic
Our study	Yes	Yes	Yes	x	x
Guest et al.(2008)	No	N/A	N/A		
Ogbonnaya et al.(2017)	Yes	Yes	No		
White & Bryson (2013)	No	No	Yes	x	
Wood et al. (2012)	Yes	Yes	No		

Theoretical Models

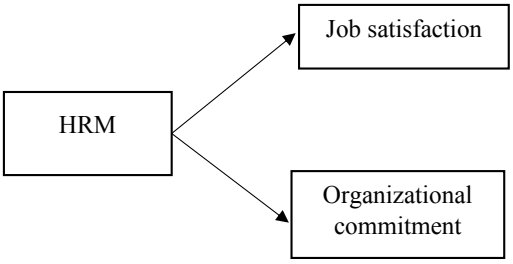
Our Model

Guest et al.'s (2008) model

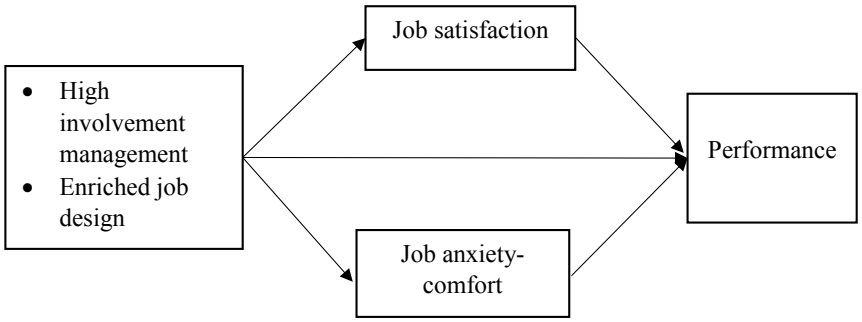
Ogbonnaya et al.'s (2017) Model



White & Bryson's (2013) model



Wood et al.'s. (2012) model



List of most recent research publications based on WERS 2004:

Guest, D., Brown, W., Peccei, R., & Huxley, K. (2008). Does partnership at work increase trust? An analysis based on the 2004 Workplace Employment Relations Survey. *Industrial Relations Journal*, 39(2), 124-152.

Ogbonnaya, C., Daniels, K., Connolly, S., & van Veldhoven, M. (2017). Integrated and isolated impact of high-performance work practices on employee health and well-being: A comparative study. *Journal of Occupational Health Psychology*, 22(1), 98.

White, M., & Bryson, A. (2013). Positive employee attitudes: how much human resource management do you need? *Human Relations*, 66(3), 385–406.

Wood, S., Van Veldhoven, M., Croon, M., & de Menezes, L. M. (2012). Enriched job design, high involvement management and organizational performance: The mediating roles of job satisfaction and well-being. *Human relations*, 65(4), 419-445.

More information about WERS 2004 can be founded at the following web link:

https://www.gov.uk/government/publications/the-2004-workplace-employment-relations-survey-wers

Chapter 3
Are HRM Systems Good or Bad for Employee Well-being? A Meta-Analysis of the Workers' Verdict (Study 2)

Abstract

One of the pressing issues human resource management (HRM) scholars are facing today is whether HRM systems are good or bad for employee well-being, also known as the "good versus bad" debate. At one end of the spectrum, some scholars have argued that employers and employees both benefit from HRM systems: the mutual gains perspective. At the other end, scholars have argued that employers, but not employees, benefit from HRM systems: the critical perspective. Yet, empirical evidence has not provided conclusive confirmation or disconfirmation of any of these perspectives. To enlighten the "good versus bad debate," we carried out a meta-analysis of the relationships between employee perceptions of HRM practices categorized within three HRM bundles, positive and negative well-being, and overall performance, using data from 72 studies and 89,027employees. The results showed that employee perceptions of three HRM bundles were associated with positive well-being but not with negative well-being and that positive well-being mediated the relationship between employee perceptions of HRM bundles and overall performance. In addition, positive well-being was associated with increased overall performance and negative well-being with decreased overall performance. Research implications and future directions are discussed.

Introduction

"*Only what is exhaustive is of interest. The truth comes from an accumulation of details*." Thomas Mann (1875-1955)

Although the core philosophy of human resource management (HRM) is based on the assumption that human resources are the key to a firm's success, research on the impacts of HRM practices, bundles, or systems on employees' quality of working life and well-being at work has been, over the last decades, overshadowed by empirical research aimed at demonstrating a link between HRM systems and firm performance, often referred to as the HRM-performance paradigm (Karen Legge, 2001; Paauwe, 2009). Recently, research on health and well-being in the workplace has stepped out of the eclipse of the HRM-performance paradigm, with these having "become common topics in the mainstream media, in practitioner-oriented magazines and, increasingly, in scholarly research journals" (Danna & Griffin, 1999: 357; Guest, 2017; Van De Voorde, Paauwe, & Van Veldhoven, 2012).

Unfortunately, the outpouring of research has not yielded accumulated insights but, instead, confusion and quarrels as "we find ourselves in the midst of a lively debate over" whether HRM systems are good or bad for employee well-being (Boxall & MacKy, 2009, p. 4). At one end of the spectrum, some researchers have argued that HRM systems benefit both employers and employees (e.g., Kochan & Osterman, 1994; Levine, 1995; Pfeffer, 1998), labeling them "shared capitalism" (Kruse et al., 2010), "high-involvement" (Lawler, 1992), "mutual gains" (Kochan & Osterman, 1994), or "high commitment" (Walton, 1985). Following Kochan & Osterman (1994), we label this view "the mutual gains perspective," as it conveys a key message where both employers and employees benefit from HRM systems. At another end of the spectrum, researchers have argued that HRM systems benefit employers but not employees (Delbridge & Turnbull, 1992; Godard, 2001; Keenoy, 1990; Legge, 1995). We label this view "the critical perspective." However, empirical research on this topic has yielded mixed and contradictory results. Some studies have obtained support for a positive impact of HRM systems on different dimensions of well-being such as job satisfaction (e.g.,Barling, Kelloway, & Iverson, 2003; Mohr & Zoghi, 2008; Takeuchi, Chen, & Lepak, 2009), reduced job-related stress (e.g., Butts, Vandenberg, DeJoy, Schaffer, & Wilson, 2009; Macky & Boxall, 2008; Mohr & Zoghi, 2008), and increased commitment (e.g., Gong, Law,

Chang, & Xin, 2009; Macky & Boxall, 2007; Takeuchi et al., 2009). However, others have provided empirical evidence for a negative impact, showing that HRM systems are associated with higher levels of workload, burnout, stress, and otherwise heightened pressure on employees (e.g., Godard, 2001; Jensen, Patel, & Messersmith, 2011; Kroon, Voorde, & Veldhoven, 2009; Landsbergis, Cahill, & Schnall, 1999; Lewchuk & Robertson, 1997). Finally, others have obtained findings in support of a combination of positive and negative consequences (Ramsay et al., 2000).

Based on their recent review of the literature, Peccei, van de Voorde, and Van Veldhoven came to the conclusion that we actually know very little about the link between HRM systems and well-being, as there is a lack of "a systematic and well-articulated set of arguments able to explain how and why HRM practices and systems may actually affect different aspects of well-being" (2013, p. 25). That said, it is generally accepted that employee well-being is a function of the nature and quality of employees' experiences of the objective work environments (Fisher, 2010) and that these work experiences are influenced by the HRM practices, bundles, and systems adopted by the organization (Peccei et al., 2013). We agree, and because of the lack of a cumulative body of knowledge about the precise nature of the relationship between HRM systems and well-being, a comprehensive meta-analytic study is needed for three particular reasons. First, at its simplest, well-being is important in its own right, as there is strong evidence that burnout at work is associated with anxiety, depression, drops in self-esteem, decreased performance, and increased health problems (Danna & Griffin, 1999; Maslach, Schaufeli, & Leiter, 2001; Melamed, Shirom, Toker, Berliner, & Shapira, 2006; Taris, 2006). It is also deemed to increase work–family conflict (Geurts, Kompier, Roxburgh, & Houtman, 2003; Maslach, 2003). Second, well-being advances our understanding of the HRM process, as job satisfaction, commitment, and well-being are often hypothesized as mechanisms that explain some of the association between HRM systems and firm performance (Appelbaum et al., 2000; D. E. Guest, 1997; N. P. Podsakoff, LePine, & LePine, 2007). Third, focusing explicitly on well-being contributes not only to "wider debates in the field of HRM about the impact of HRM practices on organizational performance" (Peccei, 2004, p. 3-4), but also to the happy–productive worker thesis; "an old and overworked topic, but one that remains very much a source of confusion and controversy" (Staw, 1986, p. 40).

We therefore aim to contribute the current HRM/well-being debate by conducting a meta-analysis to answer one fundamental question: Do HRM systems in the form of HRM bundles benefit employers, employees, or both? Importantly, we explore the question of concern from the

workers' view by investigating their perceptions of HRM bundles. This is because theoretically, well-being is assumed to be the result of employees' experiences of the work environment, as well as the HRM practices and bundles adopted by the organization, rather than how these contexts are perceived by management (Fisher, 2010; Peccei et al., 2013).

Theories and Hypotheses

Existing Research on Relationships between HRM Systems, Well-Being, and Performance

In considering the relationship between HRM systems, well-being, and performance, the four most basic questions are how to conceptualize (1) HRM systems, (2) well-being, and (3) performance, and (4) the relationship between HRM systems, well-being, and performance. We start with how we conceptualize and define HRM systems.

HRM Systems

Boselie, Dietz, and Boon (2005) observed that most studies conceptualize HRM systems according to the so-called AMO model (skills, motivation, and opportunity). We accept this observation, and to be consistent with prior research, we conceptualize HRM systems on the basis of the AMO model. The AMO model was built on the logic of the theory of work performance, which was first formulated by Vroom (1964) and further developed by Blumberg and Pringle (1982). According to Blumberg and Pringle (1982), individual performance is a function of ability, motivation, and opportunity, or performance = f (ability x motivation x opportunity). This idea has quickly been accepted by HRM scholars (e.g., Appelbaum et al., 2000; Boxall & Purcell, 2003; Huselid, 1995), and it is argued that HRM practices are likely to contribute to improved performance if they include one of three bundles: the skill-enhancing bundle, the motivation-enhancing bundle, or the opportunity-enhancing bundle (Macduffie, 1995). Although there is still a debate about what specific HRM practices should constitute each bundle, there is a consensus that the skill-enhancing bundle generally includes rigorous selection and extensive training; the motivation-enhancing bundle includes incentives and rewards, promotion and development, extensive benefits, and job security; and the opportunity-enhancing bundle includes job enrichment (skill flexibility, job variety, responsibility), work teams, employee involvement, and information sharing.

Employee Well-Being

Employee well-being is an elastic concept, meaning "any number of things to various people" (Danna & Griffin, 1999; Wright & Huang, 2012, p. 1188). In a broad fashion, employee well-being "refers to people's evaluations of their lives" (Diener, Suh, Lucas, & Smith, 1999, p. 213), or "all the things that are important to how we think about and experience our lives" (Rath & Harter, 2010, p. 137). In a narrow fashion, it restricts to one dimension such as job satisfaction (Cropanzano & Wright, 2001; Grant et al., 2007). At the operational level, variation in conceptualization is also evident. Earlier conceptualizations of employee well-being, particularly within the psychological tradition (e.g., Bradburn, 1969; Campbell, 1981; Diener, 1994; Ryan & Deci, 2001), focused exclusively on pleasant emotional experience as a fundamental of dimension of employee well-being, often described in academic research as "subjective well-being" (Ed Diener, 1994), or "psychological well-being" (Wright et al., 2007). According to this view, high subjective/psychological well-being is said to occur if a person "experiences frequent positive emotions such as joy and happiness and infrequent negative emotions such as sadness and anger" (Bakker & Oerlemans, 2011, p. 179; Diener & Larsen, 1993). Consequently, employee well-being is operationalized as the presence of dispositional positive affect and the absence of dispositional negative affect (Cropanzano & Wright, 2001; Ed Diener, 1994). Over the years, additional dimensions have been added to the psychological well-being such as social (Keyes, 1998; Larson, 1996), self-validation (Warr, 2007), and physical health (Danna & Griffin, 1999). However, the most accepted and comprehensive conceptualization of employee well-being today is the one suggested by Grant et al. (2007, p. 52), who define well-being as "the overall quality of an employee's experience and functioning at work", which can be assessed in terms of three dimensions: psychological, physical, and social. The psychological dimension is related to subjective experience at work, composing of two aspects: pleasure (or hedonic) and fulfillment of potential (or eudaimonic). In organization science, the hedonic aspect has been frequently studied in terms of job satisfaction and organizational commitment (Grant et al., 2007; Peccei et al., 2013), whereas the eudaimonic aspect in terms of meaning and engagement (Grant et al., 2007). The physical dimension is concerned with physiological indicators and subjective experiences of bodily health (Grant et al., 2007). In organization science, physical health has often been studied in terms of injuries, diseases (Danna & Griffin, 1999) and job-related anxiety, stress, burnout and exhaustion (Grant et al., 2007; Peccei et al., 2013). Finally, the social dimension addresses the

quality of relationships at work, which has been widely studied in terms of trust, social support, reciprocity, leader-member exchange, cooperation, coordination, and integration (Grant et al., 2007; Guest, 2017).

In our study, we adopted Grant et al.'s (2007) three well-being dimensions but, due to the theoretical and methodological reasons, we combined the psychological and social dimensions and labeled it "positive" well-being and re-labeled the physical health into "negative" well-being. More precisely, we defined employee well-being in terms of two dimensions, positive and negative. Positive well-being is defined as the overall positive quality of an employee's experience and functioning at work, measured by job satisfaction, organizational commitment, trust, social support, cooperation, reciprocity, and leader-member exchange. Negative well-being is defined as the overall negative quality of an employee's experience and functioning at work, measured by stress, anxiety, fatigue, burnout, work overload, and exhaustion. Theoretically and methodologically, there are compelling reasons to re-combine Grant et al.'s (2007) three dimensions into two dimensions: positive and negative. First, the objective of our study is to answer the research question whether HRM systems are good or bad for employee well-being, indicating that the positive implications of HRM on employee well-being precluding the negative ones. Consequently, to achieve construct correspondence, we conceptualized employee well-being into positive and negative and represent them as bipolar constructs, with the relative presence of positive well-being indicating the relative absence of negative well-being and vice versa. In other words, our measure is rooted in the objective of our study as well as in the theoretical frameworks applied, the mutual gains and the critical perspectives.

Second, according Viswesvaran and Ones "when results are cumulated across studies, intercorrelations between some of the narrowly defined measures may not be available, thus necessitating the analysis at a level at which the measures are defined more broadly" (1995, p. 868). This was the case in our study. Due to the availability of data, making a distinction between the psychological and social dimensions as Grant et al. (2007) did is impractical. Given the conceptual compatibility between Grant et al.'s (2007) psychological and social dimensions, which both, by definition, refer to the overall positive quality of experience and functioning at work, we decided to combine them together into one single dimension to overcome the insufficiency of data. Consequently, we defined well-being more broadly than Grant et al. (2007). However, "the usefulness of a construct for making generalizable inferences is likely to increase when the

constructs are defined more broadly" (Viswesvaran & Ones, 1995, p. 868). Third, as noted by Fisher (1980), it is important to have an appropriate "fit" between constructs to obtain maximum predictability. Failure to match constructs in terms of their generality or specificity leads to downwardly biased correlations (Hulin, 1991). Since our overall performance is operationalized as a general construct composed of more specific factors, in order to achieve construct congruence with respect to the well-being--performance relationship, one must consider well-being as a general construct. Hence, our relative broad definition of well-being is justified from this respect. Finally, our unipolar conceptualization of well-being, positive vs. negative, is consistent with the general view in the well-being literature (E Diener, 1984) that "psychologically well people are more prone to experience positive emotions and less prone to experience negative emotions" (Wright & Cropanzano, 2000, p. 84).

Overall Performance

It is generally accepted that organizational performance is multidimensional, which can be classified into turnover, operating performance (e.g., productivity, sales, service, quality, innovation, and customer loyalty), and financial performance (e.g., profits, return on assets, market return, Tobin's Q, and growth) (Combs, Liu, Hall, & Ketchen, 2006; Dyer & Reeves, 1995; Subramony, 2009). As the most frequently examined performance outcomes, job performance and intention to quit, is the focus in our study, and we categorized both individual job performance and intention to quit into a single composite construct, a common practice in previous meta-analyses (e.g., Combs et al., 2006; Subramony, 2009)

Linking the Skill-Enhancing Bundle to Well-Being and Performance

The skill-enhancing bundle include practices whose primary function is to enhance the collective knowledge, ability, and skill levels in organizations, often referred to as human capital. As Parnes noted, "…the economist's concept of human capital, for that term refers to the productive capabilities of human beings. More precisely, human capital embraces the abilities and know-how of men and women [that]…are useful in the productive process" (1984, p. 32). Consequently, human capital is often studied from the performance perspective. However, we argue that human capital also has well-being implications. Especially, we propose that skill-enhancing practices have a positive effect on employee well-being. According to the job demands–control and job demands–resource models (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Karasek, 1979), individual

resources (e.g., social, financial, and personal resources) can mitigate the debilitating effects of work stressors on employee well-being, and when individuals have sufficient resources to cope with high job demands, well-being improves. We argue that skill-enhancing practices are representative of such resources, as researchers have suggested that employees with high levels of human capital are more capable of meeting job demands (Batt & Colvin, 2011; Shaw et al., 2009), thus buffering the impact of job demands on strain (i.e., enhancing well-being) (Karasek, 1979).

The link between skill-enhancing practices and performance is well established. There is consensus among HRM scholars that the pool of human capital can be enhanced through the use of HRM practices such as recruiting and training (Becker & Huselid, 1998; Koch & McGrath, 1996; Snell & Dean, 1992). Through recruiting, high-ability employees are identified and selected (Arthur Jr, Bennett Jr, Edens, & Bell, 2003; Snell & Dean, 1992). Providing formal and informal training experiences, such as basic skills training, on-the-job experience, and management development, can further develop employees' skills (Huselid, 1995). The assumption that human capital has economic value to firms (Barney, 1991; Ulrich & Lake, 1991) has been supported by several empirical studies, providing evidence for the positive relationship between human capital and firm-level outcomes (Kaifeng, Lepak, Jia, & Baer, 2012; Subramaniam & Youndt, 2005; Youndt, Subramaniam, & Snell, 2004). There is evidence that such findings also apply at the micro level of analysis. Therefore, we expect the following:

Hypothesis 1a. Employee perceptions of skill-enhancing practices are positively related to positive well-being.

