

# A META-ANALYTIC INVESTIGATION OF THE RELATIONSHIP BETWEEN EMPLOYEE PERCEPTIONS OF HRM AND EMPLOYEE ATTITUDES AND BEHAVIORS

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## **ABSTRACT**

In the current stream of empirical research on employee perceptions of HRM a variety of concepts is used to measure how employees perceive HRM. The primary objective of this research is to examine which concept of employee perception has the highest effect on employee attitudes and employee behaviors. The secondary objective is to get a better understanding of the importance of the relationship between employee perception of HRM and employee attitudes and behaviors within the black box between HRM and organizational performance. A meta-analysis is executed to comply with these objectives. The results show no conclusive evidence which employee perception concept has the highest effect on employee attitudes and behaviors. The results show medium effect sizes between employee perception of HRM and employee attitudes, and show small effect sizes between employee perception of HRM and employee behaviors.

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## **Keywords**

Meta-analysis; HRM; employee behavior; employee attitude; employee perception;

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# 1. INTRODUCTION

Over the past few decades, studies in strategic human resource management (SHRM) have shown that an organization's HRM affects the organization's performance (Arthur, 1994; Becker, Huselid, Becker, & Huselid, 1998; Delaney & Huselid, 1996; Huselid, 1995; MacDuffie, 1995). It is argued that this relationship between HRM and organizational performance is affected through a causal chain of mediating variables and that one important mechanism is employee attitude and behavior. HR practices are assumed to enhance employee attitude and behavior, and in turn these better behaving employees enhance the organization's performance (Huselid, 1995; Nishii, Lepak, & Schneider, 2008; Wright, McCormick, Sherman, & McMahan, 1999; Wright, McMahan, & McWilliams, 1994).

More recent, it is suggested that the causal chain may be more complex and that an employee's perception of an organization's HRM affects an employee's attitudes and behaviors (Bowen & Ostroff, 2004) and thus is a mediating mechanism between an organization's HRM and an employee's attitudes and behaviors. Bowen and Ostroff (2004) reason that in order for HR practices to achieve their desired outcomes on employee attitudes and behaviors, the practices firstly have to be perceived and interpreted by employees. The perception of an employee signifies the employee's subjective belief about an organization's diverse aspects of HR practices (Chang, 2005). In conceptualizing HRM, it is essential to distinguish between the organization's intended HR practices and its actual activities as perceived by the organization's employees (P. M. Wright & Boswell, 2002). "An organization may have an abundance of written policies concerning HRM (...), but these policies and beliefs are meaningless until the individual perceives them as something important" (Vandenberg, Richardson, & Eastman, 1999, p. 302). It may become apparent that how employees perceive and respond to an organization's HR practices is important, because this affects organizational performance and that is why this current research focusses on the effect of employee perceptions of HRM on employee's attitudes and behaviors (figure 1).

In the current stream of empirical research on the relationship between employee perception of HRM and employee behaviors and attitudes a variety of concepts is used to conceptualize individual employee perception. How an HRM practice is perceived by an employee can be conceptualized and measured in several ways (Boselie, Dietz, & Boon, 2005); by its presence (i.e. dichotomous 'yes' or 'no' scale for whether the HR practice is in operation) or by its intensity (i.e. a rating scale for the degree to which employees are exposed to HR practices). Furthermore, employee perception can be conceptualized in terms of value (Marescaux, De Winne, & Sels, 2012; Mendelson, Turner, & Barling, 2011) (i.e. a rating scale for the utility an employee perceives from performance appraisal) and in terms of the "attributions of the why" (Nishii, et al., 2008) (i.e. a rating scale for whether employees perceive themselves as a cost to be controlled on the basis of compensation).

Existing studies have examined the employee perception concepts separately, leaving the question open which of these employee perception concepts is most relevant to explain employee attitudes and behaviors. A meta-analysis is used to answer this question, by statistically aggregating data of each concept of employee perception of HRM on employee attitudes and behaviors. When research streams are aggregated through meta-analysis, the size of the relationship can be estimated more accurately and more reliably than from one single study alone and reservations as to the generalizability of results which may arise from single studies can be eliminated by using

broader and more comprehensive populations (Tranfield, Denyer, & Smart, 2003). Furthermore, the overall effect size of employee perception of HRM on employee attitudes and behaviors will be examined through meta-analysis to get a better understanding of the importance of this relationship within the causal chain of HRM and organizational performance.

The primary objective of this research is to examine which concept of employee perception of HRM has the highest effect on employee attitudes and behaviors using meta-analysis. No research has been done on this subject and this meta-analysis aims to fill this knowledge gap. For further research, the results of this study can suggest the employee perception concept which is most relevant to explain employee attitudes and behaviors. In business, this can contribute to the considerations a HR manager is confronted with, i.e. when the value of an HR practice proves not to be as important as the intensity of an HR practice for the employee perception, the manager can direct its efforts on implementing an HR policy which focusses on the intensity. The secondary objective of this research is to get a better understanding of the importance of the relationship between employee perception of HR practices and employee attitudes and behaviors within the causal chain of HRM and organizational performance.

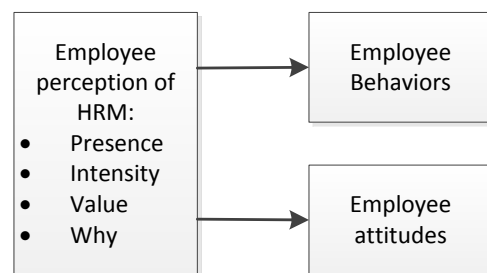


Figure 1: Focus of the current research

## 2. THEORY & HYPOTHESES

In this section the concepts and relationships of figure 1 are discussed. First, the four concepts of employee perceptions of HRM which are recognized in this meta-analysis are introduced. Second, using social exchange theory, it is proposed how employee perception of HRM affects employee attitudes and employee behaviors. Then, employee attitudes and employee behaviors are discussed. Last, the hypotheses are composed.

### 2.1 Employee perceptions of HRM

The overall perception of an employee signifies the employee's subjective belief about an organization's diverse aspects of HRM (Chang, 2005), where HRM can be defined as "all activities associated with the management of people in firms" (Marescaux, et al., 2012, p. 2). These activities are commonly referred to as HR practices (Marescaux, et al., 2012).

In this study four ways are recognized in which employee perception can be conceptualized. Boselie et al. (2005) identify two ways in which perceived HRM practices can be measured on an employee level: by its presence or by its intensity. Third, employee perception of HRM can be measured in terms of value (Marescaux, et al., 2012; Mendelson, et al., 2011). Fourth employee perception of HRM can be measured in the "attributions of the why" (Nishii, et al., 2008).

#### 2.1.1 Perceived presence of HRM

The most common way for assessing employee perception of HRM involves measuring presence or absence of HR practices. According to Boselie et al. (2005, p. 8) "the overwhelming

majority relied only on measures of presence". The "presence perception" is a very simplistic way of measuring employee perception of HRM as it only takes into account whether practices are present or absent and not the utility or the extent of the practices (Edgar & Geare, 2005b).

In this research, the "presence perception" is defined as the employees' perception of an organization's HRM based on if HR practices are generally present within the organization. It is measured using dichotomous 'yes' or 'no' scales. For example, a dichotomous 'yes' or 'no' scale for whether employees receive performance appraisals or not.

### 2.1.2 Perceived intensity of HRM

A critique on the widely used presence perception is that "there is no differentiation on the basis (...) to what extent the practice exists" (Edgar & Geare, 2005b, p. 4). A way to overcome this weakness is to measure the extent to which HRM has been operationalized, instead of merely measuring the presence of HRM (Edgar & Geare, 2005b). Measuring the perceived extent of HRM is termed "perceived intensity" in this study and is the second way Boselie et al. (2005) recognize as how to conceptualize employee perception of HRM.

The "intensity perception" is defined as the employees' perception about an organization's HRM based on the extent to which employees are exposed to HR practices. The intensity perception is measured in ordinal scales. For example, a rating scale measuring the degree to which employees receive training.

### 2.1.3 Perceived value of HRM

Several studies recognize that the presence perception does not take into account how well HRM works. Some make a distinction between perceived presence and perceived quality, where perceived quality is defined as "the degree to which employees' talents, interests and expectations are taken into account" (Marescaux, et al., 2012, p. 1). Some suggest that it is the 'perceived utility' of HRM that is central to accomplish desirable attitudes and behaviors and therefore choose to measure "satisfaction with HR practices" instead of perceived presence (Purcell & Hutchinson, 2007). Also the distinction between perceived presence and perceived benefits of HRM is made (Newman, Thanacoody, & Hui, 2011). Others recognize that the presence perception overlooks the 'perceived effectiveness' of HRM (Wall & Wood, 2005). In studies that use 'perceived effectiveness' of HRM, perceived effectiveness is often operationalized as "a judgment on how well the practice works" (Mendelson, et al., 2011, p. 3).

Even though these studies use different terminology, they have in common that they recognize that perceived presence of HRM lacks an evaluative judgment of perceived HRM and introduce measurements that use an evaluative judgment. In this study the term value is introduced to cover these differences in terminology. Value for employees can be defined as a trade-off between the perceived benefits (e.g. effectiveness, utility, quality) to do their job and the costs in meeting these benefits (e.g. effort, time) (Meijerink, 2013).

The "value perception" is defined as the employee's perception about an organization's HRM based on the value of the HR practices for the employees. The "value perception" is measured in ordinal scales. For example, a rating scale measuring the utility an employee perceives from performance appraisal.

### 2.1.4 Perceived attributions of HRM

Last, the "attributions perception" is a relatively new way in which employee perception of HRM can be measured and conceptualized. It is argued that the attributions that employees

make regarding perceived management's motivations for using particular HR practices affects the employees attitudes and behaviors (Nishii, et al., 2008). The attributions that employees make can be divided in positive or negative attributions. *Positive attributions* occur when employees perceive that the intended goals of HRM signify positive consequences for employees (well-being and quality enhancement causes), and *negative attributions* occur when employees perceive that the intended goals of HRM signify "lower levels of employee-concern" (Nishii, et al., 2008, p. 13) (cost reduction and exploiting employees HR attributions).

The attributions perception is defined as the employee's perception about an organization's HR practices based on the causal explanations that employees make regarding management's motivations for using particular HR practices (Nishii, et al., 2008). The "attributions perception" is measured in nominal or ordinal scales. For example, a rating scale measuring the extent to which employees perceive themselves as assets to the organization based on training.

## 2.2 Social exchange theory

The social exchange theory can be used to explain the relationship between employee perception of HRM and employee attitudes and employee behaviors. Employee attitudes are defined in this study as affective reactions to one's workplace (Locke, 1976), for example job satisfaction. Employee behaviors are defined as "a series of dynamic reactions of the employee, as a member of the organization, to the internal and the external environmental stimuli" (Zhu, 2013, p. 1), for example organizational citizenship behavior (OCB). The effects of attitudes on behaviors is extensively studied within psychology, but is omitted in this study.

Using the social exchange theory, the employment relationship between an employee and an employer can be viewed as a social exchange (Gould-Williams, 2007). The social exchange theory assumes that social exchanges are 'voluntary actions' which create a sense of indebtedness on the part of the recipient to the donor (Blau, 1964). For example, an employer can initiate in 'voluntary actions' by giving his employees training and the employees get a sense of obligation to reciprocate his employer, for instance by improving his attitudes. This state of obligation or indebtedness the recipient has, is a condition termed 'norms of reciprocity' (Gouldner, 1960), and remains until the donor has been reciprocated by the recipient.

There is empirical evidence that when employers invest in their employees, employees tend to repay in desirable ways for the organization, which supports the social exchange theory (Cropanzano & Mitchell, 2005; Kuvaas & Dysvik, 2010b; Settoon, Bennett, & Liden, 1996; Simon, 1957). More important for this study, there is evidence that positive employee perceptions of HRM lead to increased desirable attitudes (job satisfaction), desirable behavior (organizational citizenship behavior) and other desirable employee outcomes (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Gould-Williams, 2007; Shore & Wayne, 1993; Wayne, Shore, & Liden, 1997).

Furthermore, it has also been shown that it is possible for the 'norm of reciprocity' to be negative in the employer-employee relationship (Uhl-Bien & Maslyn, 2003). Under negative conditions of reciprocity "managers engage in hostile behaviors with employees responding in dysfunctional ways" (Gould-Williams, 2007, p. 1), hence it is possible that negative employee perceptions of 'voluntary actions' may result in undesirable employee attitudes or behaviors for the organization.

So, in line with the social exchange theory (Blau, 1964), positive employee perceptions of employer's 'voluntary actions' may result in employee attitudes and behaviors that are desirable for the organization, and negative perceptions of employer's 'voluntary actions' may result in employee attitudes and behaviors that are undesirable for the organization, with the voluntary actions being the HR practices in this study. It is therefore necessary to distinguish between desirable and undesirable employee attitudes and behaviors.

### 2.3 Desirable and undesirable employee attitudes

Desirable employee attitudes are defined as attitudes generally desirable to the goals of organizations and undesirable employee attitudes are defined as attitudes generally undesirable to the goals of organizations (Avey, Reichard, Luthans, & Mhatre, 2011). This distinction is not meant to create opposite ends of the attitudinal spectrum, but is rather a categorization of attitudes. The distinction between desirable and undesirable attitudes is meant to generally apply. For example, turnover intention is considered an undesirable attitude in this meta-analysis, but an exception may exist, i.e. a weak performing employee with high turnover intentions. However, generally, HR professionals would consider high turnover intentions to be undesirable.

Desirable and undesirable attitudes are identified by following earlier studies that recognized attitudes as being desirable or undesirable to organizations' goals. Desirable attitudes that are recognized in this study are, for example, organizational commitment, job satisfaction, psychological well-being and trust in management (Avey, et al., 2011; Whitener, 2001; Yalabik, Popaitoon, Chowne, & Rayton, 2013). Undesirable attitudes that are recognized in this study are, for example, turnover intention, cynicism toward change, job stress and anxiety (Avey, et al., 2011; Kuvaas & Dysvik, 2010b).

### 2.4 Desirable and undesirable employee behaviors

Again, a distinction is made between desirable and undesirable behaviors. Following the definition from Avey et al. (2011) on desirable and undesirable attitudes, we define desirable employee behaviors as behaviors generally desirable to the goals of organizations and undesirable employee behaviors as behaviors that are generally undesirable to the goals of organizations. Desirable and undesirable behaviors are identified by following earlier research that recognizes behaviors as either being desirable or undesirable to organizations' goals.