Hypothesis 1b. Employee perceptions of skill-enhancing practices are negatively related to negative well-being.

Hypothesis 1c. Employee perceptions of skill-enhancing practices are positively related to overall performance.

Linking the Opportunity-Enhancing Bundle to Well-Being and Performance

The opportunity-enhancing bundle consists of a set of job design practices aimed at empowering employees to use their skills to achieve organizational objectives (e.g., decision-making authority, self-managing teams, upward feedback systems, provision of information about business outcomes, and job variety). The relationship between opportunity-enhancing HRM practices and employee well-being is not straightforward. Drawing on the job characteristics model

(Hackman & Oldham, 1980), we should expect a positive relationship between opportunity-enhancing HRM practices and employee well-being. More precisely, the opportunity-enhancing HRM practices will enhance well-being because the five motivational job characteristics (Hackman & Oldham, 1980) are relatively strongly related to different facts of satisfaction, organizational commitment, job involvement, and internal work motivation, according to the meta-analysis by Humphrey, Nahrgang, and Morgeson (2007). This meta-analysis also reported negative relationships between the motivational job characteristics and indicators of negative well-being such as anxiety, stress, burnout, and overload. Furthermore, self-managing teams, in theory, implies workers being responsible for a sufficiently a whole unit of work (i.e., a work with a clear sense of the beginning and ending of a transformation process), which in turn gives rise to experienced meaningfulness (Hackman & Lawler, 1971). In addition, HRM practices like the delegation of decision-making, upward feedback systems, and autonomous teams imply greater autonomy for workers, and greater autonomy gives rise to well-being (Humphrey et al., 2007). Finally, HRM practices such as sharing information about firm financial results and business unit outcomes should help workers better understanding of the organization's objectives and their role in the achievement of goals (Lawler, 1992; Levine, 1995), which in turn gives rise to knowledge of the results (Hackman & Lawler, 1971). Evidence confirms that jobs possessing these characteristics (meaningfulness, responsibility, and knowledge of the results) produce positive well-being (Appelbaum et al., 2000; Fried & Ferris, 1987; Hackman & Oldham, 1975).

However, recently, researchers have warned that opportunity-enhancing HRM practices can undermine health (Campion & McClelland, 1991, 1993). For example, HRM practices such as decision-making authority, job variety, and autonomous teams may introduce challenges into work (e.g., complex, demanding work and taking on personal responsibility for consequential tasks). As a result, employees may feel stretched by these challenges (Hackman & Lawler, 1971). Campion & McClelland (1991, 1993) found that job enlargement (more autonomy, responsibility, and variety) is associated with strain, effort, fatigue, and overload. Similarly, Legge (1995) argues that certain opportunity-enhancing HRM practices lead to work intensification and thus reduce well-being. For example, HRM practices like decision-making authority, upward feedback systems, and information sharing do not necessarily imply more decision latitude but instead more work and responsibilities (Rick Delbridge et al., 1992). Additionally, job variety does not necessarily imply multiskilling, but multitasking (Delbridge et al., 1992). Finally, working in teams may undermine

workers' autonomy as "peer monitoring and enforcement of group norms may dominate individual discretion" (Batt & Colvin, 2011, p. 697). Based on these conflicting empirical findings, we propose competing hypotheses with respect to the relationship between opportunity-enhancing HRM practices and well-being.

Unlike well-being, we expect a positive relationship between opportunity-enhancing HRM practices and job performance, as this is well established by job design research (Humphrey et al., 2007). Thus, we predicted the following:

Hypothesis 2a. Employee perceptions of opportunity-enhancing practices are positively related to positive well-being.

Hypothesis 2a1. Employee perceptions of opportunity-enhancing practices are negatively related to positive well-being.

Hypothesis 2b. Employee perceptions of opportunity-enhancing practices are negatively related to negative well-being.

Hypothesis 2b1. Employee perceptions of opportunity-enhancing practices are positively related to negative well-being.

Hypothesis 2c. Employee perceptions of opportunity-enhancing practices are positively related to overall performance.

Linking Motivation-Enhancing Bundle to Well-Being and Performance

The motivation-enhancing bundle consists of a broad set of economic incentives (e.g., performance-based pay, profit sharing, and employee stock ownership), job security guarantees, formal appraisals, and internal promotion). The relationship between motivation-enhancing HRM practices and employee well-being is ambiguous. From an employer's perspective, motivation-enhancing HRM practices (e.g., internal promotion, job security and other employee benefits) indicate higher levels of investment and a long-term employment relationship offered to employees. Furthermore, practices such as a competitive base pay level, profit sharing, and employee stock ownership add to a perception of equality and justice (Pfeffer, 1998). According to social exchange theory (Peter Michael Blau, 1964), these factors are likely to elicit positive emotional responses to the organization, as they enhance people's sense of being valued, secure, and supported. As a result, well-being should be enhanced. On the other hand, motivation-enhancing HRM practices may also have an adverse impact on well-being. Practices such as team-based performance-related pay,

profit sharing, and ownership sharing can lead to facilitating the process of work intensification by stimulating peer pressure, as "teams are intolerant of their members who are absent from work without a justifiable reason or who fail to produce work that is up to specification" (Jackson & Mullarkey, 2000, p. 234). Thus, motivation-enhancing HRM practices may induce a "disciplinary effect" associated with the work intensification (Hyman & Mason, 1995, p. 99). Similarly, Shaw et al. (2009) labeled certain motivation-enhancing HRM practices (e.g., performance appraisals and pay for performance) as "performance-enhancing expectations" (p. 1018), as they, from an employer's perspective, lead to increased expectations about performance and effort levels. In addition, job security and other employee benefits imply higher costs, which require higher returns to justify the maintenance of them (Kroon et al., 2009; Whitfield & Poole, 1997). Furthermore, to the extent that individual incentives increase extrinsic motivation, such incentives could also be associated with decreased work performance, decreased organizational commitment, intention to quit, burnout, and work–family conflict (Bård Kuvaas, Buch, Weibel, Dysvik, & Nerstad, 2017). Consequently, motivation-enhancing HRM practices can result in greater pressure, more demands, closer monitoring, increased job stress, and increased workloads (Barker, 1993; Jensen et al., 2011; Kroon et al., 2009). Therefore, we propose competing hypotheses also for the relationship between motivation-enhancing HRM practices and well-being. We do, however, propose a positive relationship between motivation-enhancing HRM practices and overall performance. The purpose of motivation-enhancing HRM practices is to motivate employees to increase their effort and hence their output (Ariely, Gneezy, Loewenstein, & Mazar, 2009; Gerhart & Rynes, 2003; Lawler, 1971). Thus, intensive use of these practices is expected to lead to better performance. Accordingly, the following hypotheses were formed:

Hypothesis 3a. Employee perceptions of motivation-enhancing practices are positively related to positive well-being.

Hypothesis 3a1. Employee perceptions of motivation-enhancing practices are negatively related to positive well-being.

Hypothesis 3b. Employee perceptions of motivation-enhancing practices are negatively related to negative well-being.

Hypothesis 3b1. Employee perceptions of motivation-enhancing practices are positively related to negative well-being.

Hypothesis 3c. Employee perceptions of motivation-enhancing practices are positively related to overall performance.

Linking Well-Being to Performance

The link between well-being and performance has fascinated organizational scientists and practitioners for decades, going back at least as far as the human relations movement in the 1930s and often under the guise of the happy–productive worker thesis (Fisher, 2003; Wright et al., 2007). Central to this hypothesis is the belief that a happy worker is a productive worker. According to Judge, Thoresen, Bono, and Patton (2001), this belief is implicitly grounded in the general theoretical premise that "attitudes carry with them behavioral implications" (p. 376). The recent development of positive emotions theories (e.g., Fredickson, 2001; Isen, 2000)
provides theoretical explanations for the assumption of attitudes leading to behavior. More specifically, positive emotions theories suggest that happy people are more likely to be enthusiastic, creative, outgoing, optimistic, confident, collaborative, and persistent on uncertain tasks (Fisher, 2010; Wright & Staw, 1999). These positive affective states have been associated with improved work outcomes (R. A. Baron, Fortin, Frei, Hauver, & Shack, 1990; Christian, Garza, & Slaughter, 2011). On the other hand, unhappy people are cautious around their coworkers, are less optimistic and confident, and have lower self-esteem (Cropanzano & Wright, 2001). These negative affective states have been associated with declines in work outcomes (Quick, Quick, Nelson, & Hurrell, 1997). Research on positive emotions consistently shows that positive emotions are related to job performance (Cropanzano, James, & Konovsky, 1993; Staw & Barsade, 1993; Wright & Staw, 1999).

In addition, social exchange theory suggests that employees who receive positive treatment from the organization would experience satisfaction and feel commitment and obligation to reciprocate by engaging in behaviors that benefit the organization such as in extra-role behaviors and organizational citizenship behaviors (Meyer & Allen, 1997). It follows that satisfaction and attitudes have behavioral implications, and "it is through these behaviours and responses that organizational effectiveness can be achieved" (Ostroff, 1992, p. 964). A recent meta-analysis shows that positive attitudes (job satisfaction and organizational commitment) have been related to a composite criterion of individual effectiveness including measures of core job performance, contextual performance, lateness, absenteeism, and turnover (Harrison et al., 2006). On the other

hand, Warr's (2007) review of studies of anxiety, depression, or emotional exhaustion on performance shows that they are invariably associated with lower productivity and performance. Thus, research operationalizing well-being via a variety of measures has shown that well-being and employee performance are related. Therefore, the following hypotheses were generated:

Hypothesis 4a. Positive well-being is related to an increase in overall performance.

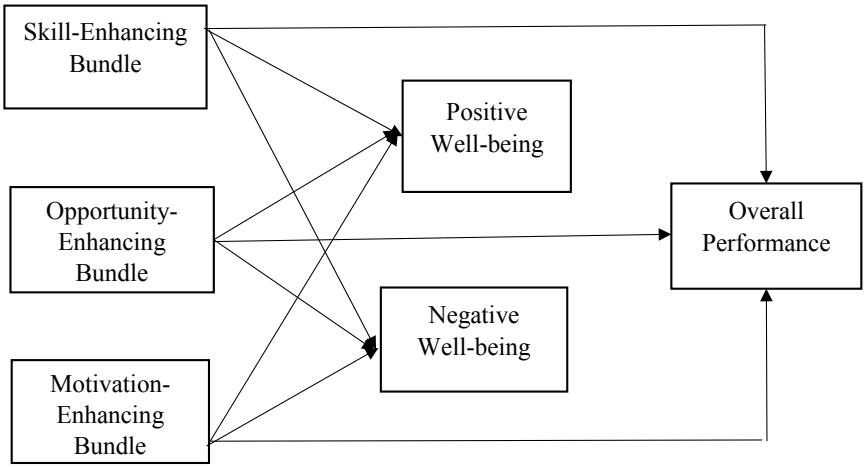
Hypothesis 4b. Negative well-being is related to a decrease in overall performance.

Finally, drawing on social exchange theory (Peter Michael Blau, 1964), we also propose that well-being mediates the relationship between the three dimensions of HRM systems (skill-, opportunity-, and motivation- enhancing bundle) and performance. According to Shaw et al. (2009), HRM practices represent the conceptual dimensions of social exchange, specifying the resources of exchange between employers and employees. Similarly, Tsui, Pearce, Porter, and Tripoli (1997) argued that employees are naturally inclined to exchange their commitment for that of the organization based on their interpretations of HRM practices. For examples, HRM practices like training, high compensation, job security, employee involvement, and information sharing reflect higher commitment from the organization, which, in turn, triggers increased positive emotional responses to the organization (i.e., increased well-being). Productivity and effectiveness follow as second-order consequences. On the other hand, if HRM practices reflect low (or lack of) commitment from the organization, employees' attachment and perceived organizational responsibility will be diminished (i.e., diminished well-being). Lower productivity and effectiveness necessarily follow. Thus, we generated the following hypotheses:

Hypothesis 5a. Positive well-being mediates the positive relationship between employee perceptions of perceived skill-, opportunity-, and motivation- enhancing practices and overall performance.

Hypothesis 5b. Negative well-being mediates the negative relationship between perceptions of perceived skill-, opportunity-, and motivation- enhancing practices and overall performance.

Figure 1. Theoretical Model of Effects of HR Bundles on Well-being and Overall Performance



Methods

Sample and Inclusion Criteria

We employed multiple search strategies to identify relevant studies. First, we searched PsycINFO, ABI/INFORM, Web of Science, Google, and Google Scholar using the combinations of the search terms of these four groups: (a) human resource management practices/systems, high performance work practices/systems, high-commitment employment practices/systems, and high-involvement employment practices/systems; (b) employee perception, employee experiences, employee ratings, and employee perspectives, perceived and experienced; (c) positive/negative well-being, stress, anxiety, fatigue, burnout, work overload, exhaustion, work intensification, job satisfaction, organizational citizenship behavior, commitment, trust, social support, cooperation, and leader–member exchange; and (d) turnover, performance, profit, service, quality, and outcome. Second, we scanned the reference lists of relevant reviews (e.g., Van De Voorde et al., 2012) as well as meta-analyses (e.g., Kaifeng et al., 2012; Subramony, 2009). Finally, as a further step, we performed manual searches of relevant journals such as *International Journal of Human Resource*

Management, *Human Resource Management*, *Human Resource Management Journal*, *Applied Psychology*, *Academy of Management Journal*, *Journal of Management*, and *Personnel Psychology*.

To be included in the meta-analysis, studies had to (a) measure HRM practices at the employee level (i.e., employee perception or experiences of HRM practices). We excluded firm-level studies where HRM practices were rated by HRM managers (e.g., Huselid, 1995). This restriction reflects the objective of the paper, examining the effects of employee perceptions of HRM practices on well-being from the employee perspective, (b) analyze at least two of the constructs included in our theoretical model, and (c) report sufficient information for the calculation of effect sizes. Finally, meta-analysis requires statistically independent samples (Schmidt & Hunter, 2004). Thus, when encountering studies that used the same sample in multiple articles, we selected only the one with the most information to avoid overrepresentation bias. On the other hand, when encountering studies that used two or more independent samples, we considered these independent samples separately. The above criteria yielded a sample of 80 studies. Of these 80 studies, 8 did not contain at least three correlations, a criteria required for a meta-analytic SEM. The final sample included 72 studies, representing 89,027 employees.

Measure

Perceived HRM system. Perceived HRM system refers to employee perceptions or experiences of HRM practices and can be measured in four different ways: presence, intensity, value, and attributions of HRM practices. The current paper focuses on the perceived presence of HRM practices, which is the most common way of measuring HRM practices in the literature (Boselie et al., 2005). Employees were typically asked to assess the presence or absence of certain HRM practices, for example, "A rigorous selection process is used to select new recruits" and "I am provided with sufficient opportunities for training and development." We identified 13 HRM practices frequently mentioned in the literature to measure employee perceptions of HRM system. To be consistent with prior research (e.g., Appelbaum et al., 2000; Guest, 1997; Kaifeng et al., 2012; Subramony, 2009), we categorized these practices along three bundles: skill-, motivation-, and opportunity-enhancing HRM bundles (i.e., the AMO model).

Well-Being. Well-being was measured in two dimensions: positive well-being (e.g., job satisfaction, commitment, organizational citizenship behavior, trust, social support, cooperation, and leader-member exchange) and negative well-being (e.g., stress, anxiety, fatigue, burnout, work

overload, and exhaustion) (for more details and theoretical justifications, review the well-being definition section).

Overall performance. Overall performance was measured by two dimensions of performance: intention to quit and job performance (e.g., task performance, creativity, quality, and customer-orientated behavior).

Meta-Analysis Procedure

We used meta-analytic SEM to examine our theoretical model. To examine our theoretical model through meta-analytic SEM, we generated a pooled correlation matrix used as input for an SEM path analysis. Following Schmidt and Hunter's (2004) recommendations, we corrected each pooled correlation for sampling error and measurement error. First, we performed sampling error corrections by weighting each correlation by its associated sample size. Second, we performed measurement error corrections for independent and dependent variables using Cronbach's alpha coefficients, which capture reliability. For studies that did not report reliability information, we used the weighted mean of available reliabilities. When variables were measured objectively or with archival data, we followed Schmidt, Hunter, and Outerbridge (1986) and De Jong, Dirks, and Gillespie (2016), assuming perfect reliability and imputing a reliability of 1.

If a study reported multiple correlations of the same relationship, we computed a composite correlation using the formula provided by Schmidt and Hunter (2004, p. 435-439) and used it as the effect size for the study. According to Viswesvaran and Ones (1995), composite correlations are a more valid construct than the average of the component correlations, as "the use of composite correlations does not distort the sampling error variance estimates in a meta-analysis" (p. 873), but the average of the component correlations does. Furthermore, Subramony (2009) argued that "simple averaging assumes that the effect sizes within a study are independent" (p. 753); that is, the practices constituting a HRM bundle are not correlated with each other, an assumption that does not fit well with the concept of bundling.

We acted according to Schmidt and Hunter's (2004) recommendations using 95% confidence intervals to test the significance of the results. Confidence intervals describe the uncertainty of the mean effect size by estimating the range of values within which we can conclude with 95% confidence that the true effect actually lies. In addition, if the 95% confidence interval does not include zero, we can conclude that the effect size is statistically significant ($p \leq 0.05$).

We also compute the I^2 statistic to assess the existence of potential moderators using the formula $I^2 = \left(\frac{Q-df}{Q}\right) x\ 100\%$, where Q is the chi-squared statistic and df is its degrees of freedom. For example, 0% to 40% of I^2 means heterogeneity might not be important. On the other hand, 30% to 60% of I^2 means moderate heterogeneity and, hence, the possible presence of moderators. Although examining moderators are outside of the scope of the present study due to the complexity of the model tested, we agree with Colquitt, LePine, and Noe (2000) that reporting when moderators may be present or absent would make our results more informative as well as identify directions for future research.