There are two main categories of desirable behaviors: in-role and extra-role behavior (Katz, 1964; Zhu, 2013). In-role behavior (IRB), is behavior that is required as part of performing the duties and responsibilities of an assigned work role and are also recognized by the firm's formal reward systems (Zhu, 2013), for example work effort, work quality and productivity (Kuvaas & Dysvik, 2010b; Taormina & Gao, 2009). Extra-role behavior (ERB) is behavior that benefits the organization and goes beyond the existing role expectations (Van Dyne, Cummings, & Parks, 1995), for example organizational citizenship behavior (OCB) (Organ, Podsakoff, & MacKenzie, 2006).

Undesirable employee behaviors that are recognized in this study are, for example, deviance and absenteeism (Avey, et al., 2011; Robinson & Bennett, 1995).

## 2.5 Hypotheses development

In line with social exchange theory (Blau, 1964), it is proposed in this study that a positive employee perception of HRM results in a positive norm of reciprocity and consequently in desirable employee attitudes and behaviors, and that a negative employee perception of HRM results in a negative norm of reciprocity and consequently in undesirable employee attitudes. This results in the following hypotheses:

- H1: *Employee perceptions of HRM presence (H1a), HRM intensity (H1b), HRM value (H1c), and positive HRM attributions (H1d) are positively related to desirable attitudes and employee perception of negative HRM attributions (H1e) is negatively related to desirable attitudes.*
- H2: *Employee perceptions of HRM presence (H2a), HRM intensity (H2b), HRM value (H2c), and positive HRM attributions (H2d) are negatively related to undesirable attitudes and employee perception of negative HRM attributions (H2e) is positively related to undesirable attitudes.*
- H3: *Employee perceptions of HRM presence (H3a), HRM intensity (H3b), HRM value (H3c), and positive HRM attributions (H3d) are positively related to desirable behaviors and employee perception of negative HRM attributions (H3e) is negatively related to desirable behaviors.*
- H4: *Employee perceptions of HRM presence (H4a), HRM intensity (H4b), HRM value (H4c), and positive HRM attributions (H4d) are negatively related to undesirable behaviors and employee perception of negative HRM attributions (H4e) is positively related to undesirable behaviors.*

So, it is hypothesized how the employee perception concepts relate to employee attitudes and behaviors, however, this leaves the primary objective unanswered; which employee perception of HRM has the highest effect on employee attitudes and behaviors.

In the marketing research field, a new dominant logic to explain the exchange-relationship between consumer and seller is observed (Vargo & Lusch, 2004). The focus in the exchange-relationship between consumer and seller has shifted from the producer perspective to the consumer perspective. Value used to be determined and embedded in goods by the producer, and would subsequently be transferred to consumers through transactions. Now the value is "perceived and determined by the consumer" (Vargo & Lusch, 2004, p. 7). This shift suggests that it has become more important for consumers to determine and perceive value, than to receive goods where value is being determined by the producer.

This new dominant logic can be applied to the social exchange-relationship between employer and employee. It is suggested in this study that the value of HRM is not determined by the employer, but is perceived and determined by the employee. It is more important for employees to determine and perceive value of HRM, than to receive HR practices where its value is determined by the employer. In other words, the perceived presence or intensity of HRM or the perceived attributions for the organization's use of HRM, are not as important to employees as the perceived value of HRM for their job.

Based on the analogy between the exchange-relationship between consumer and seller and the social-exchange

relationship between employee and employer it is proposed that the value perception has a higher effect on employee attitudes and behaviors than the presence perception, intensity perception and the attributions perception. Using the social exchange theory (Blau, 1964), it is expected that perceived value of HRM will lead to a higher norm of reciprocity than perceived presence, intensity or attributions.

*H5: Employee perception of HRM value has a higher effect on employee attitudes and behaviors than employee perception of HRM presence, HRM intensity, positive HRM attributions or negative HRM attributions.*

### 3. METHODOLOGY

In this study results from different studies are combined, using a meta-analysis, to estimate the sizes of the relationships between employee perceptions of HRM and employee attitudes and behaviors more accurately and more reliably (Tranfield, et al., 2003).

To identify relevant studies that could be used in this meta-analysis, a list of journals was composed. The list consisted only of journals ranking within the top two quarters of the SCImago Journal Rank of the subject category “Organizational Behavior and Human Resource Management”, to ensure the journals have a high quality and concern HRM. Not all suitable journals were used, as time was a limiting factor. The following journals were searched: Human Resource Management Journal, International Journal of Human Resource Management, Human Resource Management, Personnel Review, British Journal of Management, Asia Pacific Journal of Human Resources, Employee Relations, and Human Resource Development Quarterly. The search was confined to 2004, because Bowen and Ostroff (2004) suggested the novel idea of the significance of employee perception in the causal chain. So, the journals were searched for articles published between 2004 and the September 2014. Moreover, a literature review on HRM perceptions (Kooij, Jansen, Dikkers, & De Lange, 2010) was included in the search using the reference list to find more relevant studies.

The journals and the literature review were searched using two groups of search terms to find articles concerning perceived HRM. The first group consisted of HRM related search terms and the second group of perception related search terms. All possible combinations from crossing search terms from both groups were used to help identify articles. For the first group HR practices and HR systems are considered to be comprehensive in identifying HRM. The “core practices that are the most central” (Posthuma, Campion, Masimova, & Campion, 2013, p. 9) within HRM literature are considered, and the “main conceptual companions” (Boxall & Macky, 2009, p. 2) of HR systems are considered. This resulted in the following search terms: HRM practice, HRM system, High-performance work practice, High-performance work system, High-commitment work practice, High-commitment work system, High-involvement work practice, High-involvement work system, Personnel management, recruitment, selection, training, compensation, benefits, performance appraisal, performance management, job design, information sharing, participation. The second group of perception related search terms was achieved after consultation with the supervisor and resulted in the following search terms: perceived, employee perception, employee rated, experienced, satisfaction with, employee perspective.

To improve on the validity and the selection process, the four employee perceptions, the employee attitudes and the employee behaviors were operationalized beforehand. The results of the operationalization are presented in appendix A.

The selection of articles was done in two stages. The first stage was carried out by me and two colleague-students, who were also performing a bachelor thesis related to employee perceptions of HRM, to construct a joint database of articles. The second stage was carried out by me to select studies usable for this study. Initially five inclusion criteria were used in the first-stage to select studies from the journals and review article. First, only studies that used an employee level were used. Second, the study had to use employees as respondents for data collection. Third, the study had to be empirical. Fourth, the study had to include an outcome measure of HRM perceptions. Last, the papers had to be in English. An overview of the results of the joint search is shown in table 1 (under ‘articles found’). The joint database of studies that arose from the search was limited for this research in the second-stage by three more inclusion criteria and one exclusion criteria. First, the study had to report a bivariate measure of effect size (Pearson’s r), as this is most commonly used (Field & Gillett, 2010). Second, the study had to report attitudes and/or behaviors as an outcome of perceived HRM. Third, the study had to provide all items used for measuring employee perception of HRM or an accessible source which provided the items. Last, studies that used more than one perception to measure constructs were excluded from this study, in order to prevent inconsistent data and distortion in the results. The results of this second-stage search are also shown in table 1 (under ‘articles used’).

**Table 1: Results of 1<sup>st</sup>-stage and 2<sup>nd</sup>-stage search**

Journals and review	Articles found	Articles used
Human Resource Management Journal	17	6
International Journal of HRM	47	14
Human Resource Management	51	5
Personnel Review	32	6
British Journal of Management	16	0
Asia Pacific Journal of Human Resources	32	3
Employee Relations	26	1
Human Resource Development Quarterly	30	5
Review article (Kooij, et al., 2010)	33	9
Totals	284	49

Several relevant studies (Edgar & Geare, 2014; Luna-Arocas & Camps, 2007) reported correlations between all items of all constructs. Correlations between two constructs were averaged, by averaging the correlations between all items of both constructs. Multiple publications from the same data-set (Kuvaas, 2006, 2008) were treated as one study by averaging correlations. When interpretations of the perception concept left doubt, it was resolved after discussion with the supervisor. Eventually 49 usable articles remained for this meta-analysis, containing 296 correlations and covering more than 1975 organizations and 74.536 employees. From the 49 articles that were used in this meta-analysis, 48 were cross-sectional and 1 was longitudinal. From the selected studies, 8 researched the public sector, 26 the private sector and 15 used both sectors. Furthermore, 27 articles considered the service industry, 5 manufacturing, and 17 considered both. From the selected studies, 11 studies were performed in Asia, 6 in Oceania, 21 in Europe, 9 in North America and 2 studies used multiple continents.

Table 2 shows the number of studies that have been found on each relation between employee perception and employee attitudes or behaviors. In this study, a minimum of three studies within each relation is required; or else the relation will not be meta-analyzed, because otherwise too few studies are present for a meta-analysis to be useful. This means that 13 out of the 24 relationships have not been meta-analyzed and are omitted in this study.

The 11 remaining relations were meta-analyzed. Because the data in this study has multiple cultural backgrounds and industries it is expected that the population parameters are variable (Field & Gillett, 2010). Therefore the Hunter & Schmidt meta-analysis procedure is applied (Field & Gillett, 2010). The Hunter & Schmidt meta-analysis procedure was performed in SPSS, using the 'Meta\_Basic\_r.sps' syntax as described by Field & Gillett (2010). Table 3 summarizes the results of The Hunter & Schmidt meta-analysis procedure.

#### 4. RESULTS

Hypotheses H1a, H1b, H1c and H1d predict that employee perception of HRM is positively related to desirable employee attitudes. As shown in table 3, hypothesis H1a is supported with  $r = .241$  ( $p < .001$ ), H1b is supported with  $r = .306$  ( $p < .001$ ), H1c is supported with  $r = .275$  ( $p < .001$ ) and H1d is supported with  $r = .401$  ( $p < .05$ ). This means that employee perceptions of HRM presence (H1a), HRM intensity (H1b), HRM value (H1c) and positive HRM attributions (H1d) are indeed positively related to desirable employee attitudes. Using Cohen's (1992) guidelines about what constitutes a small or large effect size, hypotheses H1a, H1b, H1c and H1d all show medium effect sizes. Hypothesis H1e predicts that employee perception of negative HRM attributions is negatively related with desirable attitudes, but not enough data was found to test this hypothesis.

In accordance with the secondary objective, the effect of the overall employee perception on desirable employee attitudes was also meta-analyzed. As table 3 reveals, the overall employee perception of HRM is positively related to desirable employee attitudes; showing a medium effect size  $r = .274$  ( $p < .001$ ).

Hypotheses H2a, H2b, H2c and H2d predict that employee perception of HRM is negatively related to undesirable employee attitudes and hypothesis H2e predicts that employee perception of negative HRM attributions is positively related to undesirable employee attitudes. Hypotheses H2a, H2d and H2e are not tested because not enough data was found to perform a meta-analysis for these hypotheses. As shown in table 3, hypothesis H2b is supported with  $r = -.228$  ( $p < .001$ ), which means that employee perception of HRM intensity is indeed negatively related with undesirable attitudes. Hypothesis H2c is supported with  $r = -.246$  ( $p < .001$ ), which means that employee perception of HRM value is also negatively related with undesirable attitudes. Hypothesis H2b as well as H2c show medium effect sizes (Cohen, 1992).

The effect of the overall employee perception of HRM on undesirable attitudes was also meta-analyzed. As table 3 reveals, the overall employee perception of HRM is negatively related to undesirable employee attitudes. With  $r = -.250$  ( $p < .001$ ) also showing a medium effect size (Cohen, 1992).

Hypotheses H3a, H3b, H3c and H3d predict that employee perception of HRM is positively related to desirable employee behaviors and hypothesis H3e predicts that employee perception of negative HRM attributions is negatively related to desirable employee behaviors. Unfortunately, hypotheses H3a, H3d and H3e could not be tested because not enough data was found to perform a meta-analysis for these hypotheses. As

shown in table 3, hypothesis H3b is supported with  $r = .075$  ( $p < .001$ ), which means that employee perception of HRM intensity is indeed positively related with desirable employee behaviors, but only with a small effect size (Cohen, 1992). Hypothesis H3c is supported with  $r = .096$ , ( $p < .001$ ), which means that employee perception of HRM value is also positively related with desirable behaviors, but also with a small effect size.

The effect of the overall employee perception of HRM on desirable behaviors was also meta-analyzed. As table 3 reveals, the overall employee perception of HRM is positively related to desirable employee behaviors with a small effect size:  $r = .107$  ( $p < .001$ ) (Cohen, 1992)

There were too few studies found that researched the relation between employee perception of HRM and undesirable employee behaviors (table 3). Therefore it was not possible to test hypotheses 4.

Hypothesis 5 predicts that employee perception of HRM value has a higher effect on employee attitudes and behaviors than employee perception of HRM presence, HRM intensity or HRM attributions. In order to test this hypothesis properly there need to be data on all perceptions for at least one employee outcome (desirable attitudes, undesirable attitudes, desirable behaviors, undesirable behaviors). Unfortunately not enough data was found to test this hypothesis statistically. However, it is possible to analyze the data indicatively. As table 3 reveals, the intensity perception ( $r = .306$ ) and the positive attributions perception ( $r = .401$ ) have a higher correlations with desirable employee attitudes than the value perception ( $r = .275$ ). Only the presence perception shows a lower correlation with desirable employee attitudes ( $r = .241$ ). This contradicts what is hypothesized. The value perception does show a higher correlation with undesirable attitudes ( $r = -.246$ ) and desirable behaviors ( $r = .096$ ), than the intensity perception ( $r = -.228$ ) and ( $r = .075$ ) respectively.

What can be concluded when indicatively analyzing the outcomes of the meta-analysis is that there is not one employee perception of HRM that systematically shows higher correlations with either employee attitudes or behaviors. So, although inconclusive, hypothesis 5 seems to be improbable.

Besides results to test the hypotheses, other results have been obtained from this study. Table 3 shows that in studies on the relation between employee perception of HRM and employee attitudes and behaviors the intensity perception (170 effect sizes) and the value perception (93 effect sizes) are the most used perceptions. The presence perception (17 correlations) and the attributions perception (16 correlations) are used less often.