Given that the sample sizes of each cell were different, we followed the recommendation of Viswesvaran and Ones (1995) to use the harmonic mean of the matrix sample sizes rather than the arithmetic mean. "The harmonic mean gives much less weight to substantially large individual study sample sizes and so is always more conservative than the arithmetic mean" (Colquitt et al., 2000: 694; Viswesvaran & Ones, 1995).

For assessing data-model fit, we reported the following criteria: χ^2, TLI, CFI, RMSEA, SRMR, and AIC. According to Hu and Bentler (1999), a CFI ≥ .95 with a SRMR ≤ .09 or a RMSEA ≤ 0.06 with an SRMR ≤ 0.09 are indictors of a good fit to the data. Finally, we used R (version 3.3.1) to perform the meta-analytic SEM with maximum likelihood as the estimation method.

Results

Prior to analysis, we assessed the data-model fit of the theoretical model and the alternative model in which covariances between the three HRM bundles were added to the theoretical model. The fit indexes of the theoretical model indicate a poor fit (χ^2 = 537.0378; *df* = 4; TLI= -.33; CFI= .65; SRMR= .21; RMSEA= .03; AIC= 529.0378). The fit indices of the alternative model indicate a good fit (χ^2 = 9.8104; *df*= 1; TLI= .91; CFI= .99; SRMR= .04; RMSEA= .01; AIC= 7.8104). Therefore, we used this model to test our hypotheses.

Table 2 summarizes the correlation results of the relationships between HRM bundles, positive/negative well-being and overall performance. Figure 2 presents the standardized path estimates for the final mediating model. Hypotheses 1c, 2c, and 3c predicted a positive relationship between perceived skill-, opportunity-, and motivation-enhancing practices and performance. As shown in Figure 2, employee perceptions of skill- and motivation-enhancing bundles had a positive

and non-significant relationship with overall performance (rc=03, p>.05; rc=09, p>.05, respectively), and employee perceptions of an opportunity-enhancing bundle had a negative and non-significant relationship with overall performance (rc=-.05, p>.05). Thus, hypotheses 1c, 2c, and 3c were not supported. In hypotheses 1a, 2a, and 3a, we proposed a positive relationship between employee perceptions of skill-, opportunity-, and motivation-enhancing bundles and positive well-being. Conversely, in hypotheses 2a1 and 3a1, we proposed a negative relationship between employee perceptions of opportunity- and motivation-enhancing bundles and positive well-being. The results in Figure 2 show that employee perceptions of skill-, opportunity-, and motivation-enhancing bundles had a positive and significant relationship with positive well-being (rc=25, p<.05; rc=30, p<.05; rc=12, p<.05, respectively). Thus, hypotheses 1a, 2a, and 3a were supported, but not hypotheses 2a1 and 3a1. Hypotheses 1b, 2b, and 3b predicted a negative relationship between employee perceptions of skill-, opportunity-, and motivation-enhancing bundles and negative well-being. Conversely, hypotheses 2b1 and 3b1 predicted a positive relationship between employee perceptions of opportunity- and motivation-enhancing bundles and negative well-being. As shown in Figure 2, although employee perceptions of skill-, opportunity-, and motivation-enhancing bundles had a negative relationship with negative well-being (rc=-.07; rc=-.15; rc=-.00, respectively), the relationships were not significant (p>.05). Thus, hypotheses 1b, 2b, 3b, 2b1, and 3b1 were not supported. In hypothesis 4a, we predicted that positive well-being would enhance performance, whereas in hypothesis 4b, we predicted that negative well-being would decrease performance. Figure 2 shows that positive well-being had a positive and significant relationship with overall performance (rc=38, p<.05), and negative well-being had a negative and significant relationship with overall performance (rc= -21, p<.05), consistent with our predictions.

Finally, hypothesis 5a predicted that positive well-being would mediate the relationship between employee perceptions of skill-, opportunity-, and motivation-enhancing bundles and overall performance. On the other hand, hypothesis 5b predicted that negative well-being would mediate the negative relationship between employee perceptions of skill-, opportunity-, and motivation-enhancing bundles and overall performance. Given that the indicted path via negative well-being (hypothesis 5b) does not meet one of the statistical requirements for mediation, the cause being significantly related to the mediator (R. M. Baron & Kenny, 1986), we did not perform a mediation test for hypothesis 5b, but only for 5a. In order to test mediation, we simultaneously tested the direct and indirect paths of the independent variables on the dependent variables.

Mediation can be inferred from the test if the indirect path is significant. The results showed that all the indirect paths between employee perceptions of skill-, opportunity-, and motivation-enhancing bundles and overall performance were significant (rc=.09; rc=.11; rc=.05, respectively; all *p*-values were less than .05). In other words, the results suggest that positive well-being partially meditated the positive relationships between employee perceptions of perceived skill-, opportunity-, and motivation-enhancing bundle and overall performance. Hypothesis 5a was thus supported.

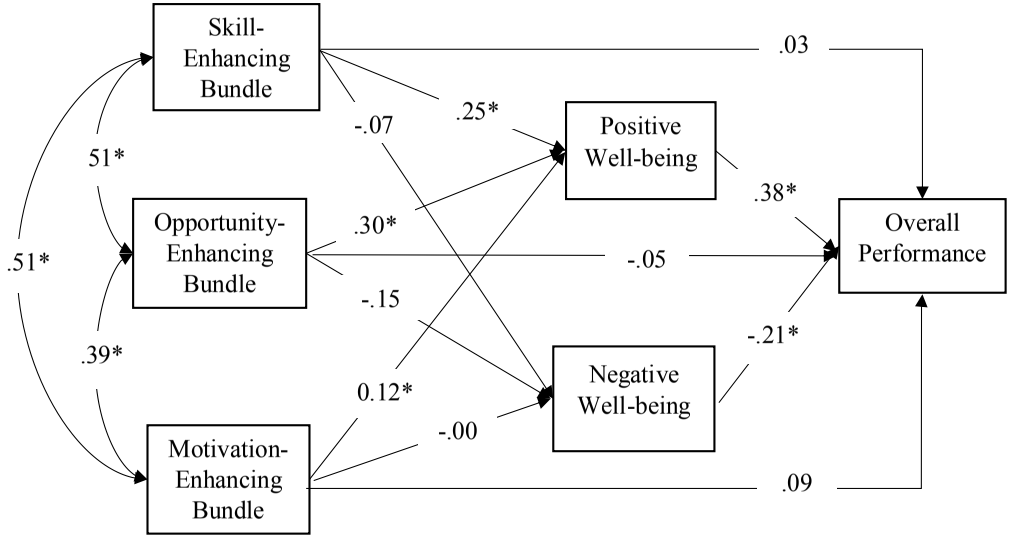
Table 1

Meta-analytic Correlations between HRM Bundles, Well-being, and Overall Performance

Variables	1	2	3	4	5	6
1. Skill-Enhancing Bundle (r, rc)	1					
2. Opportuntiy-Enhancing Bundle (r, rc) *K (N)* 95% CI I^2 (Q statistic)	.51, .64 15 (9452) .53: .75 .99	1				
3. Motivation-Enhancing Bundle (r, rc) *K (N)* 95% CI I^2 (Q statistic)	.51, .64 22 (13186) .57: .72 .99	.39, .49 27 (46963) .39: .59 .99	1			
4. Positive Well-being (r, rc) *K (N)* 95% CI I^2 (Q statistic)	.46, .55 16 (9289) .50: .61 .92	.46, .57 27 (56392) .49: .64 .99	.36, .45 33 (51257) .38: .52 .98	1		
5. Negative Well-being (r, rc) *K (N)* 95% CI I^2 (Q statistic)	-.04, -.05 8 (6763) -.27: .17 .99	-.14, -.18 16 (21879) -.31: -.06 .99	-.08, -.10 19 (22150) -.23: .04 .99	-.25, -.30 25 (26987) -.43: -.17 .99	1	
6. Overall Performance (r, rc) *K (N)* 95% CI I^2 (Q statistic)	.25, .30 11 (6472) .17: .44 .98	.21, .27 17 (43914) .17: .36 .98	.24, .29 21 (39947) .20: .38 .98	.42, .49 37 (62112) .41: .57 .99	-.25, -.30 20 (15523) -.41: -.19 .99	1

Note. r= mean sample-size-weighted correlation; rc=mean sample-size-weighted correlation, corrected for measurement error; *K*= number of studies used for each estimate; *N*= total sample size; 95% CI= 95% confidence interval around the mean sample-size-weighted corrected correlation (rc); I^2 = the percentage of variation across studies due to heterogeneity and it can be computed from Q following the equation: $I^2 = \left(\frac{Q-df}{Q}\right) X\ 100\%$, where Q is the chi-squared statistic and df is its degrees of freedom; 0% to 40% of I^2 means heterogeneity might not be important; 30% to 60 % of I^2 means moderate heterogeneity and, hence, possible presence of moderators.

Figure 2. Final Model of Effects of HRM Bundles on Well-being and Overall Performance



Note. Standardized coefficients are presented.

* $P < .05$

Discussion

In this paper, we used meta-analysis to answer one of the critical questions HRM scholars are facing today: Are HRM systems good or bad for employee well-being? We found that employee perceptions of HRM systems are positively associated with positive well-being but unrelated to negative well-being. We also found that positive well-being mediates the positive relationship between employee perceptions of HRM systems and overall performance. In addition, we found that positive well-being is associated with overall performance and that negative well-being is negatively associated with overall performance. Our results have several implications.

Research Implications

The question of whether HRM systems are good or bad for employee well-being has been a matter of lively debate recently (Peccei et al., 2013). Some HRM scholars have argued that employers and employees both benefit from HRM systems (e.g., Kochan & Osterman, 1994; Levine, 1995; Pfeffer, 1998) while others have claimed that HRM systems only benefit employers but not employees (e.g., Delbridge & Tumbull, 1992; Godard, 2001; Legge, 1995). This disagreement has been to referred to by Harley, Sargent, and Allen as the "good vs bad" debate (2010, p. 741). Empirical results of different studies on the question have typically been conflicting; and according to Hunter and Schmidt (2004), the most prevalent and often the only reason, is sampling error. Further, other methodological artifacts (e.g., measurement error) are also found to cause variance in results across studies (Hunter & Schmidt, 1990). Hunter, Schmidt, and Jackson (1982) argue directly that researchers must first correct for sampling error via meta-analysis before looking for supposed moderators that have caused the conflicting findings. Our study is the first meta-analysis to contribute to the "good vs bad" debates. Correcting for sampling error and measurement error, we found that perceived HRM systems (measured by skill-, opportunity-, and motivation-enhancing bundles) enhance employee well-being and we believe these findings distinguish our study from others on two accounts; first, our findings are based on the combination of existing research (i.e., a meta-analysis), which is considered to be more scientifically valid than individual empirical studies (Garg, Hackam, & Tonelli, 2008; Hunter & Schmidt, 1990). Second, the findings are based on the workers' verdict, which has been argued to have more credit than management's (Delbridge & Keenoy, 2010; Farndale, Hope-Hailey, & Kelliher, 2011; Paauwe,

2009). While our finding may not settle the "good vs bad" debates, it does not support critical scholars who argue that HRM leads to worker exploitation. Furthermore, our finding that HRM systems have *favorable, rather than debilitating*, effects on employee well-being, suggests that the current body of research regarding the HRM systems/well-being relationship are not as conflicting as previously thought, and that useful and sound general conclusions can be drawn from existing research, at least research findings based on individual employee-rated measures of HRM studies. Such empirical finding is important for theory development, as it plays a central role in confirming, revising, or discrediting existing competing theories and providing a firm ground for development of new theory (Popper, 2005).

Our study also contributes to the wider black box debate in the field. Earlier research has tended to adopt a macro perspective, proposing a direct relationship between HRM and firm performance. While macro-level research can establish the link between the HRM and performance, convincing theoretical explanations are lacking (D. E. Guest, 2011). Recently, it has been generally accepted that if we are to gain a deeper understanding of how HRM translates into firm performance, we need to listen to employee voices, focusing on HRM systems as perceived by employees themselves (i.e., at the micro level) rather than as described by management (i.e., at the macro level) (Delbridge & Keenoy, 2010; Farndale et al., 2011; Kuvaas, 2008; Paauwe, 2009). There are, at least, three main reasons for why we should focus on the voices of employees rather than those of management. First, HRM practices do not directly influence firm performance, but rather influence it indirectly via employee attitudes and behavior (Becker et al., 1997; Guest, 1997). In other words, employees are the primary recipients and consumers of HRM initiatives (Clark, Mabey, & Skinner, 1998; Storey & Sisson, 1989). Paying attention to the voices of those at the receiving end is critical in that sense. Second, an employee is an agent "who constantly appraises the work situation, evaluates the merits of the context, and formulates an attitude based on these conditions" (Staw, 1986, p. 42). For example, Nishii, Lepak, and Schneider (2008) showed that employees tend to adjust their attitudes and behaviors according to their interpretation of the aims and intentions of HRM policies and practices. For this reason, we need to go beyond the intended HRM policies and practices reported by management and focus on the relevance and role of employee in sharping the outlook of the organization's HRM initiatives. Finally, employees' perceptions of HRM practices have more influence on their attitudes and behavior than the practices themselves (D. E. Guest, 1999; Meyer & Allen, 1997). Indeed, empirical evidence

suggests that there are substantial differences between intended HRM practices (as reported by management) and implemented HRM practices (as perceived by employees) (Khilji & Wang, 2006; Liao et al., 2009). Nevertheless, researchers sometimes do not distinguish between intended and implemented HRM practices, assuming that just because HRM policies and practices are described in an organization's HRM strategy, they are perceived as such by employees (Alfes, Shantz, Truss, & Soane, 2013; Gratton & Truss, 2003). In sum, theory and empirical evidence suggest that "we do not understand the HRM process unless we have studied what workers think of it" (Boxall, 2014, p. 583). Thus, Clark et al. (1998) and Legge (1998), early on, observed that employee voices were under-represented in the HRM literature. Our study restores this unbalance by including only employee voices (i.e., employee-level studies) in our sample.

Central to the happy–productive worker is the assumption that happy workers are more productive than unhappy workers. The pursuits of the happy–productive worker typically involved the search for a relationship between satisfaction and productivity (Wright & Cropanzano, 2000). Although the happy–productive worker is intuitively appealing, earlier qualitative and quantitative reviews of the satisfaction-performance relationship (e.g., Brayfield & Crockett, 1955; Iaffaldano & Muchinsky, 1985; Petty, McGee, & Cavender, 1984; Vroom, 1964) have shown that the relationship, while being positive, was relatively weak. For example, in his classical study, Vroom (1964) reported that the median correlation between satisfaction and performance was .14. A subsequent, highly influential meta-analytic review by Iaffaldano and Muchinsky (1985) confirmed that the relationship between satisfaction and performance was modest, with an average true score correlation of .17. Consequently, many researchers questioned the usefulness of continued research on the happy–productive worker relationship (e.g., Brief, 1998; Côté, 1999; Katzell, Thompson, & Guzzo, 1992; Landy, 1989), labelling it either as an "illusory correlation" (Iaffaldano & Muchinsky, 1985, p. 270) or "bordering on the trivial" (Landy, 1989, p. 481), and, to some extent, treating it as "a comfortable 'old shoe,' one that is unfashionable and unworthy of continued research" (Roznowski & Hulin, 1992, p. 124). However, Wright and Cropanzano (2000) argued that the findings of the earlier meta-analytic reviews should be treated with a necessary dose of skepticism as they suffered from several conceptualization and method limitations. Similarly, Judge et al. (2001) also suggested that we might "have erroneously accepted conclusions about the magnitude of the job satisfaction and job performance relationship" (p. 383). To support their view, Judge et al. (2001) showed, in their recent meta-analysis, that the mean true correlation

between overall job satisfaction and job performance was .30 after correcting for sampling errors and internal consistency unreliability. Our meta-analysis estimated the true correlation at .38. In other words, our result, like Judge et al.'s (2001), suggests that the estimates are large enough to have a sizeable effect on performance. Given the importance of this topic, it could be time to revise the skepticism regarding the happy–productive worker thesis.

Finally, as noted by Chamberlin (1965), simultaneous evaluation of multiple working hypotheses increases our scientific understanding because it combats bias in science, "the tendency to fall in love with any one of several carefully constructed hypotheses" (Raup & Chamberlin, 1995, p. 349). Similarly, Klayman and Ha (1987) argue that researchers often adopt what they call *a positive strategy*, selectively examining instances or cases that they expect to be confirmed. In light of researchers' disposition toward a single, popular hypothesis, they "should try to develop tenable hypotheses for the phenomenon of interest from as many conceivable perspectives as possible" (Chamberlin, 1965; Miller & Tsang, 2010, p. 142-3). The history of natural science demonstrates that testing competing hypotheses is an effective means of advancing scientific understanding (Losee, 2005). Although some HR researchers (e.g., Delery & Doty, 1996) have given equal weight to several competing hypotheses, this is a rare occurrence in the literature. Our study is among the first to adopt the method of multiple working hypotheses.

Practical Implications

This study also offers practical implications. First of all, firms can benefit from investments in employee well-being, as our findings suggest that happy employees are more productive than unhappy employees. Specially, we found that increasing positive well-being by one standard deviation increases overall performance by .38 of a standard deviation, whereas increasing negative well-being by one standard deviation decreases overall performance by .21 of a standard deviation. Thus, firms should take employee well-being seriously, as it has a significant impact on employees' overall performance and thereby indirectly on the survival of organizations. In addition, our study shows that bundling several HRM practices into a coherent system yields a stronger impact on well-being than introducing a smaller set of HRM practices/bundles in isolation. For example, we found that one standard deviation increase in the use of HRM systems relates to a .51 standard deviation increase in positive well-being compared to .25, .12, and .30 for skill-, motivation-, and opportunity-enhancing bundles, respectively. Given that increasing well-being is synonymous with increasing performance, this finding suggests that firms should invest in all three

HRM bundles (i.e., HRM systems) to utilize the positive returns to the fullest extent. This is not to say that adopting a smaller set of HRM practices/bundles in isolation does not yield any positive returns. As indicated by our results, employee perceptions of all three HRM bundles were positively related with (positive) well-being but with different magnitudes; perception of the opportunity-enhancing bundle is most strongly related to well-being, followed by the skill-enhancing and motivation-enhancing bundles. Thus, firms can still benefit from investing in bundles of practices. However, it is advisable, especially for firms having financially limited resources, to invest in the opportunity-enhancing bundle of practices (e.g., self-managed teams, autonomy, skill flexibility, job variety, responsibility, and involvement in decision making) where the strongest positive return on investment is expected.