Furthermore, this research shows that employee attitudes are more researched than employee behaviors in relationship with employee perception of HRM. Only 23 studies reported on employee behaviors, whereas 43 studies reported on employee attitudes.

Although not statistically tested, employee perception of HRM seems to be stronger related with employee attitudes, than with employee behaviors. Employee perceptions of HRM systematically show higher correlations with employee attitudes, than with employee behaviors (table 3). For example, the effect size between overall employee perception of HRM and desirable attitudes is  $.274$  ( $p < .001$ ), while the effect size between overall employee perception of HRM and desirable behaviors is  $.107$  ( $p < .001$ ).

**Table 2: Numbers of studies**

	Presence perception	Intensity perception	Perceived Value	Perceived positive attributions	Perceived negative attributions	Overall perception
Desirable attitudes	3	23	21	3	1	51
Undesirable attitudes	1	14	10	0	0	25
Desirable behaviors	1	12	6	2	0	21
Undesirable behaviors	1	0	1	0	0	2

**Table 3: Results of the meta-analysis**

	Presence perception			Intensity perception			Value perception			Positive attributions perception			Negative attributions perception			Overall perception		
	K	N	r	K	N	r	K	N	r	K	N	r	K	N	r	K	N	r
Desirable attitudes	11	35.456	.241 ***	104	13.161	.306 ***	68	38.309	.275 ***	10	1.057	.401 *	3	330	-	196	88.403	.274 ***
Undesirable attitudes	3	5.748	-	33	8.700	-.228 ***	15	33.056	-.246 ***	0	-	-	0	-	-	51	47.504	-.250 ***
Desirable behaviors	2	6.400	-	33	9.379	.075 ***	9	6.914	.096 ***	3	3.496	-	0	-	-	47	26.189	.107 ***
Undesirable behaviors	1	8.454	-	0	-	-	1	732	-	0	-	-	0	-	-	2	9.168	-

N = pooled sample size; K is number of effect sizes; r = sample weighted mean effect size; \*p < .05; \*\*p < .01; \*\*\*p < .001

The results of the meta-analysis also show that desirable employee outcomes are more researched than undesirable employee outcomes in relationship with employee perception of HRM. All 49 studies reported desirable employee attitudes or behaviors, whereas 22 studies reported on undesirable employee attitudes or behaviors.

Although not statistically tested, employee perceptions of HRM seem to be slightly stronger related to desirable employee attitudes than to undesirable employee attitudes. Employee perceptions of HRM show higher correlations with desirable attitudes than with undesirable attitudes. For example, the effect size between overall employee perception of HRM and desirable attitudes is .274 ( $p < .001$ ), while the effect size between overall employee perception of HRM and undesirable attitudes is -.250 ( $p < .001$ ). Not enough data is available to compare desirable behaviors with undesirable behaviors.

## 5. DISCUSSION

This research contributes to the literature by giving more insight into the black box between HRM and organizational performance. The sample sizes resulting from this meta-analysis give an indication of the importance of the relationship between employee perception of HRM and employee attitudes and behaviors within the black box. The results show medium significant effect sizes between employee perception of HRM and employee attitudes, and show small significant effect sizes between employee perception of HRM and employee behaviors.

The results of this study give no indication that the value perception is stronger related to employee attitudes and behaviors than the other employee perceptions recognized in this study. This contradicts with what is hypothesized, and contradicts with a study by Edgar & Gear (2005b), who's findings suggest the perceived quality of HRM matters more than the perceived presence or intensity of HRM for employee attitudes. On the other hand, there is some empirical evidence that suggests the value perception is not stronger related to employee attitudes than the intensity perception. Edgar & Geare (2014) researched the intensity (the extent to which employees agreed that HR practices occur) and the value of HR practices (the perceived utility of HR). They concluded that "perceptions about the utility of practice seem to have a more tangential relationship with employee attitudes (...) when compared to perceptions about actual practice" (Edgar & Geare, 2014, p. 13). In other words, the value perception showed lower correlations with employee attitudes than the intensity perception. The research by Mendelson et al. (2011) showed similar results. They also studied the effect of perceived HRM intensity (perceived presence of HIWP's on a rating scale) and perceived HRM value (perceived effectiveness of HIWP's) on employee attitudes. The study concluded that "the results were largely similar for both the perceived presence and the perceived effectiveness of practices" (Mendelson, et al., 2011, p. 20). This is consistent with the indicative results of this meta-analysis, which shows there is indeed no or very little difference in the effect of the intensity perception or the value perception on employee attitudes and behaviors.

What this meta-analysis contributes is that it gives an answer to these contradicting studies. The results suggest there is not one employee perception of HRM that systematically shows higher correlations with either employee attitudes or behaviors.

This suggests that it is the experience of HR practices that is most important for employees. A positive experience of HRM leads to significantly more desirable employee attitudes and behaviors. The perceived management's motivation for implementing the practices or the perceived value of HRM does

not lead to more desirable employee attitudes or behaviors than the mere experience of HRM.

However, this statement needs to be asserted with caution, because no z-tests have been carried out to statistically conclude if there is significant difference in sample sizes between perceptions or not.

My findings also suggest that the intensity perception and the value perception are used more often than the presence perception. This is in contradiction with Boselie et al. who state that "the overwhelming majority relied only on measures of presence" (2005, p. 8). A difference in definitions explains the difference in results. Boselie et al. (2005) use a definition of presence which incorporates the presence perception as well as the intensity perception.

Furthermore, this research shows that employee attitudes are more researched than employee behaviors. This seems logical, as perception and attitudes are more closely related than perception and behavior. This also explains why higher correlations are found between perception and attitudes, than between perception and behaviors (Fazio, Powell, & Herr, 1983).

The results also show that employee perceptions of HRM seem to be slightly stronger related to desirable employee attitudes than to undesirable employee attitudes. There is evidence, which support this result. It appears that when employers engage in hostile behaviors, often employees will not reciprocate in undesirable attitudes and behaviors as they worry that this will only lead to further adverse outcomes (Gould-Williams, 2007). This suggests that employees suppress negative norms of reciprocity.

## 6. LIMITATIONS AND FUTURE RESEARCH

There are a number of limitations in this research. The main limitation of this research is that not enough data was found to comply with the primary objective of this research. The dataset needs to be expanded in order to test hypothesis 5. Only then can be statistically shown which of the employee perception concepts is most relevant to explain employee attitudes and behaviors. To find more relevant studies, more HRM-related journals can be searched, the timespan can be increased, or the keywords can be revised.

Another limitation in this study is that the effect of different HR practices is omitted. The type of HR practice may influence the relationship between employee perception of HRM and employee attitudes and behaviors. In this study it is unclear how HR practices are spread across the different perceptions. For further research it is suggested to analyze the effect of soft HR practices and hard HR practices on the relation between employee perception of HRM and employee attitudes and behaviors. Soft HRM "emphasizes the ability of HRM to satisfy employees' needs which is hypothesized to generate favorable HRM outcomes" (Marescaux, et al., 2012, p. 3) and therefore soft HR practices may have a stronger effect on employee attitudes and behaviors than hard HR practices.

A limitation of the meta-analysis procedure that was used is that the correlations extracted from journals were not corrected for reliability. This research could be carried out again, correcting the reliability of correlations, to improve the reliability of this research. For the most part the reliability measures are available in the raw data.