Limitations and Future Research

We acknowledge that our study has several limitations. First, while our theoretical model implies causality, most of the studies included in the analysis have cross-sectional designs, thereby preventing us from drawing causal conclusions regarding the direction of the tested mechanism. Clearly, there is a need for more longitudinal studies that collect information on HRM practices, well-being, and performance at different points in time. Future meta-analysis can test our theoretical model with a longitudinal research design to see if it will yield the same results. Second, whereas we were able to test the additive synergies comparing HRM systems and individual bundles, we were unable to explore multiplicative synergies among the three bundles due to a lack of a sufficient number of relevant studies. Theoretically, the three HRM bundles are complementary, with the effect of one bundle depending on the existence of the others. For example, it can be argued that the skill-enhancing bundle and opportunity-enhancing bundle are complementary. The purpose of the skill-enhancing bundle is to enhance the collective knowledge, ability, and skill levels (or collective human capital). However, a high level of human capital has a limited effect if highly skilled employees are not empowered to use their skills to achieve organizational objectives. On the other hand, the purpose of the opportunity-enhancing bundle is to provide a mechanism through which employees can use their knowledge, skills, and abilities in performing their roles. Thus, combining these two bundles would create combined synergistic effects that are substantially greater than those of individual bundles in isolation. We therefore encourage more studies examining the synergistic relationships between bundles. Future meta-

analysis can explore whether a combination of various bundles can create an even larger effect than individual bundles in isolation.

Finally, our study only focused on the relationships between HRM, well-being, and performance at the individual level (i.e., employee voices). However, we acknowledge that examining the same relationship at the organizational or business unit level may also be interesting, especially as the preliminary evidence suggests that there are substantial differences between the practices reported by management and those perceived/experienced by employees (Khilji & Wang, 2006; Liao et al., 2009). Thus, exploring the HRM/well-being/performance relationship both at the employee level and at the organizational level would deepen our understanding of HRM processes. We therefore encourage scholars to explore this issue in future research.

In conclusion, this study contributes to two of the most controversial debates in the literature. One is whether HRM systems are good or bad for employee well-being, labeling it as the "good vs. bad" debate. Another is whether happy employees are more productive than unhappy employees, better known as the "happy–productive" debate. We have thrown one of the first stones into these debates. We hope that more will be thrown in the future.

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(Articles used in the meta-analysis are marked with an asterisk)

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APPENDIX

CODING OF STUDIES INCLUDED IN THE META-ANALYSIS

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Alfes, Shantz, and Truss, (2012)	Perceived HRM practices				Orgamizational citizenship behaviour, Well-being		Turnover intentions	Task performance
Alfes, Shantz, Truss and Soane, (2013)	Perceived HRM practices				Engagement, perceived organisational support, organisational citizenship behaviour		Turnover intentions	
Alfes, Truss, Soane, Rees, and Gatenby, (2013)	Perceived HRM Practices				Engagement			Self-Report Task Performance
Ang, Bartram, McNeil, Leggat, and Stanton, (2013)	Employee high-performance work systems				Affective commitment, Engagement, Job satisfaction, Trust in supervisor		Intention to leave	
Avey, Luthans, and Jensen (2009)						Stress Symptoms	Intentions to Quit	
Baer, Dhensakahlon						Perceived workload,		Job performance

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
, Colquitt, Outlaw, and Long (2015)						Emotional exhaustion		
Boon, Belschak, Den Hartog, and Pijnenburg, (2014)			Employment relation	Appraisal & reward	Extra effort, Satisfaction		Absence	
Boon, Den Hartog, Boselie, and Paauwe (2011)	Perceptions of HR practices				Organisational commitment, Organisational citizenship behaviour, Job satisfaction		Intention to leave	
Boon and Kalshoven (2014)	Perceived High-commitment HRM				Work engagement, Organizational commitment			Task proficiency
Boon, Arumugam, Safa, and Bakar (2007)		Training and development	Employee participation, Empowerment, Teamwork, Communication	Reward and recognition	Job involvement			
Boxall and Macky (2014)		Knowledge	Power-autonomy, Information	Rewards	Job satisfaction, Trust in management, Co-worker trust, Supervisor support	Stress, Fatigue, Overload		

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Carvalho and Chambel (2014)	High Performance Work System perceptions				Supervisor support	Job demands		
Castanheira and Chambel (2010)		Training	Participation	Performance-related pay		Quantitative demands, Exhaustion		
Chandler, Keller, and Lyon (2000)				Reward System Support	Managerial Support	Workload Pressure		
Chiang, Birtch, and Kwan (2010)			Job control	Work-life balance practices		Job demands, Job stress		
Chien, Lawler, and Uen (2010)				Performance-based pay				Task performance
Conway (2004)		Resourcing; Training	Involvement, Job design, Teamwork	Career development, Performance management, Job security, Reward	Affective			
Conway, Fu, Monks, Alfes, and Bailey (2016)			Employee voice	Performance management	Employee engagement	Emotional exhaustion		
Cook (2009)				Work–family policies	Supervisory support perceptions, Job satisfaction	Job burnout	Intention to turnover	

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Den Hartog, Boon, Verburg, and Croon (2013)	Employee-rated HRM				Satisfaction			Perceived performance
De Jonge, Reuvers, Houtman, Bongers, and Kompier (2000)			Decision authority		Job satisfaction, Social suport	Emotional exhaustion, Depression, Psychosomatric health complaints	Sickness absence frequency, sickness absence duration	
Devonish (2013)					Job satisfaction, Citizenship behavior	Workplace bullying, Depression		Task performance
Devonish (2014)						Job demands, Workplace bullying, Physical exhaustion, Depression	Uncertified absence	
Edwards (2009)			Autonomy, Involved communication	Distributive justice, Advancement	Motivating manager, Perceived organisational support	Pressure, Job stress		
Ehrnrooth and Björkman (2012)	HRM process				Psychological empowerment	Work load		Core job performance, Creativity
Fan, Cui, Zhang, Zhud,		High performance	High performance	High performance		Burnout		

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Hartelel, and Nyland (2014)		work systems-ability	work systems-opportunity	work systems-motivation				
Gavino, Wayne, and Erdogan (2012)		Training and Development, Selective Staffing	Decision making, Participation	Pay for performance, Performance Management, Promotional opportunities	Perceived organizational support, Organizational Citizenship Behavior			Customer Commitment
Gellatly, Hunter, Currie, and Irving (2009)		Development-oriented HRM practices		Stability-oriented HRM practices, Reward-oriented HRM practices	Affective commitment			
Gelsema, Van Der Doef, Maes, Akerboom, and Verhoeven (2005)			Communication, Skill discretion, Decision authority	Reward	Support supervisor, Support colleagues, Job satisfaction	Work/time pressure, Emotional exhaustion, Psychological distress, Somatic complaints		
Giauque, Anderfuhren-Biget, and Varone (2013)			Job enrichment, Participation	Job security, performance-related pay, Career development, Individual appraisal	Organizational commitment			Perceived efficiency

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Gould-Williams (2003)	Perceived HR practices				Commitment, Satisfaction			Percieved performance
Gould-Williams (2004)		Opportunities for training, Rigorous selection process	Involvement, Job variety, Team working, Communication, Empowerment	Job security, Pay for performance	Commitment, Motivation, Satisfaction, Relation with boss, Relation with colleagues		Intention to quit	
Gould-williams, Bottomley, Redman, Snap, Bishop, Limpanitgul, and Mostafa (2014)	Perceived high commitment human resource practices				Job satisfaction, Affective commitment	Work overload	Intention to quit	
Gulzar, Moon, Attiq, and Azam (2014)	High Performance work system					Anxiety, Job Burnout, Role Overload		Counterproductive Work Behavior
Harley, Allen, and Sargent (2007)		Selection, Training	Autonomous team membership, Organizational communication, Say in decisions, Job characteristics	Rewards	Affective commitment, Job satisfaction	Psychological strain, Work effort	Turnover intention	

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Harley, Sargent, and Allen (2010)		Training	Autonomous Team Membership, Job Characteristics	Performance Management	Commitment, Satisfaction	Emotional exhaustion		
Juhdi, Pa'wan, and Hansaram (2013)			Job control	Career management, Compensation, Performance appraisal	Organizational commitment, Organizational engagement		Turnover intention	
Jung, Yoon, and Kim (2012)						Burnout	Turnover intent	
Jyoti, Rani, and Gandotra (2015)		Extensive training, Competence development	Empowerment	Performance-based compensation, Performance management		Emotional exhaustion	Intention to leave	
Kazlauskaite, Buciuniene, and Turauskas (2011)			Organisational empowerment		Psychological empowerment, Job satisfaction, Affective commitment			Customer-oriented behaviour
Knies and Leisink (2014)	Supportive HR practices				Commitment			Extra-role behaviour

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Kuvaas (2008)		Perception of training opportunities		Perception of career development, Perception of performance appraisal	Perceived organizational support, Affective commitment		Turnover intention	Individual work performance
Kuvaas and Dysvik (2010)			Information sharing, Empowerment	Fair compensation	Intrinsic motivation, Affective commitment,		Turnover intention	Individual work performance
Latorre, Guest, Ramos, and Gracia (2016)	Perceived HR practices				Perceived organizational support, Job satisfaction			Employee performance
Lu, Kao, Chang, Wu, and Cooper (2008)			Autonomy	Personal leave	Job satisfaction, Organizational commitment	Workload		
Luna-Arocas and Camps (2007)			Job enrichment	Job stability	Job satisfaction, Employee commitment		Turnover intentions	
Maden (2015)		Competency development	Empowerment, Information sharing	Recognition, Fair reward				Individual innovation
McNall, Masuda, and Nicklin (2009)				Flexible work arrangement	Job satisfaction		Turnover	

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Mellor, Moore, and Siong (2015)						Role Overload, Emotional Exhaustion	Intention to Quit	
Meyer and Smith (2000)		Training		Performance appraisal, Benefits, Career development	Organizational support, Affective commitment			
Paré and Tremblay (2007)		Competence development	Empowerment, Information sharing	Fair rewards, Salary	Affective commitment, Organizational citizenship behavior		Turnover intentions	
Riordan, Vandenberg, and Richardson (2005)		Training	Participative Decision Making, Information Sharing	Performance-Based Rewards	Organizational Commitment, Job Satisfaction, Climate of Involvement		Turnover	
Schreurs, Guenter, Schumacher, Van Emmerik, and Notelaers (2013)			Information sharing, Participation in decision making	Pay-level satisfaction	Job satisfaction, Affective commitment		Turnover intention	
Siegall and McDonald (2004)					Satisfaction	Burnout, Emotional Exhaustion, Depersonalization	Intent to leave	

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Singh, Burke, and Boekhorst (2016)						Exhaustion, Psychosomatic symptoms, Work intensity	Intent to quit	
Sommer and Kulkarni (2012)				Feedback, Opportunities for Advancement	Positive Affect, Job Satisfaction	Negative Affect		
Sun and Pan (2008)	HR practices				Job satisfaction	Emotional exhaustion		Job performance
Takeuchi and Takeuchi (2013)	HRM practices	Staffing, Training		Appraisal, Compensation	Affective organizational commitment, Job involvement		Turnover intention	Job quality improvement
Thanacoody, Newman, and Fuchs (2014)					Affective commitment	Emotional exhaustion	Turnover intentions	
Thompson and Prottas (2006)			Job autonomy	Family benefits, Alternative schedule	Supervisor, Coworker, Job satisfaction	Job pressure, Stress and well-being	Turnover intention	
Tourigny, Baba, Han, and Wang (2013)					Affective organizational commitment	Emotional Exhaustion	Turnover intention	Job performance
Veldhoven (2005)				Career possibilities, job security	Affective organizational commitment	Work speed and quantiy, Job strain		

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Tremblay, Cloutier, Simard, Chênevert, and Vandenbergh e (2010)		Skills development	Top-down information, Bottom-up information	Non-monetary rewards, Performance feedback	Affective organizational commitment			In-role behaviors
Wang and Hwang (2012)		HRM staffing system perceptions, HRM development system perceptions		HRM compensation system perceptions	Task satisfaction, Affective commitment			
Wegge, Dick, Fisher, West, and Dawson (2006)			Autonomy, Participation		Supervisory support, Positive emotions, Job satisfaction, Affective commitment	Overload, Negative emotions, Health complaints		
Yamamoto (2013)		Training & development, Careful recruiting		Fair appraisal, Job security, Employee benefits			Turnover intention	
Yu and Egri (2005)		Recruitment, Employee selection, Training		Performance management, Compensation, Job security	Affective commitment, Job satisfaction			

Study	HRM System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Positive Well-being	Negative Well-being	Overall Performance	
							Turnover	Job Performance
Zatzick and Iverson (2011)	High-involvement work systems				Job satisfaction		Absenteeism (log)	
Zerbe, Dobni, and Harel (1998)		Training		Rewards, Career opportunities, Performance appraisal		Work demands		Service behaviour
Zhang and Agarwal (2009)	Psychological contract Fulfilment		Empowerment, Communication		Organizational citizenship behaviour		Turnover intention	
Zhang, Zhu, Dowling, and Bartram (2013)	High-performance work systems				Job satisfaction, Work engagement	Emotional exhaustion		

Chapter 4
The Devil Is in The Details: Performance Implications of Internally Consistent Commitment HRM systems
(study 3)

Abstract

An important assumption in research on the HRM-organizational performance relationship is that the HRM systems need to consist of internally consistent HRM practices that enhance and complement each other and create mutually reinforcing, synergistic effects. Due to the different theoretical frameworks, conceptualizations, definitions, and operationalizations of HRM systems, we do not know whether the systems investigated in prior research actually represent practices that create synergies and whether the level of internal consistency matters for organizational performance. To reduce this conceptual and methodological ambiguity, we conduct a meta-analysis of the level internally consistent commitment HRM systems and operational and financial performance and voluntary turnover. Statistical aggregation of 97 studies reveals a stronger relationship between high levels of internally consistent commitment HRM systems and operational and financial performance than between moderate/low levels of internally consistent commitment HRM systems and operational and financial performance. The level of internally consistent commitment HRM systems did not, however, relate to voluntary turnover. The implications for research and practice and future research directions are discussed.

Keywords: commitment HRM systems; organizational performance; meta-analysis

Introduction

Several narrative and quantitative reviews have led to the conclusion that there is a positive association between HRM systems and various measures of organizational performance (e.g., Combs, Liu, Hall, & Ketchen, 2006; Jackson, Schuler, & Jiang, 2014; Paauwe, Wright, & Guest, 2013; Rabl, Jayasinghe, Gerhart, & Kuhlmann, 2014; Subramony, 2009). For example, the meta-analysis by Combs et al. (2006) reported a relationship between HRM systems and organizational performance that was twice as strong as the relationship between individual HRM practices and organizational performance. A central tenet in this research is that the HRM systems (or subsystems/bundles) need to consist of internally consistent HRM practices that enhance and complement each other and create mutually reinforcing, synergistic effects, also referred to as horizontal fit (Wright & McMahan, 1992). It is even assumed that changes in single practices or the implementation of inconsistent practices have no, or even negative, performance implications (B. E. Becker, Huselid, Pickus, & Spratt, 1997; Jiang, Lepak, Han, et al., 2012). However, we currently do not know whether the systems investigated in prior empirical research actually represent practices that create synergies to obtain a whole that is more than the sum of its parts and whether the level of horizontal fit or internal consistency matters for organizational performance.

There is no agreed-upon conceptualization or definition of HRM and there is no list of what HRM practices to include in empirical studies (Paauwe, 2009; Posthuma, Campion, Masimova, & Campion, 2013; Wright & Ulrich, 2017). According to Boselie, Dietz, and Boon (2005: 74), "HRM can consist of whatever researchers wish or, perhaps, what their samples and data sets dictate." Second, the most dominating theoretical frameworks applied have been the resource-based view (RBV) of the firm, human capital theory, the ability, motivation and opportunity (AMO) model, and social exchange theory (SET) (Wright & Ulrich, 2017). These frameworks represent different levels of analyses and put different emphasis on the individual employee's perspective and well-being (e.g., Boselie, Brewster, & Paauwe, 2009), which may, for instance, have implications for whether job security is viewed as a practice that increases or decreases organizational performance. Even micro-level frameworks, such as the AMO model and SET, can lead to competing predictions regarding the relationship between HRM practices and organizational performance. For instance, the AMO model is based on expectancy theory (Vroom, 1964), which relies exclusively on extrinsic motivation and does not take into account other types of motivation, such as intrinsic and prosocial motivation (e.g.,

Grant & Berry, 2011). Thus, research based on the AMO model typically predicts that individual incentives will increase organizational performance (Boselie et al., 2009), whereas a SET lens would probably put a stronger emphasis on diffuse long-term reciprocal obligations (Shore, Tetrick, Lynch, & Barksdale, 2006).

To reduce this conceptual and methodological ambiguity, we present a meta-analysis of the type and level of internally consistent HRM practices and organizational performance. Specifically, we classify and compare studies with high levels of internally consistent commitment HRM systems with studies with moderate/low levels of internally consistent commitment HRM systems. The most commonly used labels for HRM systems in prior empirical research have been high performance, high involvement, and high commitment (Jackson et al., 2014). These labels represent a variety of theories and frameworks, but we chose the commitment HRM systems framework (Arthur, 1994; MacDuffie, 1995; Walton, 1985), which is sometimes also referred to as "best practice" HRM or a universalistic HRM perspective (Delery & Doty, 1996), for several reasons. First, it is the most unified framework for HRM systems by a making a distinction between commitment and control HRM systems and by capturing a particular approach to the why and how question of HRM systems. According to Arthur (1994), high commitment systems "shape desired employee behaviors and attitudes by forging psychological links between organizational and employee goals" and "developing committed employees who can be trusted to use their discretion to carry out job tasks in ways that are consistent with organizational goals." (p. 672). This provides a relatively straightforward benchmark from which to classify individual HRM practices or bundles as more or less in line with commitment HRM.

Second, the distinction between commitment and control has been, and still is, one of the most prominent distinctions in HRM systems research (Boselie et al., 2009; Collins & Smith, 2006; Hauff, Alewell, & Hansen, 2014; Jackson et al., 2014; Lepak & Snell, 1999, 2002; Toh, Morgeson, & Campion, 2008; Verburg, Den Hartog, & Koopman, 2007). It is, however, important to note that our classification of level of internally consistent commitment HRM systems is based on an evaluation of how individual practices or bundles are measured, independent of the labels used in the studies – that is, high commitment, high involvement, high performance, or other labels.

Third, several specific practices listed by Walton (1985) and empirically examined by Arthur (1994) are well aligned with prior and contemporary research within organizational behavior (OB), such as social exchange theory (Cropanzano, Anthony, Daniels, & Hall, 2017), self-determination theory (Gagné & Deci, 2005), job design theories (Humphrey, Nahrgang, &

Morgeson, 2007), and organizational commitment theory (Meyer, Becker, & Vandenberghe, 2004), to name a few.

Fourth and finally, and despite support from OB research, individual empirical studies and reviews have questioned the commitment HRM framework on several accounts. Guest (1997), for instance, criticized the framework for being normative and atheoretical and for focusing on internal HRM characteristics at the expense of broader strategic issues. The commitment HRM tradition has also been disputed because it is assumed that employees and employers have conflicting interests (Boselie et al., 2009). Empirically, Su, Wright, and Ulrich (2015) recently reported that both commitment-based practices and compliance-based practices were positively related to organizational performance and that the interaction of the two explained additional variance in performance in a Chinese sample. Furthermore, Hauff, Alewell, and Hansen (2014) found few differences in HRM outcomes between 'pure' commitment and regulated commitment HRM systems in a German context. A meta-analysis can unveil whether such findings are sample specific or whether they are more or less generalizable.

By conducting a meta-analytical investigation of the association between different levels of internally consistent commitment systems and organizational performance, we contribute to HRM systems research and practice in two specific ways: First, by exploring whether one particular type of HRM systems based on a unified framework can actually increase the strength of the relationship between HRM systems and organizational performance, we can contribute to accumulated knowledge about the HRM system *content*; that is, what particular combination of practices can contribute to organizational performance. By doing so we respond to calls for research that "specify which practices must fit with each other" (Kepes & Delery, 2007: 394) and whether there is "one high commitment form of HRM that is associated with high performance" (Guest, 2011, p. 7). Thus, we aim at increasing our understanding of the more specific nature of internally consistent HRM and thereby assist practitioners in avoiding the implementation of less consistent or internally inconsistent HRM systems. Second, our study can also inform research on the HRM *process* by exploring whether the "strength of an HRM system" influences the HRM-organizational performance relationship, as suggested by Bowen and Ostroff (2004).

Theoretical Background, Review, and Hypothesis Development

Considerable effort has recently been made to clarify the construct HRM systems (Arthur & Boyles, 2007; Chadwick, 2010; Hong, Liao, Hu, & Jiang, 2013; Jiang, Lepak, Han, et al., 2012; Jiang, Lepak, Hu, & Baer, 2012; Jiang, Takeuchi, & Lepak, 2013). Significant progress has been made, especially with respect to identifying different levels of HRM systems (e.g., principles, policies, programs, practices, and climates or principles, policies, practices, and products) (Arthur & Boyles, 2007; Posthuma et al., 2013) and bundles, components or domains of HRM systems (e.g., knowledge, skills, and abilities, motivation and effort, and opportunity to contribute) (Jiang, Lepak, Han, et al., 2012; Lepak, Liao, Chung, & Harden, 2006; Subramony, 2009). However, conceptually clarifying higher-order constructs is not sufficient to guide future HRM systems research and practice if the lower-order constructs, namely the content of the HRM systems, bundles, or practices themselves, remain unclear.

Control and commitment HRM systems represent two very different approaches to achieve organizational efficiency. The goal of control HRM is to improve organizational efficiency through reduced labor costs and employee compliance with specified rules procedures, whereas the goal of commitment HRM is to increase desired employee behaviors and attitudes by creating psychological links between organizational and employee goals (Arthur, 1994; Walton, 1985). In addition, the commitment approach to HRM views the fulfillment of employee needs as an end in itself (e.g., Guest, 1997). Thus, and according to social exchange theory, the organization commits itself toward the employees by fulfilling their needs. The employees, therefore, feel an obligation to reciprocate by being committed to the organization and exert themselves on behalf of it (e.g., Purcell, 1999). With respect to specific HRM practices, commitment HRM pertains to flexible, autonomous, and empowering work systems that rest primarily on employees' self-regulated behavior and discretionary effort (MacDuffie, 1995), such as broad job descriptions, flexible definitions of duties, a collective focus on accountability and incentives, a focus on training, job security, and flat organization structures, and mutual influence (Arthur, 1994; Walton, 1985). Pfeffer and colleagues (e.g., O'Reilly & Pfeffer, 2000; Pfeffer, 1994; Pfeffer & Veiga, 1999) have provided thoughtful and practically relevant descriptions of how individual practices work in concert within successful organizations. In short, job security, where the organization commits itself not to engage in downsizing unless forced to do so, will provide a highly affectively committed and flexible

workforce that is willing to take part in continuous improvement initiatives. Positive consequences of job security, however, require highly selective hiring and extensive training if existing competencies need be devolved to implement that business strategy that, in turn, create the foundation for broad job descriptions, flexible definitions of duties and so on.

Whereas early research on commitment HRM was heavily influenced by the human relations tradition and research on organizational behavior, later research on high performance work practices (HPWPs) or systems (HPWSs) has, to a lesser extent, been based on a unified theoretical framework. Huselid (1995), for instance, did not define HPWPs, but simply referred to several practices that "can improve the knowledge, skills, and abilities of a firm's current and potential employees, increase their motivation, reduce shirking, and enhance retention of quality employees while encouraging nonperformers to leave the firm." (p. 625). In addition, the most popular framework in recent research, the AMO model (Paauwe, 2009), is underspecified. The AMO model (Appelbaum, Bailey, Berg, & Kalleberg, 2000; Bailey, 1993) posits that HRM contributes by developing employees' abilities (A) and skills to perform their work well, enhance employees' motivation (M) for discretionary effort, and providing employees opportunities (O) to capitalize on their abilities, skills, and motivation. The AOM model is appealingly simple, but because of its simplicity, it fails to provide theoretically sound and empirically based implications for how to design HRM bundles or practices that can predict individual and collective effectiveness. For instance, it does not distinguish between different types of motivation (e.g., intrinsic, prosocial, and extrinsic) or take into account the role of the employee-organization relationship (EOR). This is also evident by the fact that early discussions (e.g., B. E. Becker et al., 1997; Guest, 1997) of the AOM model relied on expectancy theory (Vroom, 1964), which only takes extrinsic motivation into account.

The lack of a unified theoretical framework and the application of an underspecified model have led to a set of HR practices that researchers and practitioners believe are positively synergistic and which may actually represent dis-synergies or deadly combinations. For instance, whereas many studies of HR systems, including a meta-analyses (Combs et al., 2006; Subramony, 2009), do not differentiate between individual and collective financial incentives, both experimental (Barnes, Hollenbeck, Jundt, Scott DeRue, & Harmon, 2011) and field (Kuvaas, 2006) studies suggest that mixing individual and collective incentives creates social dilemmas that may be detrimental to both individual and team performance. Another example is conceptualizing and measuring performance management activities as "extensive" or "sophisticated" without differentiating between administrative, evaluative, or controlling versus developmental performance appraisal. In their meta-analysis, Combs et al. (2006, p. 518)

did not find a relationship between performance appraisal and organizational performance in their meta-analysis and referred to research arguing "that performance appraisal need to be developmental to be effective," thereby implicitly stating that controlling and developmental performance management may constitute a deadly, rather than powerful, combination.

Acknowledging the potential existence of deadly combinations of HR practices is not novel. Becker and colleagues highlighted the importance of a systems, rather than a functionalist, view of HR and wrote that "deadly combinations develop when firms adopt HR policies and practices that might well make sense in isolation but when evaluated within the context of *other* HRM practices deployed throughout the firm are a recipe for disaster" (B. E. Becker et al., 1997: 43). They also provided several examples of *potential* deadly combinations and ended their discussion by arguing that if deadly combinations "are idiosyncratic there will be no one common organizational experience, or right answer; however, the only way that any organization can hope to identify the HRM system that is appropriate is to adopt a systems perspective."

Whereas some deadly and powerful combinations may be idiosyncratic and prone to contextual influences, such as strategy and industry, others are more general in nature when viewed in light of a commitment HRM systems framework. Below we review how HRM systems, bundles, and practices have been measured in prior studies and highlight different levels of commitment HRM consistency within skill-enhancing practices, motivation-enhancing practices, and opportunity-enhancing practices (please see Table 1).

Table 1

Configuration of Commitment HRM Systems

Skill-Enhancing Practices	Motivation-Enhancing Practices	Opportunity-Enhancing Practices
Selective hiring that stresses fit values/attitudes, and long-term employee potential Extensive training that stresses broad skills, long-term growth, and development Training and developmental opportunities for all employees	Continuous performance appraisal process that stresses growth and development Comparatively high compensation contingent on organizational performance that reinforces cooperation, participation, and contribution Collective incentive plans (bonuses, profit-sharing, gain-sharing plans) Opportunities for internal career mobility and promotions Health care and other employee benefits	Formal grievance procedure and complaint resolution systems Self-managed teams and decentralization of decision making as the basic principle of organizational design Broad task design (skill flexibility, job variety, responsibility) Employee involvement in decision making and problem solving Information sharing (finance, performance, strategy) Systems to encourage feedback from employees Job security

Skill-Enhancing Practices

Most conceptualizations and operationalizations of skill-enhancing practices correspond with a commitment HRM framework by focusing on selective hiring that stresses fit of values and attitudes, long-term employee potential, and extensive training that stresses broad skills, long-term growth, and development. We did expect to find studies that measured HRM differentiation with respect to, for instance, talent programs for a few top performers, which would have been inconsistent with the collective focus in the commitment HRM systems framework. We did not, however, find such indices.

Opportunity-Enhancing Practices

Most measures of opportunity-enhancing practices are also typically consistent with a commitment HRM framework. Practices include grievance procedures and complaint resolution systems, self-managed teams, employee involvement in decision-making and problem solving, information sharing, systems to encourage feedback from employees, and job security. There are, however, a few studies that have included measures of tightly, narrowly, or clearly defined jobs or job descriptions (e.g., Delery & Doty, 1996; Patel, Messersmith, & Lepak, 2013), which are more in line with principles of scientific management and control HRM systems that are clearly counter to broad task design, skill flexibility, job variety, and broad responsibilities.

Motivation-Enhancing Practices

Whereas practices concerned with opportunities for internal career mobility and promotions from within and health care and other employee benefits correspond well with a high commitment view, those concerned with performance management and compensation practices are often less internally consistent or even inconsistent. With respect to compensation, several studies include measures that combines individual and collective performance-contingent variable incentives (e.g., Bae & Lawler, 2000; Delery & Doty, 1996; T. M. Gardner, Wright, & Moynihan, 2011; Guest, Michie, Conway, & Sheehan, 2003; Ogbonnaya, Daniels, Connolly, & van Veldhoven, 2017). Mixing individual and collective incentives, however, can create a conflict between the individual and collective interests of employees (Sniezek, May, & Sawyer, 1990) that resemble a social dilemma (Barnes et al., 2011). Even though both individual and collective incentives can increase effort, they do so through different mechanisms where, for instance, the instrumentality of pay is much stronger for individual rather than collective incentives (e.g., Gerhart, Rynes, & Fulmer, 2009). In accordance with

this, Barnes et al. (2011) conducted an experiment and found that mixed individual/team incentives made team members perform faster, but less accurately; team members also focused on their own tasks to the detriment of helping others when compared to teams with team incentives only. In a field study, Kuvaas (2006) found significantly lower perceptions of procedural and distributive justice among employees sorting under a combined pay plan than under a collective plan. Finally, some studies include measures of the level of pay dispersion (Bae & Lawler, 2000; Beltran-Martin, Roca-Puig, Escrig-Tena, & Bou-Llusar, 2008; Ngo, Lau, & Foley, 2008; Ngo, Turban, Lau, & Lui, 1998), which is typically higher in organizations applying individual incentives. High pay dispersion, however, is directly at odds with the commitment HRM framework's emphasis on designing compensation systems to reinforce cooperation. Thus, for both theoretical and empirical reasons, individual and collective variable incentives typically do not represent positive synergies from a commitment HRM view. This type of misfit within a certain type of HRM activities—in this case, compensation—has been referred to as intra-HRM activity (mis)fit (Kepes & Delery, 2007).

In addition, collective variable incentives are better aligned with the high commitment framework than individual variable incentives, for several reasons. First, under high commitment HRM systems, variable incentives are applied to create equity and to reinforce collective achievements (Arthur, 1992; Collins & Smith, 2006; Walton, 1985), which is aligned with collective incentives such as profit-sharing, gain-sharing, and employee ownership plans. Second, individual variable incentives are best aligned with work tasks where performance quantity is more relevant than performance quality (Cerasoli, Nicklin, & Ford, 2014; Jenkins, Mitra, Gupta, & Shaw, 1998), which is inconsistent with, for instance, training for broad skills and the design of broad and flexible jobs and will, therefore, reflect what Kepes and Delery (2007) referred to as inter-HRM activity area (mis)fit, here between compensation and training activities. Third, performance contingent pay is typically contingent on specified performance levels and, therefore, puts more of the employees' pay at risk compared to base pay (Rousseau & Ho, 2000), which is at odds with the fulfillment of employee needs. Fourth, with its emphasis on "developing committed employees who can be trusted to use their discretion to carry out job tasks in ways that are consistent with organizational goals" (Arthur, 1994, p. 672), a commitment HRM framework implicitly relies on intrinsic or prosocial, rather than extrinsic, motivation. According to self-determination theory (SDT), the effect of incentives on different types of motivation depends on how the incentive satisfies the needs for autonomy, competence, and relatedness (Gagné & Forest, 2008). A competitive base pay level that is relatively non-contingent on future performance may satisfy these needs and research has found a positive

association between base pay level and intrinsic motivation and similar constructs (D. G. Gardner, Van Dyne, & Pierce, 2004; Kuvaas, 2006; Kuvaas, Buch, Gagné, Dysvik, & Forest, 2016). Besides, a competitive base pay level is consistent with a high commitment framework because of its reliance on highly and broadly skilled employees who should not be paid below the market average. Therefore, based on both theory and empirical research, collective variable incentives and a competitive base pay level are consistent with a high commitment HRM systems framework, whereas individual incentives typically are not.

Performance appraisal is often measured in terms of how formalized, standardized, or extensive it is, whether it is based on evaluation of behavior or on results or objective criteria, and how closely it is related to variable or merit pay. First, formalization and standardization is inconsistent with the emphasis on broad task design and flexibility in the commitment HRM framework. Second, the link to compensation and the distinction between behavior and results emphasize past performance, whereas the commitment framework stresses growth and development, which represent a more future-oriented performance perspective (DeNisi & Pritchard, 2006).

Internally Consistent Commitment HRM and Organizational Performance

HRM systems affect the motivation, attitudes, and behaviors of employees that, in turn, may impact organizational performance. Whereas commitment HRM systems aim at influencing employees' affective and normative organizational commitment, intrinsic and prosocial motivation and social exchange relationships with the organization control HRM systems may increase continuance organizational commitment, extrinsic motivation, and economic exchange relationships with the leader and the organization. In what follows, we will show that organizational behavior research relating such attitudes, perceptions, and motivations to employee outcomes (e.g., work performance, organizational citizenship behavior (OCB), and turnover intention) typically reports beneficial outcomes for the attitudes, perceptions, and motivations that are associated with commitment HRM systems.

Extensive research based on social exchange theory provides robust support for the benefits of social exchange relationships. A social exchange relationship is characterized by a long-term orientation, trust, and diffuse obligations involving the exchange of socio-emotional resources (Shore, Coyle-Shapiro, Chen, & Tetrick, 2009). An economic exchange relationship, on the other hand, is characterized by the exchange of tangible resources over a specified period of time or discrete transactions (Shore et al., 2009). In a recent review of research on such relationships, Shore, Coyle-Shapiro, and Chang (in press) reported positive associations

between social exchange relationships and work performance and OCB and negative associations between economic exchange relationships and the same outcomes. In addition, commitment HR practices, such as base pay level, training, perceived investment in employee development, and perceived organizational support, were associated with social exchange relationships, whereas individual variable pay was positively, and training and perceived investment in employee development were negatively, associated with economic exchange relationships (Shore et al., in press). Second, a meta-analysis of organizational commitment research found that affective commitment had the strongest positive correlations with work performance and OCB, followed by normative commitment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Affective commitment refers to an emotional attachment to, identification with, and involvement in the organization and normative commitment reflects a perceived obligation to remain in the organization (Meyer et al., 2002). Continuance commitment, denoting the perceived costs associated with leaving the organization, however, was negatively related to work performance and unrelated to OCB (Meyer et al., 2002). Third, and finally, a meta-analysis of research on perceived organizational support (POS) or the perception of the extent to which the organization values employees' contributions and cares about their well-being, found positive associations between POS and work performance, OCB, and well-being, and negative associations with withdrawal behaviors (Kurtessis et al., 2017). Furthermore, commitment HR practices, such as developmental opportunities, job security, flexible work schedules, enriching job characteristics, job autonomy, and participation in decision making, were all positively associated with POS.

With respect to motivation, a recent meta-analysis found that intrinsic motivation was a medium to strong predictor of work performance and that the association between intrinsic motivation and performance were stronger when incentives were only indirectly tied to performance than when incentives were directly tied to performance (Cerasoli et al., 2014). Intrinsic motivation refers to the desire to perform an activity for its own sake, in order to experience the pleasure and satisfaction inherent in the activity (Deci, Connell, & Ryan, 1989). Furthermore, in a study including three independent samples, Kuvaas, Buch, Weibel, Dysvik, and Nerstad (2017) found that intrinsic motivation was positively associated with work performance and affective commitment, and negatively associated with continuance commitment, turnover intention, burnout, and work–family conflict. Extrinsic motivation, or the desire to perform an activity with the intention to attain positive consequences, such as an incentive, or to avoid negative consequences, such as a punishment (Deci & Ryan, 2000), however, was positively associated with continuance commitment, turnover intention, burnout,

and work–family conflict and negatively or unrelated to work performance. Performance-contingent individual incentives are associated with control HRM systems (Arthur, 1994) and such incentives are positively related to extrinsic motivation (Kuvaas et al., 2016).