Also, the results may have been overestimations due to publication bias. The published literature may not represent the result of all research, because studies that show significant



results are more likely to be published. To compensate for publication bias, unpublished work, conference papers and work in progress could be added to the dataset (Field & Gillett, 2010).

This study also showed that undesirable outcomes as well as employee behaviors are underrepresented in research on the relationship between employee perception of HRM and employee outcomes. Further research could especially focus more on the undesirable behaviors. Also, very little empirical research was found that investigated the effect of the negative attributions perception. Further empirical research could focus on the effect of the negative attributions perception on employee outcomes.

## REFERENCES

- \* Alfes, K., Shantz, A., Truss, C., & Soane, E. (2013). The link between perceived human resource management practices, engagement and employee behaviour: a moderated mediation model. *The International Journal of Human Resource Management*, 24(2), 330-351.
- \* Alfes, K., Truss, C., Soane, E. C., Rees, C., & Gatenby, M. (2013). The Relationship Between Line Manager Behavior, Perceived HRM Practices, and Individual Performance: Examining the Mediating Role of Engagement. *Human resource management*, 52(6), 839-859.
- \* Ang, S. H., Bartram, T., McNeil, N., Leggat, S. G., & Stanton, P. (2013). The effects of high-performance work systems on hospital employees' work attitudes and intention to leave: a multi-level and occupational group analysis. *The International Journal of Human Resource Management*, 24(16), 3086-3114.
- Arthur, J. B. (1994). Effects of Human-Resource Systems on Manufacturing Performance and Turnover. *Academy of Management Journal*, 37(3), 670-687. doi: Doi 10.2307/256705
- Avey, J. B., Patera, J. L., & West, B. J. (2006). The implications of positive psychological capital on employee absenteeism. *Journal of Leadership & Organizational Studies*, 13(2), 42-60.
- Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance. *Human resource development quarterly*, 22(2), 127-152.
- Becker, B. E., Huselid, M. A., Becker, B., & Huselid, M. A. (1998). *High performance work systems and firm performance: A synthesis of research and managerial implications*. Paper presented at the Research in personnel and human resource management.
- \* Benson, G. S. (2006). Employee development, commitment and intention to turnover: a test of 'employability' policies in action. *Human Resource Management Journal*, 16(2), 173-192.
- Blau, P. M. (1964). *Exchange and power in social life*: Transaction Publishers.
- Bolino, M. C., & Turnley, W. H. (2005). The personal costs of citizenship behavior: the relationship between individual initiative and role overload, job stress, and work-family conflict. *Journal of Applied Psychology*, 90(4), 740.
- \* Boon, C., Den Hartog, D. N., Boselie, P., & Paauwe, J. (2011). The relationship between perceptions of HR practices and employee outcomes: examining the role of person-organisation and person-job fit. *The International Journal of Human Resource Management*, 22(01), 138-162.
- \* Boon, C., & Kalshoven, K. (2014). How High-Commitment HRM Relates to Engagement and Commitment: The Moderating Role of Task Proficiency. *Human resource management*, 53(3), 403-420.
- \* Boon, O. K., Arumugam, V., Safa, M. S., & Bakar, N. A. (2007). HRM and TQM: association with job involvement. *Personnel Review*, 36(6), 939-962.
- Borman, W. C., & Motowidlo, S. (1993). Expanding the criterion domain to include elements of contextual performance. *Personnel selection in organizations; San Francisco: Jossey-Bass*, 71.
- Boselie, P., Dietz, G., & Boon, C. (2005). Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal*, 15(3), 67-94.
- \* Boselie, P., & Van der Wiele, T. (2002). Employee perceptions of HRM and TQM, and the effects on satisfaction and intention to leave. *Managing Service Quality*, 12(3), 165-172.
- Bowen, D. E., & Ostroff, C. (2004). Understanding HRM-firm performance linkages: The role of the "strength" of the HRM system. *Academy of management review*, 29(2), 203-221.
- Boxall, P., & Macky, K. (2009). Research and theory on high-performance work systems: progressing the high-involvement stream. *Human Resource Management Journal*, 19(1), 3-23.
- \* Chang, (2005). Employees' overall perception of HRM effectiveness. *Human Relations*, 58(4), 523-544.
- \* Chew, J., Girardi, A., & Entekin, L. (2005). Retaining Core Staff: The impact of human resource practices on organisational commitment. *Journal of Comparative International Management*, 8(2).
- \* Chien, M. S., Lawler, J. S., & Uen, J.-F. (2010). Performance-based pay, procedural justice and job performance for R&D professionals: evidence from the Taiwanese high-tech sector. *The International Journal of Human Resource Management*, 21(12), 2234-2248.
- Cohen, J. (1992). A power primer. *Psychological bulletin*, 112(1), 155.
- \* Conway, E. (2004). Relating career stage to attitudes towards HR practices and commitment: Evidence of interaction effects? *European Journal of Work and Organizational Psychology*, 13(4), 417-446.
- \* Conway, E., & Monks, K. (2008). HR practices and commitment to change: an employee-level analysis. *Human Resource Management Journal*, 18(1), 72-89.
- \* Conway, E., & Monks, K. (2009). Unravelling the complexities of high commitment: an employee-level analysis. *Human Resource Management Journal*, 19(2), 140-158.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of management*, 31(6), 874-900.