Moving beyond motivation and behaviors that are associated with commitment HRM systems, research on particular commitment practices, such as job autonomy and job security, strengthen our argument that high levels of internally consistent commitment HRM should be strongly related to organizational performance. Job autonomy "reflects the extent to which a job allows freedom, independence, and discretion to schedule work, make decisions, and choose the methods used to perform tasks" (Morgeson & Humphrey, 2006, p. 1323). Meta-analytical findings show strong positive relationships between job autonomy and several outcomes that are relevant for organizational performance, such as work performance, job involvement, and internal work motivation (Humphrey et al., 2007). Meta-analyses of job insecurity show that it is negatively related to work performance, psychological and physical health, trust, and job involvement and positively related to turnover intention (Cheng & Chan, 2008; Sverke, Hellgren, & Näswall, 2002).

In their influential article, Bowen and Ostroff (2004) argued that HRM content, which in our study is commitment HRM, and process must be integrated in order for HRM to linked to organizational performance. Strong HRM systems send unambiguous signals to employees about what employees behaviors and attitudes are expected, supported, and rewarded, which in turn result in shared "collective perceptions, attitudes, and behaviors among employees" (Bowen & Ostroff, 2004, p. 206). Thus, highly internally consistent commitment HRM systems send unambiguous messages that commitment goes both ways. Such systems also convey that employees are trusted to have the necessary competence and motivation to work for organizational goals across HRM practices and over time, such as, for instance, both growth periods and recessions. Therefore, individual HRM practices can pertain to flexible, autonomous, and empowering work systems that rest primarily on employees' self-regulated behavior and discretionary effort (MacDuffie, 1995). We, thus, hypothesize:

> *Hypothesis: There is a stronger positive relationship between high levels of internally consistent commitment HRM systems and organizational performance than between moderate/low levels of internally consistent commitment HRM systems and organizational performance.*

Method

Literature Search

To identify relevant studies, we employed multiple search strategies. First, we searched PsycINFO, ABI/INFORM, Web of Science, Google, and Google Scholar by using the following keywords: "human resource management practices/systems," "high performance work practices/systems," "commitment employment practices/systems," and "high involvement employment practices/systems," in combination with the keywords "turnover," "performance," "profit," "service," "growth," "quality," and "outcome." At this early stage, our search terms led us to be biased in a Type I direction, as we were more likely to include an article that was not relevant than to exclude an article that was relevant. Second, we reviewed the reference lists of relevant theoretical reviews of HRM (e.g., B. E. Becker & Huselid, 1998; Boselie et al., 2009; Boselie et al., 2005; Wall & Wood, 2005) and meta-analyses (e.g., Combs et al., 2006; Jiang, Lepak, Hu, et al., 2012; Subramony, 2009). Third, as a final step, we conducted a hand search in relevant journals: "International Journal of Human Resource Management," "Human Resource Management," "Human Resource Management Journal," "Applied Psychology," "Academy of Management Journal," "Journal of Management," and "Personnel Psychology."

Inclusion and Exclusion Criteria

We selected studies based on the following criteria: First, we only included studies that examined the relationship between HRM practices and organizational outcome at the macro or organizational level (e.g., establishment, unit, or firm). We, thus, excluded studies that examined the relationships at the employee level (e.g., Boon & Kalshoven, 2014; Kuvaas, 2008) or cross-level relationships between organizational-level HR practices and individual outcomes (e.g., H. Liao, Toya, Lepak, & Hong, 2009; Takeuchi, Lepak, Wang, & Takeuchi, 2007). This restriction reflects the objective of our paper by examining the differential effects of different HRM systems on organizational outcomes. Second, we only included studies that examined the use of HRM practices/systems—not the effectiveness or value of these practices or systems (e.g., Huselid, Jackson, & Shuler, 1997). Third, we excluded studies that did not report sufficient information for the calculation of effect sizes (e.g., Cappelli & Neumark, 2001). Fourth, we included studies that analyzed at least one relationship embedded in our theoretical model (e.g., one correlation among HRM systems,

bundles, or practices and various organizational outcomes). Finally, a meta-analysis requires statistically independent samples (Hunter & Schmidt, 2004). Consequently, when encountering "duplicate studies" that used the same sample in two or more articles, we selected only the one that provided the most information to avoid the overrepresentation bias. On the other hand, when encountering a study that used two or more independent samples, we treated these independent samples separately. Applying the above criteria yielded a final sample of 97 studies, covering 23,796 firms.

Coding Procedure

Coding was first carried out independently by the two authors based on a standardized coding scheme. As a meta-analysis requires numerous subjectivity and judgment calls, we decided to discuss all discrepancies until consensus was reached (i.e., 100% agreement).

Following previous meta-analyses (e.g., Combs et al., 2006; Jiang, Lepak, Hu, et al., 2012; Subramony, 2009), we created a list of HRM practices frequently mentioned in the literature to represent commitment HRM systems. We categorized these practices into skill-enhancing practices, motivation-enhancing practices, and opportunity-enhancing practices. (see Table 1).

Next, we coded primary studies based on the internal consistency of their measures of commitment HRM systems using a one-to-five scale. Level 5 indicates high internally consistent commitment HRM systems and level 1 signifies low internally consistent commitment HRM systems. When encountering primary studies that reported multiple HRM bundles, we selected the ones that reflected internally consistence from a commitment point of view. For instance, the study by Batt (2002) was coded as 5 because we only included the work design and high involvement indexes (which have separate correlations). Similarly, the study by Batt, Colvin, and Keefe (2002) was coded as 5 since we selected only the practices that clearly reflect high commitment HRM (i.e., union voice, problem-solving groups, self-directed teams, pay to cost of living, training, and mobility). When encountering primary studies that used single indexes, we looked at the individual items. The study by Armstrong et al. (2010), for instance, has 18 items, of which 16 clearly reflect internally consistent commitment HRM. Therefore, we coded it as a level 4 internally consistent commitment HRM system. Since all of the studies had some element of commitment HRM, no study was coded as level 1. In order to get a sufficient number of effect sizes, we coded levels 5 and 4 studies as highly internally consistent commitment HRM systems and levels 2 and 3 as moderately/low internally consistent commitment HRM systems.

Finally, following Dyer and Reeves (1995), we coded organizational performance into three categories: voluntary turnover (i.e., excluding dismissal rate and overall turnover rate), operational outcomes (e.g., productivity, service, innovation, and overall operational performance), and financial outcomes (e.g., accounting returns, sales growth, market returns, and overall financial performance).

Meta-Analytic Procedures

Within meta-analysis methods, two meta-analysis models "have been used widely in published meta-analyses," fixed-effects (FE) models, and random-effects (RE) models (Hunter & Schmidt, 2000: 275). We used both models in our meta-analysis. Although FE and RE models "employ similar sets of formulas to compute statistics, and sometimes yield similar estimates" (Borenstein, Hedges, Higgins, & Rothstein, 2010: 97), they rest on a different set of assumptions about the data. It is, therefore, of critical importance to outline the differences between the models to ensure that the various statistics are correctly estimated and the results are properly interpreted. In essence, the FE model assumes the homogeneity of effect parameters (i.e., that effect parameters are constant across studies) (Hedges, 1982; Rosenthal & Rubin, 1982). RE models "do not make this assumption," allowing for the possibility that the population parameters vary from study to study (Hunter & Schmidt, 2000: 275). In statistical terms, the main difference between the two models lies in the calculation of standard errors. The standard errors of RE have two components, within-study variability and between-studies variability, whereas FE have only one component, within-study variability (as it assumes variability between studies to be zero) (Hunter & Schmidt, 2000). In other words, the standard errors of RE incorporate more uncertainty than FE. RE models are, therefore, more conservative than FE models. For example, Hunter and Schmidt (2000: 275) show that "FE models, but not RE models, yield confidence intervals for mean effect sizes that are narrower than their nominal width, thereby overstating the degree of precision in meta-analysis findings." Another main difference is that FE and RE models are designed for different inference goals (Hedges & Vevea, 1998). If the researcher wants to make inferences only about the effect parameters in the specific studies included the meta-analysis and (i.e., a conditional inference), then FE analyses are appropriate. On the other hand, if the researcher wants to make inferences about "the parameters of a population of studies that is larger than the set of observed studies and that may not be strictly identical to them inference" (i.e., an unconditional inference) (Hedges & Vevea, 1998, p. 487), then RE analyses are appropriate. In other words, the choice between FE and RE models, according to Hedges and Vevea (1998), should not rest upon the

assumption about the homogeneity of effect parameters, but on the nature of the inference desired as "there may be situations in which the fixed-effects analysis is appropriate even when there is substantial heterogeneity of results." (p. 487).

Following the meta-analytic methods by Hunter and Schmidt (2004), we corrected the raw correlations (*r*) for both sampling error and measurement error. We performed sampling error correction by weighting each study's effect size by its sample size. We performed measurement error corrections for both the independent and dependent variables using the Cronbach's alpha coefficients. When complete reliability information was not available, we used the weighted mean of available reliabilities. When variables were measured objectively or with archival data (e.g., accounting returns), we followed Schmidt, Hunter, and Outerbridge (1986) and De Jong, Dirks, and Gillespie (2016) by assuming perfect reliability and imputing a reliability of 1.

We combined the correlations between HRM practices and outcomes by using the formula provided by Hunter and Schmidt (2004, p. 435-439) to create a single composite correlation for each relationship within each study. Averaging the component correlations is inappropriate, as it not only "will distort the sampling error variance estimate" (Viswesvaran & Ones, 1995, p. 872), but it is also conceptually wrong for the case for practices within a bundle (Subramony, 2009). In addition, we acted in accordance with Hunter and Schmidt's (2004) recommendations by using 95% confidence intervals (CI) to evaluate whether some HRM systems have a significantly stronger relationship with business outcomes than others. Overlapping CI scores indicate a lack of significant differences in HRM systems. Finally, we used the I^2 index to assess whether the HR system outcome relationships were influenced by study characteristics acting as moderators. The I^2 index can be interpreted as the percentage of the variability in effect estimates that is due to heterogeneity, rather than sampling error, and can be computed by the following formula: $I^2 = \left(\frac{Q-df}{Q}\right) x\ 100\%$, where Q is the chi-squared statistic and df is its degrees of freedom. For examples, 0% to 40% of I^2 means that heterogeneity might not be important. On the other hand, 30% to 60 % of I^2 means moderate heterogeneity and, hence, suggests the possible presence of moderators. Although investigating moderators is not the purpose of our paper, we agree with Colquitt, Lepine, and Noe (2000) that "illustrating where moderators may be present would make our results as informative as possible and identify directions for future research." (p. 687).

Table 2

Fixed-Effect Model (97 studies)

Systems Categories	*K*	*N*	r	rc	95% CI
High Internally Consistent Commitment HRM System (Levels 4 and 5)					
Financial Outcomes	39	9582	.31	.40	.38: .42
Operational Outcomes	36	8353	.36	.48	.46: .49
Voluntary Turnover	16	4259	-.19	-.25	-.28: -.22
Moderate/Low Internally Consistent Commitment HRM System (Levels 2 and 3)					
Financial Outcomes	25	6755	.19	.23	.21: .26
Operational Outcomes	18	5293	.20	.25	.23: .27
Voluntary Turnover	12	3676	-.20	-.27	-.31: -.23

Note. *K* = number of effect sizes; *N* = pooled sample size; *r* = sample weighted mean (bare bones) effect size; rc = population effect size (corrected for sampling error and unreliability); 95% CI = 95% Confidence Interval around the population effect size corrected for sampling error and unreliability (rc).

Table 3

Random-Effect Model (42 studies)

Systems Categories	*K*	*N*	r	rc	S^2	SD_{rc}	95% CI	I^2
High Internally Consistent Commitment HRM System (Levels 4 and 5)								
Financial Outcomes	20	5166	.33	.42	.03	.05	.36: .51	.94
Operational Outcomes	23	5390	.40	.50	.05	.07	.37: .62	.98
Voluntary Turnover	12	3239	-.21	-.25	.01	.01	-.31: -.19	.70
Moderate/Low Internally Consistent Commitment HRM System (Levels 2 and 3)								
Financial Outcomes	13	3893	.23	.28	.01	.02	.20: .35	.85
Operational Outcomes	13	4601	.18	.23	.01	.02	.15: .30	.86
Voluntary Turnover	10	3387	-.14	-.17	.02	.04	-.28: -.06	.93

Note. *K* = number of effect sizes; *N* = pooled sample size; *r* = sample weighted mean (bare bones) effect size; rc = population effect size (corrected for sampling error and unreliability); S^2 = sample weighted variance; SD_{rc}= estimated population variance; 95% CI = 95% Confidence Interval around the population effect size corrected for sampling error and unreliability (rc); I^2 = the percentage of variation across studies due to heterogeneity and it can be computed from Q following the equation I^2=100% x (Q-df)/Q; 25% of I^2= low heterogeneity, 50% of I^2= medium heterogeneity, and 75% of I^2= high heterogeneity.

Results

Table 2 and 3 summarize the correlation results of the relationships between high and moderate/low levels of internally consistent HRM systems and organizational outcomes categories (financial outcomes, operational outcomes, and voluntary turnover). Our hypothesis predicted that there will be a stronger positive relationship between high levels of internally consistent commitment HRM systems and organizational performance than between moderate/low levels of internally consistent commitment HRM systems and organizational performance. As shown in table 2 (fixed-effect model), a high level of internally consistent HRM systems was more strongly related to organizational performance (in terms of financial and operational outcomes) than moderate/low levels of internally consistent HRM systems (rc = .40, p <.05 for financial outcomes; rc = .48, p <.05 for operational outcomes versus rc = .23 p <.05 for financial outcomes; rc = .25 p <.05 for operational outcomes). Regarding voluntary turnover, there was no significant difference between high and moderate/low levels of internal consistency as confidence intervals (CI) scores overlap. Table 3 (random-effect model) also shows that high levels of internally consistent commitment HRM systems were significantly more strongly related to organizational performance (in terms of financial and operational outcomes) than moderate/low levels of internal consistency (rc = .42, p <.05 for financial outcomes; rc = .50, p <.05 for operational outcomes versus rc = .28 p <.05 for financial outcomes; rc = .23 p <.05 for operational outcomes). With respect to voluntary turnover, there was no significant difference between high and moderate/low levels of internal consistency as confidence intervals (CI) scores overlap. Accordingly, the results of different models (fixed- and random-effects) consistently show that firms with a high level of internally consistent commitment HRM systems outperform those with moderate/low levels of internally consistent commitment HRM systems in terms of financial and operational outcomes. Our hypothesis was thus supported for financial and operational outcomes, but not for voluntary turnover.

Discussion

The current study contributes to research on the relationship between HRM systems and organizational performance by providing empirical evidence linking the level of internally consistent commitment HRM systems to organizational performance. Specifically, our meta-

analysis of 97 studies revealed that high levels of internally commitment HRM systems were more strongly related to operational and financial performance than were less internally commitment HRM systems.

Research Implications

In his review of research on HRM and performance, Guest (2011: 8) argued that "we need to retain a focus on the basic and as yet unresolved question of what combination of practices are likely to have the greater impact on performance and other outcomes." Based on our findings and the review of contemporary organizational behavior research, we suggest that the practices listed in Table 1 indeed represent such a combination. Our study also provides indirect support to Bowen and Ostroff's (2004) proposition that if HRM is to alter employee behavior and performance, it must be a "strong system." Thus, if the overall messages of the HRM systems are persuasive and unambiguous (i.e., a strong system) or, in our own language, a high level of internal consistency, then major effects on performance are expected. On the other hand, if the overall messages of HR systems are unpersuasive and ambiguous (i.e., a weak system) or, in our own language, moderate/low levels of internal consistency, then one should expect weaker effects on performance. Also in support of Bowen and Ostroff (2004), but in contrast to the proposition that a lack of internally consistence can be detrimental to organizational performance (B. E. Becker et al., 1997; Jiang, Lepak, Han, et al., 2012), we found that moderate/low levels of internally consistent commitment HRM systems were also positively and significantly related to organizational performance.

Previous meta-analyses also empirically support a universalistic model (Combs et al., 2006; Subramony, 2009), but ours do so in a more fine-grained way by testing the performance implications of more or less internally consistent commitment HRM systems. Thus, our findings suggest that not only are internally consistent HRM systems relatively strongly related to organizational performance, but a particular type of system, namely the commitment one. We do not argue that contextual moderators would not influence the relationship between internally consistent commitment HRM systems and organizational performance. First, the meta-analysis by Rabl et al. (2014) shows that national culture moderates the relationship between high-performance work systems and organizational performance. Accordingly, national culture will probably also moderate the relationship between internally consistent commitment HRM systems and organizational performance. Second, some of the individual practices listed in Table 1 are probably not more effective than alternatives across all contexts. Individual performance-contingent incentives, for instance, have been found to increase

performance quantity (Cerasoli et al., 2014; Jenkins et al., 1998) and performance for uninteresting tasks (Weibel, Rost, & Osterloh, 2010). Still, our findings do imply that internally consistent commitment HRM systems can increase performance under many different contexts. With respect to business strategy as a particularly relevant moderator, Paauwe (2009, p. 138) has suggested that HRM can serve as an enabler for a different strategies, implying that the HRM system's "main goal is the development of a workforce with a sufficient degree of flexibility/adaptability to implement a range of strategic options."

We did not find a significant difference between high versus moderate/low levels of internally consistent commitment HRM systems and voluntary turnover. This finding may imply that individual HRM practices, such as a competitive pay level, job security, or developmental opportunities, rather than HRM systems, explain voluntary turnover. Another explanation is that voluntary turnover is constrained by external factors, such as alternative employers. Thus, employees may remain in the organization not because they are affectively or normatively committed to it, but because they are stuck without exit options, a situation that Alutto, Hrebiniak, and Alonso (1973) and Becker (1960) referred to as "calculative" commitment and Meyer et al. (2002) termed "continuance" commitment.

Practical Implications

Our study offers four important practical implications. First, our findings suggest that organizations can benefit in terms of higher operational and financial performance from the implementation of a high level of internally consistent HRM system. All practices in Table 1 send persuasive and unambiguous messages that employees are valued, that they can be invested in and trusted, and that commitment goes both ways, which is probably more important than the more specific nature of each practice. This, in turn, probably requires that top management has employee-centered values and act according to such values (Arthur, Herdman, & Yang, 2016).