- Delaney, J. T., & Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal*, 39(4), 949-969.
- \* Edgar, & Geare. (2005a). Employee voice on human resource management. *Asia Pacific Journal of Human Resources*, 43(3), 361-380.
- \* Edgar, & Geare. (2005b). HRM practice and employee attitudes: different measures—different results. *Personnel Review*, 34(5), 534-549.
- \* Edgar, & Geare. (2014). An employee-centred analysis: professionals' experiences and reactions to HRM. *The International Journal of Human Resource Management*, 25(5), 673-695.
- Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 75(1), 51.
- \* Ellinger, A. E., Elmadağ, A. B., & Ellinger, A. D. (2007). An examination of organizations' frontline service employee development practices. *Human resource development quarterly*, 18(3), 293-314.
- \* Elorza, U., Arizeta, A., & Ayestaran, S. (2011). Exploring the black box in Spanish firms: the effect of the actual and perceived system on employees' commitment and organizational performance. *The International Journal of Human Resource Management*, 22(07), 1401-1422.
- Fazio, R. H., Powell, M. C., & Herr, P. M. (1983). Toward a process model of the attitude–behavior relation: Accessing one's attitude upon mere observation of the attitude object. *Journal of Personality and Social Psychology*, 44(4), 723.
- Field, A. P., & Gillett, R. (2010). How to do a meta-analysis. *British Journal of Mathematical and Statistical Psychology*, 63(3), 665-694.
- \* Gavino, M. C., Wayne, S. J., & Erdogan, B. (2012). Discretionary and transactional human resource practices and employee outcomes: The role of perceived organizational support. *Human resource management*, 51(5), 665-686.
- Gould-Williams, J. (2007). HR practices, organizational climate and employee outcomes: evaluating social exchange relationships in local government. *The International Journal of Human Resource Management*, 18(9), 1627-1647.
- \* Gould-Williams, J. (2004). The effects of 'high commitment' HRM practices on employee attitude: the views of public sector workers. *Public Administration*, 82(1), 63-81.
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 161-178.
- \* Guchait, P., & Cho, S. (2010). The impact of human resource management practices on intention to leave of employees in the service industry in India: the mediating role of organizational commitment. *The International Journal of Human Resource Management*, 21(8), 1228-1247.
- \* Harley, B., Allen, B. C., & Sargent, L. D. (2007). High performance work systems and employee experience of work in the service sector: the case of aged care. *British Journal of Industrial Relations*, 45(3), 607-633.
- Haslam, C., Atkinson, S., Brown, S., & Haslam, R. (2005). Anxiety and depression in the workplace: effects on the individual and organisation (a focus group investigation). *Journal of affective disorders*, 88(2), 209-215.
- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3), 635-672.
- Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and organizational psychology*, 73(3), 287-302.
- \* Juhdi, N., Pa'wan, F., & Hansaram, R. M. K. (2013). HR practices and turnover intention: the mediating roles of organizational commitment and organizational engagement in a selected region in Malaysia. *The International Journal of Human Resource Management*, 24(15), 3002-3019.
- Kassing, J. W. (1998). Development and validation of the organizational dissent scale. *Management Communication Quarterly*, 12(2), 183-229.
- Katz, D. (1964). The motivational basis of organizational behavior. *Behavioral science*, 9(2), 131-146.
- \* Kazlauskaitė, R., Buciniene, I., & Turauskas, L. (2011). Organisational and psychological empowerment in the HRM-Performance linkage. *Employee Relations*, 34(2), 138-158.
- \* Kinnie, N., Hutchinson, S., Purcell, J., Rayton, B., & Swart, J. (2005). Satisfaction with HR practices and commitment to the organisation: why one size does not fit all. *Human Resource Management Journal*, 15(4), 9-29.
- \* Knies, E., & Leisink, P. (2014). Linking people management and extra-role behaviour: results of a longitudinal study. *Human Resource Management Journal*, 24(1), 57-76.
- \* Kooij, D. T., Guest, D. E., Clinton, M., Knight, T., Jansen, P. G., & Dikkers, J. S. (2013). How the impact of HR practices on employee well-being and performance changes with age. *Human Resource Management Journal*, 23(1), 18-35.
- Kooij, D. T., Jansen, P. G., Dikkers, J. S., & De Lange, A. H. (2010). The influence of age on the associations between HR practices and both affective commitment and job satisfaction: A meta-analysis. *Journal of Organizational Behavior*, 31(8), 1111-1136.
- \* Kuvaas, B. (2006). Performance appraisal satisfaction and employee outcomes: mediating and moderating roles of work motivation. *The International Journal of Human Resource Management*, 17(3), 504-522.

- \* Kuvaas, B. (2007). Different relationships between perceptions of developmental performance appraisal and work performance. *Personnel Review*, 36(3), 378-397.
- \* Kuvaas, B. (2008). An exploration of how the employee–organization relationship affects the linkage between perception of developmental human resource practices and employee outcomes\*. *Journal of Management Studies*, 45(1), 1-25.
- \* Kuvaas, B., & Dysvik, A. (2010a). Does best practice HRM only work for intrinsically motivated employees? *The International Journal of Human Resource Management*, 21(13), 2339-2357.
- Kuvaas, B., & Dysvik, A. (2010b). Exploring alternative relationships between perceived investment in employee development, perceived supervisor support and employee outcomes. *Human Resource Management Journal*, 20(2), 138-156.
- Lacity, M. C., Iyer, V. V., & Rudramuniyaiah, P. S. (2008). Turnover intentions of Indian IS professionals. *Information Systems Frontiers*, 10(2), 225-241.
- Locke, E. A. (1976). The Nature and Causes of Job Satisfaction1. *Hand book*.
- \* Luna-Arocas, R., & Camps, J. (2007). A model of high performance work practices and turnover intentions. *Personnel Review*, 37(1), 26-46.
- MacDuffie, J. P. (1995). Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Industrial and labor relations review*, 197-221.
- \* Malhotra, N., Budhwar, P., & Prowse, P. (2007). Linking rewards to commitment: an empirical investigation of four UK call centres. *The International Journal of Human Resource Management*, 18(12), 2095-2128.
- \* Marescaux, E., De Winne, S., & Sels, L. (2012). HR practices and HRM outcomes: the role of basic need satisfaction. *Personnel Review*, 42(1), 4-27.
- Meijerink, J. G. (2013). *Beyond shared savings: a multilevel analysis of the perceived value of HR shared services*: Universiteit Twente.
- \* Mendelson, M. B., Turner, N., & Barling, J. (2011). Perceptions of the presence and effectiveness of high involvement work systems and their relationship to employee attitudes: A test of competing models. *Personnel Review*, 40(1), 45-69.
- Meyer, & Allen. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61-89.
- Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*: Sage.
- Near, J. P., & Miceli, M. P. (1985). Organizational dissidence: The case of whistle-blowing. *Journal of Business Ethics*, 4(1), 1-16.
- \* Newman, A., Thanacoody, R., & Hui, W. (2011). The impact of employee perceptions of training on organizational commitment and turnover intentions: a study of multinationals in the Chinese service sector. *The International Journal of Human Resource Management*, 22(8), 1765-1787.
- Nishii, Lepak, & Schneider. (2008). Employee attributions of the “why” of HR practices: Their effects on employee attitudes and behaviors, and customer satisfaction. *Personnel Psychology*, 61(3), 503-545.
- Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). *Organizational citizenship behavior: Its nature, antecedents, and consequences*: Sage.
- \* Paré, G., & Tremblay, M. (2007). The influence of high-involvement human resources practices, procedural justice, organizational commitment, and citizenship behaviors on information technology professionals' turnover intentions. *Group & Organization Management*, 32(3), 326-357.
- Posthuma, R. A., Campion, M. C., Masimova, M., & Campion, M. A. (2013). A high performance work practices taxonomy integrating the literature and directing future research. *Journal of management*, 0149206313478184.
- Purcell, J., & Hutchinson, S. (2007). Front-line managers as agents in the HRM-performance causal chain: theory, analysis and evidence. *Human Resource Management Journal*, 17(1), 3-20. doi: 10.1111/j.1748-8583.2007.00022.x
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38(2), 555-572.
- \* Schreurs, B., Guenter, H., Schumacher, D., Van Emmerik, I., & Notelaers, G. (2013). Pay-Level Satisfaction and Employee Outcomes: The Moderating Effect of Employee-Involvement Climate. *Human resource management*, 52(3), 399-421.
- Settoon, R. P., Bennett, N., & Liden, R. C. (1996). Social exchange in organizations: Perceived organizational support, leader–member exchange, and employee reciprocity. *Journal of Applied Psychology*, 81(3), 219.
- Shore, L. M., & Wayne, S. J. (1993). Commitment and employee behavior: comparison of affective commitment and continuance commitment with perceived organizational support. *Journal of Applied Psychology*, 78(5), 774.
- \* Shuck, B., Twyford, D., Reio, T. G., & Shuck, A. (2014). Human Resource Development Practices and Employee Engagement: Examining the Connection With Employee Turnover Intentions. *Human resource development quarterly*, 25(2), 239-270.
- Simon, H. A. (1957). Models of man; social and rational.