Second, the relationships between high versus moderate/low levels of internally consistent HRM systems and operational and financial performance were not only statistically significant, but also practically relevant. For instance, a one -standard deviation increase in the use of high internally consistent commitment HRM systems translates, on average, to a 9.7 percentage-point increase in gross ROA from 5.1 to 14.8. In comparison, a one standard deviation increase in the use of moderate/low internally consistent commitment HRM systems translates, on average, to a 6.4 percentage-point increase in gross ROA from 5.1 to 11.5.

Second, we also found that moderate/low levels of internally consistent commitment HRM systems were positively and significantly related to operational and financial performance and that the level of internally consistent commitment HRM systems could not explain variations in voluntary turnover. An important practical implication of these findings is that organizations which, for instance, operate in very turbulent markets and therefore cannot practice job security or organizations that cannot afford to invest in internally consistent commitment HRM systems, still should implement as internally consistent commitment HRM systems as feasible.

Third, whereas the measures of the skill-enhancing and opportunity-enhancing practices corresponded well with a high commitment view, those concerned with the motivation-enhancing practices were less internally consistent. Many measures of performance appraisal and compensation practices were not in alignment with commitment HRM. Accordingly, managers in organizations that want to implement a more internally consistent HRM system could start by changing these practices.

Limitations and Directions for Future Research

One important limitation of this study is that we did not investigate potential moderators, such as a strategy, environmental factors, national culture, and sources of measurement error (Combs et al., 2006; Rabl et al., 2014; Subramony, 2009). We identified too few studies that included both sufficient information to categorize the level of internally consistent commitment HRM systems and information about moderators. Thus, future research should include such information.

Theoretically, it is assumed that internally consistent commitment HRM systems cause organizational performance, and the vast majority of the studies we included have cross-sectional designs. This prevents us from drawing causal conclusions regarding the direction of the tested relationships.

We investigated studies at the macro-level of analysis and did not include measures of mediators that can test the predictions of internally consistent commitment HRM systems. As there now may be a sufficient number of cross-level studies (Jiang, Lepak, Hu, et al., 2012), future meta-analyses could investigate the relationship between different levels of internally consistent commitment HRM systems; proximal organizational outcomes, such as collective job satisfaction, organizational commitment, organizational citizenship, and a cooperative work climate; and more distal organizational outcomes, such as operational and financial performance and voluntary turnover. Another opportunity for future research could be to

conduct meta-analyses of the relationship between collective internally consistent commitment HRM systems measured by employees and organizational performance.

In conclusion, this study contributes to research and practice on the relationship between HRM and systems and organizational performance by finding a stronger relationship between high levels of internally consistent commitment HRM systems and operational and financial performance than between moderate/low levels of internally consistent commitment HRM systems and operational and financial performance.

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APPENDIX

Coding of Studies Included in the Meta-analysis

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Ahmad, S., & Schroeder, R. G. (2003)		Selective hiring, Extensive training	Self-managed teams and decentralization of decision making, Sharing of financial and performance information	Employment security, Compensation contingent on organizational performance.		Overall operational performance	
Akhtar, Ding, & Ge (2008)		Training	Participation/ voice, Job descriptions	Employment security, Profit sharing, Internal career opportunities, Results-oriented appraisal		Product/service performance	Financial performance
Allen,M.R., Ericksen, J.,	Commitment-based HR				Quit rates		Revenue growth

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Collins, C.J. (2013)							
Appleyard, M., & Brown, C. (2001)		Training	Team particiaption/ autonomy			labor productivity	
Armstrong, C., Flood, P. C., Guthrie, J. P., Liu, W., MacCurtain, S., & Mkamwa, T. (2010)	High Performance Work Systems				Turnover	Productivity, Innovation	
Arthur, J. B. (1994)	HRM system				Tunrover	Labour hours	
Batt, R. (2002)	High-involvement work system		Work design index	HR incentive index	Quite rate		Percent change in sales

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Batt, R., & Colvin, A. J. S. (2011)	High involvement work index	Initial training, Selection ratio, Systematic selection procedures	Problem-solving groups, Self-directed teams	Internal mobility opportunities, Relative pay, Pensions	Quite rate	Customer satisfaction	
Batt, R., Colvin, A., & Keefe, J. (2002)		Trainning	Problem-Solving Groups, Self-Directed Team	Pay to Cost of living	Quite rate		
Bae, J., Chen, S., Wan, T., Lawler, J., & Walumba, F. (2003)	Hhigh performance work systems)						Organizational performance
Bae, J., & Lawler, J. (2000)	High-involvement HRM strategy						Firm performance

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Beltrán-Martín, I., Roca-Puig, V., Escrig-Tena, A., & Bou-Llusar, J. (2008)	High performance work systems	Selective staffing, Comprehensive training		Developmental performance appraisal, Equitable rewards system		Organizational performance (Customer service)	
Bjorkman, I., & Xiucheng, F. (2002)	HRM system					Overall firm performance	
Bhattacharya, M., Gibson, D. E., & Doty, D. H. (2005)	High-performance HR Practice index						Financial performance index
Buck, T., Filatotchev, I., Demina, N., & Wright, M. (2003).	Human resource Investment system					Capacity utilization (CAP99)	Sales per employee (SPE99)
Chadwick, C., Super, J., & Kwon, K. (2015)	Commitment-based HR system						Employee productivity, ROE

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Chadwick, C.,Way, S.A., Kerr, G., Thacker, J.W. (2013)	HIHRS additive index						Firm labor productivity
Chan, L. L. M., Shaffer, M. A., & Snape, E. (2004)		HR practices (skills/ structure)		HR practices (motivation)		Organizational performance	Market performance
Chandler, G. N., & McEvoy, G. M. (2000)		Training hours	Total quality Management	Outcome based pay			Firm earnings
Chen, C., & Huang, J. (2009)		Staffing, training	Participation	Performance appraisal, compensation		Innovation	
Chuang, C., & Liao, H. (2010)	High performance work systems	Staffing, Training	Involvement	Performance, Compensation, Caring		Service performance	Market performance

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Collins, C., & Clark, K. (2003)				Incentive pay			Sales growth, One-year stock returns
Collins, C. J., & Smith, K. G. (2006)	Commitment HR practices						One-year sales growth, Revenue from new products and services
Datta, D., Guthrie, J., & Wright, P. (2005)	High performance work system					Labor productivity	Firm sales growth
DeGeest, D.S., Follmer, E.H., Walter, S.L., O'Boyle, E.H. (2015)				Motivation-enhancing human resource practices			Profit
De Winne, S., & Sels, L. (2010)	HR practices Index					Innovative output	

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Delaney, J., & Huselid, M. (1996)		Staffing selectivity , Training	Grievance procedure, Decentralized decision making	Incentive compensation, Internal labor market			Pereived market performance
Delery, J. E., & Doty, D. H. (1996)		Training	Job descriptions, Participation	Appraisal, Job security, Career opportunities, Profit sharing		Innovation	ROA, ROE
Delery, J. E., Gupta, N., Shaw, J. D., Jenkins, G. D., & Ganster, M. L. (2000)			Voice mechanisms	Pay and benefits	Quite rate		
Den Hartog, D. N., & Verburg, R. M. (2004)		Employee skill and direction	Autonomy, Information sharing meetings	Reward, Profit sharing, Performance evaluation	Employee turnover	Firm performance	Economic outcome

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Faems, D., Sels, L., De Winne, S., & Maes, J. (2005)		Selection, Training	Participation	Careers, Compensation, Performance management	Voluntary turnover		Value added
Fey, C. F., Björkman, I., & Pavlovskaya, A. (2000)		Training	Decentralization, complaint resolution	Performance based compensation, job security, career planning, salary level			Firm performance
Gardner, T. M., Wright, P. M., & Moynihan, L. M. (2011)		Skill HR practices	Empowerment HR practices	Motivation HR practices	Voluntary turnover		
Gerhart, B., & Milkovich, G. T. (1990)				Base pay, Ratio of bonus to base pay, Long-term incentive eligibility			ROA, Sales

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Ghebregiorgis, F., & Karsten, L. (2007)		Recruitment, Selection, Training, Development	Grievances	Compensation	Turnover		Productivity
Gibson, C., Porath, C., Benson, G., & Lawler, E. (2007)			Information sharing, Team enabling			customer service, Quality	Financial performance
Guerrero, S., & Barraud-Didier, V. (2004)		Trainning	Teamwork, Information about compensation	Perf. Based compensation, Stock ownership, Fringe benefits,		Product and services quality, Productivity	Profitability
Guthrie, J. P. (2001)	High-involvement work practices				Employee retention rate	Productivity	
Guest, D., Michie, J., Conway, N., & Sheehan, M. (2003)	High use of HRM practices				Employee turnover	Labour productivity, Quality of goods and services	Financial performance

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Guest, D., Conway, N., & Dewe, P. (2004)		Selection tests, Internal recruitment, Training and development	Employee involvement, Information, Job design, Teamworking	Performance appraisal, Employee security, Performance-related pay,	Employee turnover	Employee innovation	
Harel, G. H., & Tzafrir, S. S. (1999).		Recruitment, Selection, Training	Participation in HRM issue, Participation impact, Grievance procedure	Incentive compensation, Internal labor market		Perceived organizational performance	Perceived market performance
Hartog, D., & Verburg, R. (2004)		Employee skill and direction	Autonomy, Information sharing meetings	Pay-for-performance, Profit sharing, Performance evaluation	Employee turnover	Firm performance	Economic outcome
Hoang, H.,& Bård, K. (2014)	HRM index						Overall financial performance

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Huselid, M. A. (1995)		Employee skills and organizational structure		Employee motivation	Turnover	Productivity	Tobin's q, Gross rate of return on assests, Sales growth
Iverson, R. D., & Zatzick, C. D. (2011)	High-performance work systems					Labor productivity	
Jensen, J. M., Patel, P. C., & Messersmith, J. G. (2013)	High performance work systems				Turnover intentions		
Katz, H. C., Kochan, T. A., & Weber, M. A. (1985)			Participation in suggestion programs, QWL-program involvement			Direct labor efficiency	
Khatri, N. (2000)		Use of structured interviews, Use of employment tests,	Employee participation	Flexible benefits, Performance-based compensation, Consultative		Non-financial performance	Profitability, Sales growth

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
		Amount of training		performance appraisal			
Kim, H., & Gong, Y. (2009)				Group-based pay			Tobin's Q, ROA
Kintana, M. L., Alonso, A. U., & Olaverri, C. G. (2006)	High performance work systems index	Staffing, Training	Job Rotation, Teams, Communication	Incentives, Pay level, Security		Performance	
Lam, L., & White, L. (1998)	HR orientation						Return on assets, Growth in sales
Lee, M. B., & Chee, Y. H. (1996)		Knowledge and training	Information sharing, Power-sharing	Contingent reward			Return on equity, Return on assets, Per capita value added, Sales growth rate

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Lee, J., & Miller, D. (1999)	Education and competence Development, compensation,						ROA
Liao, Y. S. (2005)		Input control		Output control			Overall financial performance
Liao, H., & Chuang, A. (2004)		Service training	Employee involvement	Performance incentives		(Store-level) Service performance, Customer evaluation of service quality, Customer satisfaction, Customer loyalty	
Liouville, J., & Bayad, M. (1998)	HRM practices (system)					Organizational performances	Economic performances

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Lui, S. S., Lau, C. M., & Ngo, H. Y. (2004)		Employee development, Selective hiring		Career developement, Performance-based compensation			Overall financial performance
Mansour, N., Gara, E., & Gaha, C. (2014)	High performance work systems						Overall financial performance
Mavondo, F. T., Chimhanzi, J., & Stewart, J. (2005)	Human resource practices					Product innovation, Operating efficiency	Marketing effectiveness, Financial performance
McClean, E., & Collins, C. J. (2011)	High commitmentH R practices						Overall financial performance
Messersmith, J.G., & Guthrie, J.P. (2010)	HPWS Index				Voluntary Turnover	Innovation	Sales Growth

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Miah, M. K., & Bird, A. (2007)		Merit-based hiring, Training and development			Employee turnover		Growth rate
Neal, A., West, M., & Patterson, M. (2005)	HRM index					Productivity	
Ngo, H., Lau, C., & Foley, S. (2008)	HR Practices (scale)					Operational performance	Financial performance
Ngo, H., Turban, D., Lau, C., & Lui, S. (1998)		Structural trainning and development		Retention-oriented compensation, Seniority-based compensation	Employee retention		Sales, Net profit
Obeidat, S. M., Mitchell, R., & Bray, M. (2016)		Ability-enhancing	Opportunity-enhancing	Motivation-enhancing	Turnover		Organizational performance

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Park, H., Mitsuhashi, H., Fey, C., & Bjorkman, I. (2003)	HR system						Financial performance
Patel, P.C., Messersmith, J.G., & Lepak, D.P. (2013)	High performance work systems						Firm growth
Patterson, M. G., West, M. A., & Wall, T. D. (2004)		Skill enhancement	Job enrichment			Productivity	Profit
Paul, A., & Anantharaman, R. (2003)		Selection, Training	Team job design	Performance appraisal, Compensation, Career development, Employee ownership	Employee retention	Employee productivity, Product quality, Speed of delivery	Financial performance
Perry-Smith, J. E., & Blum, T. C. (2000)		Staffing selectivity, Trainning effectiveness	Grievance procedure, Decentralized decision making	Benefits, Incentive compensation			Market performance, Profit-sales growth

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Richard, O. C., & Johnson, N. B. (2004)	High performance work practices					Organizational innovation	Market performance
Rodwell, J. J., & Teo, S. T. T. (2008)		Selective staffing, Comprehensive training		Performance appraisal			Market performance
Rogg, K., Schmidt, D., Shull, C., & Schmitt, N. (2001)		Training, Hiring	Job description	Performance review		Service satisfaction	
Russell, J. S., Terborg, J. R., & Powers, M. L. (1985)		Percentage trained, Training emphasis				Volume per employee	
Shaw, J., Delery, J., Jenkins, G., & Gupta, N. (1998)		Training, Selection ratio, Selection procedures	Electronic monitoring, Procedural justice	Average pay, Benefits, Job stability, Performance appraisal	Quit rates		

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Shaw, J., Gupta, N., & Delery, J. (2005)	HRM index				Voluntary turnover	Accident frequency ratio, Operating ratio	Return on equity
Singh, K. (2004)		Selection, Training	Job definition, Employee participation	Performance appraisal, Compensation system, Career planning system			Market performance
Snell, S. A., & Youndt, M. A. (1995)		Staffing, Training and development		Performance appraisal, Performance-based reward			ROA, Sales growth
Subramony, M., Krause, N., Norton, J., & Burns, G. N. (2008)				Pay perceptions		Productivity, Customer satisfaction	

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Sun, L. Y., Aryee, S., & Law, K. S. (2007)	High-performance HR practices				Voluntary turnover	Productivity	
Tzafrir, S. S. (2006)		Training, Selection	Employee participation	Incentive compensation, Internal labour market		Organizational performance	Market performance
Tzafrir, S. S. (2005)		Training	Participation	Compensation, Internal labour market, Evaluation		Organization performance	Market performance
Way, A. S. (2002)	Hhigh performance work systems				Voluntary turnover	Labor productivity	
Welbourne, T., & Andrews, A. (1996)				Organization-based rewards			Tobin's Q,

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Wood, S., Holman, D., & Stride, C. (2006)		Systematic selection tests, training,	Task control, Performance monitoring, Working in cross-functional teams, Improvement teams, Flexible work descriptions	Performance appraisal, Internal recruitment	Unauthorized absence, Employee quiting	Proportion of calls answered in time, Customer satisfaction levels	
Wright, P. M., Gardner, T. M., & Moynihan, L. M. (2003)	HR practicces					Payroll per piece, Payroll per error	Profitability
Wright, P. M., Gardner, T. M., Moynihan, L. M., & Allen, M. R. (2005)	HR practice index					Productivity, Quality	Profitability

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Wright, P. M., McCormick, B., Sherman, W. S., & McMahan, G. C. (1999)		Selection, Training	Participation	Compensation, Appraisal			Overall financial perfonnance
Yang, C., & Lin, C. Y. (2009)		Recruiting & selection, Training & development		Performance appraisal, Compensation		Overall organizational performance	
Youndt, M. A., Snell, S. A., Dean, J. W., & Lepak, D. P. (1996)	Human capital-enhacing HR					Employee productivity	
Youndt, M., & Snell, S. (2004)		Acquisition HR, Developmental HR	Flat structure, Empowerment, participation, Broad job				Overall financial performance

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Zhang, M. M., McNeil, N., Bartram, T., Dowling, P., Cavanagh, J., Halteh, P., & Bonias, D. (2016)	High performance work systems				Voluntary turnover		
Zhang, Z., Wan, D., & Jia, M. (2008)	High performance HR practice					Innovation	
Zhong, L., Wayne, S., & Liden, R. (2016)	High-performance human resource practices				Voluntary turnover		
Zhou, Y., Hong, Y., & Liu, J. (2013)	Commitment HRM					Innovation	

Reference	System	Skill-Enhancing Bundle	Opportunity-Enhancing Bundle	Motivation-Enhacing Bundle	Turnover	Operational Outcomes	Financial Outcomes
Zhu, W., Chew, I. K. H., & Spangler, W. D. (2005).		Selection, Training		Compensation			Sales

Chapter 5

Summary of Main Findings and Contributions

Study 1: Human Resource Management Systems, Employee Well-Being, and Firm Performance: The Well-Being Paradox

Although research on health and employee well-being has recently grown exponentially, research in this area is not accumulative, reflected by the fragmented and inconsistent existing findings (Peccei, 2004; Peccei, van de Voorde, & Van Veldhoven, 2013). On the one hand, some studies document positive associations with employees' experience of work (e.g., Appelbaum, Bailey, Berg, & Kalleberg, 2000; Butts, Vandenberg, DeJoy, Schaffer, & Wilson, 2009; Castanheira & Chambel, 2010; Guest, 2002; Harley, Allen, & Sargent, 2007; Macky & Boxall, 2007). On the other, some reveal negative associations (e.g., Godard, 2001; Jensen, Patel, & Messersmith, 2011; Kroon, Voorde, & Veldhoven, 2009; Landsbergis, Cahill, & Schnall, 1999). Together, this entails a phenomenon which I label the *well-being paradox*.

Study 1 sheds light on this paradox through testing the non-linear relationship between HRM systems, employee well-being, and firm performance. The results, based on a sample of 1,292 firms and 15,937 employees, indicate that HRM systems have a plateau effect. When HRM practices are implemented at low levels, they result in negative well-being (higher levels of work intensification and anxiety), which is consistent with the prediction of the critical perspective. Meanwhile, when HRM practices are implemented at high levels, they tend to result in positive well-being (lower levels of work intensification and anxiety), which is consistent with the prediction of the mutual gains perspective.

These findings have both theoretical and practical implications. Theoretically, they suggest that the conflicting findings regarding the HRM systems/well-being relationship may be attributable to the fact that prior research has not paid sufficient attention to a possible nonlinear association between HRM systems and well-being. The results also indicate that assuming linearity may lead to inaccurate interpretations of the consequences of HRM systems. In terms of practical implications, Study 1 suggests that more precise estimates of the effects of HRM systems on employee well-being can prevent missteps in the application of HRM practices.

In the well-being literature, there is a widely-held assumption that "psychologically well people are more prone to experience positive emotions and less prone to experience negative

emotions" (Diener, 1994; Wright & Cropanzano, 2000, p.84). In other words, positive and negative well-being have been considered as bipolar constructs, with the presence of positive well-being implying the absence of negative well-being. Study 1 challenges this routine assumption, showing that HRM systems can enhance employee well-being by increasing job satisfaction and organizational commitment, but they can also undermine employee health by increasing work intensification. In other words, positive and negative well-being are independent and unipolar constructs, which have the potential to arise simultaneously. Consequently, they should be measured independently. The results also support Grant, Christianson, and Price's (2007) observation that HRM practices "frequently create trade-offs between different dimensions of employee well-being, whereby one aspect of employee well-being improves but another aspect of employee well-being decreases" (p. 51).

Study 2: Are HRM Systems Good or Bad for Employee Well-being? A Meta-Analysis of the Workers' Verdict

Study 2 explores the impact of HRM systems on employee well-being and the implication for overall performance. One of the most hotly contested issues today in the field is whether HRM systems are good or bad for employee well-being; described as the "good versus bad" debate (Harley, Sargent, & Allen, 2010). At one end of the spectrum, some scholars argue that employers and employees both benefit from HRM systems (the mutual gains perspective) (e.g., Kochan & Osterman, 1994; Levine, 1995; Pfeffer, 1998). At the other end, scholars argue that employers, but not employees, benefit from HRM systems (the critical perspective) (e.g., Delbridge & Turnbull, 1992; Godard, 2001; Legge, 1995). Yet, empirical evidence has not provided conclusive confirmation or disconfirmation of any of these perspectives. Therefore, Study 2 enlightens the "good versus bad" debate.

The meta-analysis of 72 studies and 89,027 employees shows that employee perceptions of three HRM bundles (i.e., skill-, opportunity-, and motivation-enhancing bundles) are associated with positive well-being but not with negative well-being. Moreover, that positive well-being mediates the relationship between employee perceptions of HRM bundles and overall performance. In addition, positive well-being is associated with an increased overall performance, and negative well-being with a decreased overall performance.

These results have both theoretical and practical implications. Theoretically, the results contribute to the "good versus bad" debate that has long split HRM scholars. While the finding may not settle the "good vs bad" debate, it does not support critical scholars who argue that HRM leads to worker exploitation. Furthermore, the finding that HRM systems have favorable,

rather than debilitating, effects on employee well-being is important for theory development as it plays a central role in confirming, revising, or discrediting existing competing theories and provides a firm ground for the development of new theory (Popper, 2005).

The finding that positive well-being mediates the relationship between employee perceptions of HRM bundles and overall performance contributes to the wider black box debate in the field. Most studies have focused on a relatively restricted range of potential mediators, such as affective commitment, employee skills and ability, or organizational citizenship behavior. The HRM-performance literature has therefore overlooked developments in other related areas, and specifically the evidence linking employee well-being to performance (R. E. Peccei et al., 2013). Thus, Study 2 suggests that employee well-being is one of the key mechanisms linking HRM systems to performance.

Central to the happy–productive worker is the assumption that happy workers are more productive than unhappy workers. Although the happy–productive worker is a reasonable well-accepted proposition, earlier qualitative and quantitative reviews of the satisfaction-performance relationship (e.g., Brayfield & Crockett, 1955; Iaffaldano & Muchinsky, 1985; Petty, McGee, & Cavender, 1984; Vroom, 1964) have shown that the relationship, while being positive, is relatively weak. Consequently, many researchers question the usefulness of continued research on the happy–productive worker relationship (e.g., Brief, 1998; Côté, 1999; Katzell, Thompson, & Guzzo, 1992; Landy, 1989), labelling it either as an "illusory correlation" (Iaffaldano & Muchinsky, 1985, p. 270) or "bordering on the trivial" (Landy, 1989, p. 481). To some extent, it has also been treated as "a comfortable 'old shoe,' one that is unfashionable and unworthy of continued research" (Roznowski, M., & Hulin, 1992, p. 124). The finding of Study 2 suggests that employee well-being has a sizeable effect on performance, with the estimated true correlation at .38. In other words, Study 2 contributes to the "happy–productive worker debate" by empirically demonstrating that employee well-being matters for performance.

Study 2 also offers practical implications. First of all, firms can benefit from investments in employee well-being, as the findings suggest that happy employees are more productive than unhappy ones. In other words, firms should take employee well-being seriously, as it has a significant impact on employees' overall performance and thereby indirectly on organizational survival. In addition, firms should invest in all three HRM bundles (i.e., combing the skill-, opportunity-, and motivation-enhancing bundles into a system) to maximize the positive impacts of well-being on performance. This is because the evidence indicates that bundling several HRM practices into a coherent system yields a stronger impact on well-being (and hence on performance) than introducing a smaller set of HRM practices/bundles in isolation. Finally,

if constrained by financial resources, it is advisable to invest in the opportunity-enhancing bundle of practices (e.g., self-managed teams, autonomy, skill flexibility, job variety, responsibility, and involvement in decision making) where the strongest positive return on investment is expected.

Study 3: The Devil is in the Details: Performance Implications of Internally Consistent Commitment HRM Systems

The assumption that practices constituting a HRM system must be internally consistent, enhancing and complementing each other to create mutually reinforcing, synergistic effects, is central to the field of HRM. Nevertheless, due to the different theoretical frameworks, conceptualizations, definitions, and operationalizations of HRM systems, we do not know whether the systems investigated in prior research actually represent the practices that create synergies, and whether the level of internal consistency matters for organizational performance. To reduce this conceptual and methodological ambiguity, we conducted a meta-analysis of the type and level of internally consistent HRM practices and organizational performance. Specifically, we classify and compare studies with high levels of internally consistent commitment HRM systems with studies that include moderate/low levels of internally consistent commitment HRM systems.

The statistical aggregation of 97 studies reveals a stronger relationship between high levels of internally consistent commitment HRM systems and operational and financial performance than between moderate/low levels of internally consistent commitment HRM systems and operational and financial performance. The level of internally consistent commitment HRM systems did not, however, relate to voluntary turnover.

These results have several theoretical and practical implications. Theoretically, they suggest the existence of positive and negative synergies, with the effects of high levels of internally consistent commitment HRM systems on operational and financial performance being stronger than those of moderate/low levels of internally consistent commitment HRM systems. The results are also consistent with Bowen and Ostroff's (2004) proposition of a "strong system" being required for major effects on performance. In other words, if the overall messages of the HRM systems are persuasive and unambiguous (i.e., a strong system), or in our language, have a high level of internal consistency, then major effects on performance are expected. On the other hand, if the overall messages of HRM systems are unpersuasive and ambiguous (i.e., a weak system), or in our language, have moderate/low levels of internal consistency, then one should expect weaker effects on performance.

In contrast to the proposition that a lack of internal consistency can be detrimental to organizational performance (B. E. Becker, Huselid, Pickus, & Spratt, 1997; Kaifeng, Lepak, Jia, & Baer, 2012), the results show that moderate/low levels of internally consistency are also positively and significantly related to organizational performance.

Practically, the findings indicate that organizations can benefit in terms of higher operational and financial performance from the implementation of a high level of an internally consistent HRM system. In addition, the results also suggest that organizations with high levels of internally consistent HRM systems outperform those with moderate/low levels. Organizations should therefore pay serious attention to the issue of in/consistency when implementing HRM practices.

Limitations and Future Directions

The results of Studies 1, 2, and 3 should be interpreted in light of the following limitations. First, according to Shadish, Cook, and Campbell (2002), inferring causality must satisfy three criteria:

1. Covariation between the presumed cause and effect (i.e., whenever we find A, we also find B, and we have a certainty that this conjunction will continue to happen);
2. The temporal precedence of the cause (i.e., the cause (A) must occur before the effect (B)); and
3. The ability to control or rule out alternative explanations for a possible cause-and-effect connection (i.e., any events that might cause B have been identified and ruled out in favor of A causing B).

Study 1 uses a cross-sectional survey design whereas Studies 2 and 3 use meta-analyses. Nevertheless, most of the studies included in the meta-analyses have cross-sectional designs. With such cross-sectional research designs, we are clearly not in a position to assert cause and effect even though the theoretical models in all three studies imply causality. I therefore encourage future research to strive to collect longitudinal data with information on HRM practices, well-being, and performance to establish causality with increasing confidence. For example, future meta-analyses can test our theoretical models with a longitudinal research design to see if the same results will be yielded.

Second, I did not examine potential moderators in all three studies. Relevant for Studies 1 and 2, previous research has suggested that the relationship between HRM systems and well-being may be moderated by a range of individual, organizational, and institutional factors. For

example, Jensen, Patel, and Messersmith (2013) find that HRM systems lead to work intensification. However, this relationship is contingent on employees' perceptions of job control; that is, employees with low levels of perceived job control report higher work intensification than those with higher levels of perceived job control. I therefore encourage future research to systematically examine these possible moderator effects to develop a more complete understanding of the relationship between HRM systems, well-being, and firm performance.

Third, although in Studies 1 and 2 I have provided compelling theoretical arguments which support the mediating effect of positive and negative well-being on the HRM systems-performance link, I recognize that there are other potential mediators. In studies of the social word, causality is rarely manifested in a simple relationship, in which "an event of type a is invariably accompanied by an event of type b" (Bhaskar, 2008, p. 70). Instead, causality is often manifested in a complex relationship, in which multiple causal variables contribute to a given outcome. Future research should therefore examine other mediating mechanisms, such as human capital, organizational climate, and organizational core competence which may explain the HRM-performance relationship.

Fourth, I followed the common practice in the field to sum scores on specific HRM practices to develop a system/bundle measure (e.g., Becker & Huselid, 1998). Specifically, "[t]his analytic approach implies that HRM practices are equivalent and substitutable" (Shaw, Delery, Jenkins, & Gupta, 1998, p. 522). An alternative operationalization of synergy in HRM involves interactions among HRM practices (Chadwick, 2010), which is, according to Becker and Gerhart (1996), closer to the notion of fit/synergy. The interactionist perspective implies complementarities between practices, with the effect of one practice depending on the existence of the others. For example, it can be argued that the skill-enhancing bundle and opportunity-enhancing bundle (Study 2) are complementary. The purpose of the skill-enhancing bundle is to enhance the collective knowledge, ability, and skill levels (or collective human capital). However, a high level of human capital has a limited effect if highly skilled employees are not empowered to use their skills to achieve organizational objectives. On the other hand, the purpose of the opportunity-enhancing bundle is to provide a mechanism through which employees can use their knowledge, skills, and abilities to perform their roles. Thus, combining these two bundles would create combined synergistic effects that are substantially greater than those of individual bundles in isolation. Future meta-analyses can explore whether a combination of various bundles can create an even larger effect than individual bundles in isolation.

Finally, Study 1 relies on a single source to rate HRM practices, which may lead to significant measurement error (Gerhart, Wright, MAHAN, & Snell, 2000; Wright et al., 2001). However, I do not think that measurement error is a serious concern in this study for two reasons. First, the descriptions of HRM practices were collected from senior employees responsible for employment relations who had a good understanding of the workplace information provided about HRM practices. Second, the data collection occurred at the plant or business unit levels. Data collection at those levels measures HRM practices in relatively homogeneous settings, reducing the potential reliability problems caused by using single raters (Huselid, & Becker, 2000). Therefore, while I have sufficient confidence in the measure, a similar study with multi-method, multi-rater measurements should yield more powerful results.

Combined Contributions and Conclusion

According to (Guest, 1997, p. 263), if significant progress is to be made, we need three theories: a theory about HRM, a theory about performance, and a theory about how they are linked (see Figure 1). Consequently, I agree and use Guest's framework to highlight the combined contributions of my PhD. As argued, my PhD, composed of three studies, addresses two issues: (1) employee well-being and (2) consistency or fit.

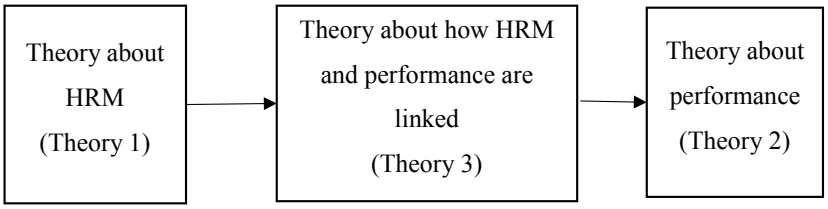

Figure 1. Guest's (1997) three theories of HRM

First, according Guest (2017), there are three good reasons why we should focus on employee well-being. First, "[i]t is the right thing to do on ethical grounds." Second, HRM practices can be used to partly neutralize "the pressures in the external context that carry threats to well-being." And third, "organisations are likely to benefit from a focus on well-being in terms of both enhanced performance and reduced costs" (p. 34). While research into health and well-being is important in its own right, and research in this area is beginning to accumulate fairly rapidly, the precise nature relationship between HRM, well-being, and performance remains unclear (Peccei et al., 2013).

One of the puzzling issues scholars are facing today is the conflicting findings in the field, with some studies documenting positive associations with employee experience of work, but others negative associations. Based on a sample of 1,292 firms and 15,937 employees, Study 1 shows that the relationship between HRM systems and employee well-being is nonlinear. At low levels of implementation, HRM systems are negatively correlated with employee well-being but positively associated at high levels. Study 1 also highlights that HRM systems can enhance employee well-being by increasing job satisfaction and organizational commitment, but they can also undermine it by increasing work intensification. In other words, HRM systems do not have equivalent effects on employee well-being, "whereby one aspect of employee well-being improves but another aspect of employee well-being decreases" (Grant et al., 2007, p. 51). These results suggest that the conflicting findings in the literature may be attributable to the possible nonlinear associations between HRM systems and well-being and the tradeoffs among the well-being dimensions.

The second puzzling issue is the "good vs bad" debate. The result, based on 72 studies and 89,027 employees (Study 2), shows that HRM bundles/systems have favorable, rather than debilitating, effects on employee well-being. Note that this finding is based on the combination of existing research (i.e., a meta-analysis), which is considered to be more scientifically valid than individual empirical studies (Garg, Hackam, & Tonelli, 2008; Hunter, & Schmidt, 1990). As such, while the finding may not provide the final voice to the "good vs bad" debate, it does not support critical scholars who argue that HRM leads to worker exploitation. Taken together, Studies 1 and 2 contribute to the well-being literature on two issues, namely: the inconclusive findings and the "good vs bad" debate.

Besides advancing the well-being research, Studies 1 and 2 also contribute to the HRM-performance paradigm by shedding light on the wider black box debate, or the process whereby HRM can be linked to performance. For example, both studies consistently show that positive well-being mediates the relationship between HRM systems and performance, suggesting that well-being is one of the key mechanisms linking HRM systems with performance. Although the black box is becoming less "black," as we now have a better understanding about how and why HRM influences firm performance (Kaifeng et al., 2012), we still need a theory about it (Guest, 2011). Moreover, Study 2 contributes to the "happy-productive worker debate" by empirically demonstrating that happy employees are more productive than unhappy ones.

Finally, my PhD contributes to the fit-misfit debate. Underlying the notion of fit is the assumption that if the relationships among HRM practices are internally consistent (internal fit), and that those practices are also aligned with strategic objectives (external fit), superior

performance is expected (Becker & Gerhart, 1996; Huselid, 1995). In other words, a good fit will be associated with superior performance whereas a poor fit with low (or negative) performance. Although the notion of fit is widely accepted, scant research has tested the idea, and the results today are fragmented and incomplete (Chadwick, 2010; Gerhart, 2007; Huselid, 1995; Kaifeng et al., 2012). As already explicated, Huselid (1995) was arguably the first who faced this paradox.

Study 3 was designed to address this issue by conducting a meta-analysis of the type and level of internally consistent HRM practices and organizational performance. The result, based on 97 studies, shows high levels of internally consistent commitment HRM systems have stronger impacts on operational and financial performance than moderate/low levels. In other words, this result provides the direct evidence of the positive synergistic relationships among HRM practices. Empirically verifying the existence of (positive) synergy or fit is important for two reasons. First, according to Guest (1997), "the concept of 'fit' is central to many attempts to theorize about HRM" (p. 270). Thus, a better understanding of how HRM practices interact and the synergy that is embedded in a HRM system help us understand the nature of HRM; i.e., what practices constitute a HRM system or what Guest (1997) calls the theory about HRM. Second, better understanding how HRM practices interact also helps us recognize the mechanisms through which HRM translates into performance (Becker & Gerhart, 1996), or what Guest (1997) calls the theory about how HRM and performance are linked. Becker and Gerhart (1996) make this point very clear as they said in order to "grasp the precise mechanisms by which the interplay of human resource practices and policies generates value…it is necessary to understand how the elements interact" (p. 782). Thus, empirically demonstrating that a good fit is associated with superior performance is the first step toward understanding how the elements interact.

In conclusion, my PhD contributes to three of the most controversial debates in the HRM literature today, namely: the "good vs. bad" debate (whether HRM practices are good or bad for employee well-being); the "happy–productive" debate (whether happy employees are more productive than unhappy employees); and, the "fit-misfit" debate (whether high levels of internally consistent commitment HRM systems are associated with better performance than moderate/low levels of internally consistent commitment HRM systems). I have thrown one of the first stones into these debates, and hope that more will be thrown in the future.

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