- \* Sommer, K. L., & Kulkarni, M. (2012). Does constructive performance feedback improve citizenship intentions and job satisfaction? The roles of perceived opportunities for advancement, respect, and mood. *Human resource development quarterly*, 23(2), 177-201.
- Stanley, D. J., Meyer, J. P., & Topolnytsky, L. (2005). Employee cynicism and resistance to organizational change. *Journal of Business and Psychology*, 19(4), 429-459.
- \* Stumpf, S. A., Doh, J. P., & Tymon, W. G. (2010). The strength of HR practices in India and their effects on employee career success, performance, and potential. *Human resource management*, 49(3), 353-375.
- \* Takeuchi, N., & Takeuchi, T. (2013). Committed to the organization or the job? Effects of perceived HRM practices on employees' behavioral outcomes in the Japanese healthcare industry. *The International Journal of Human Resource Management*, 24(11), 2089-2106.
- Taormina, R. J., & Gao, J. H. (2009). Identifying acceptable performance appraisal criteria: An international perspective. *Asia Pacific Journal of Human Resources*, 47(1), 102-125.
- \* Thite, M., & Russell, B. (2010). Work organization, human resource practices and employee retention in Indian call centers. *Asia Pacific Journal of Human Resources*, 48(3), 356-374.
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207-222.
- Uhl-Bien, M., & Maslyn, J. M. (2003). Reciprocity in manager-subordinate relationships: Components, configurations, and outcomes. *Journal of management*, 29(4), 511-532.
- Van Dyne, Cummings, & Parks. (1995). Extra-role behaviors-In pursuit of construct and definitional clarity (a bridge over muddied waters). *RESEARCH IN ORGANIZATIONAL BEHAVIOR: AN ANNUAL SERIES OF ANALYTICAL ESSAYS AND CRITICAL REVIEWS, VOL 17, 1995, 17*, 215-285.
- Vandenberg, R. J., Richardson, H. A., & Eastman, L. J. (1999). The impact of high involvement work processes on organizational effectiveness a second-order latent variable approach. *Group & Organization Management*, 24(3), 300-339.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1-17.
- Wall, T. D., & Wood, S. J. (2005). The romance of human resource management and business performance, and the case for big science. *Human Relations*, 58(4), 429-462.
- Warr, P. (1990). The measurement of well-being and other aspects of mental health. *Journal of occupational Psychology*, 63(3), 193-210.
- Wayne, S. J., Shore, L. M., & Liden, R. C. (1997). Perceived organizational support and leader-member exchange: A social exchange perspective. *Academy of Management Journal*, 40(1), 82-111.
- \* Wells, D. L., Moorman, R. H., & Werner, J. M. (2007). The impact of the perceived purpose of electronic performance monitoring on an array of attitudinal variables. *Human resource development quarterly*, 18(1), 121-138.
- Whitener, E. M. (2001). Do "high commitment" human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modeling. *Journal of management*, 27(5), 515-535.
- Wright, McCormick, Sherman, & McMahan. (1999). The role of human resource practices in petro-chemical refinery performance. *International Journal of Human Resource Management*, 10(4), 551-571.
- Wright, McMahan, & McWilliams. (1994). Human resources and sustained competitive advantage: a resource-based perspective. *International Journal of Human Resource Management*, 5(2), 301-326.
- Wright, P. M., & Boswell, W. R. (2002). Desegregating HRM: A review and synthesis of micro and macro human resource management research. *Journal of Management*, 28(3), 247-276. doi: Pii S0149-2063(02)00128-9
- Yalabik, Z. Y., Popaitoon, P., Chowne, J. A., & Rayton, B. A. (2013). Work engagement as a mediator between employee attitudes and outcomes. *The International Journal of Human Resource Management*, 24(14), 2799-2823.
- \* Youngcourt, S. S., Leiva, P. I., & Jones, R. G. (2007). Perceived purposes of performance appraisal: Correlates of individual-and position-focused purposes on attitudinal outcomes. *Human resource development quarterly*, 18(3), 315-343.
- \* Yu, B. B., & Egri, C. P. (2005). Human resource management practices and affective organizational commitment: A comparison of Chinese employees in a state-owned enterprise and a joint venture. *Asia Pacific Journal of Human Resources*, 43(3), 332-360.
- \* Zatzick, C. D., & Iverson, R. D. (2011). Putting employee involvement in context: a cross-level model examining job satisfaction and absenteeism in high-involvement work systems. *The International Journal of Human Resource Management*, 22(17), 3462-3476.
- \* Zhang, H., & Agarwal, N. C. (2009). The mediating roles of organizational justice on the relationships between HR practices and workplace outcomes: an investigation in China. *The International Journal of Human Resource Management*, 20(3), 676-693.
- Zhu, Y. (2013). Individual Behavior: In-role and Extra-role. *International Journal of Business Administration*, 4(1), p23.

## Appendix A

First-order construct	Second-order construct	Third-order construct	Fourth-order construct
Perception: the employee's subjective belief about an organization's diverse aspects of HRM, based on either the presence, the intensity, the value or the attributions of these diverse aspects of HRM	Presence perception: the employees' perception of an organization's HRM based on if HR practices are generally present within the organization	Operationalization keywords: existence, availability, presence, absence, opportunity	
	Intensity perception: the employees' perception about an organization's HRM based on the extent to which employees are exposed to HR practices	Operationalization keywords: degree, extent, activity level, or intensity	
	Value perception: the employee's perception about an organization's HRM based on the value of the HR practices for the employees.	Operationalization keywords: satisfaction, effectiveness, relevance, quality, appropriateness, value , utility	
	Attributions perception: the employee's perception about an organization's HR practices based on the causal explanations that employees make regarding management's motivations for using particular HR practices, either being positive or negative (Nishii, et al., 2008)	Positive attributions: employees perceive that HR practices are used to enhance quality or employee well-being	Quality enhancement causes: employees are perceived as assets and investments are made into employees (Nishii, et al., 2008)
			Employee well-being; employee welfare above revenues and profits(Nishii, et al., 2008)
		Negative attributions: employees perceive that HR practices are used to reduce costs or to exploit employees	Cost reduction causes: "employees are seen as replaceable workers who are part of a cost equation function, which results in low base salaries with few" (Nishii, et al., 2008, p. 14)
			Exploiting Employees: enforcing employee compliance with rules and procedures perks and engaging in narrow and short-term training (Nishii, et al., 2008)
Employee attitude: an affective expression of the employee towards the employee's workplace (Locke, 1976), either being desirable or undesirable for the organization	Desirable attitude: employee attitudes that are desirable to the goals of an organization (Avey, et al., 2011), e.g. organizational commitment, job satisfaction, psychological well-being and trust in management	Organizational commitment: the psychological bond an employee has with his or her employer (J. P. Meyer & Allen, 1997, p. 14), consisting of the dimensions affective, continuance and normative commitment	Affective Commitment: the employee's positive emotional attachment to the organization. (Meyer & Allen, 1991)
			Continuance Commitment: the gains verses losses (availability of alternatives, economic costs and social costs) of working in an organization (Meyer & Allen, 1991)
			Normative Commitment: Commitment to a group or organization based on a sense of obligation (Meyer & Allen, 1991)

First-order construct	Second-order construct	Third-order construct	Fourth-order construct
		Psychological well-being: the overall quality of an employee's experience and functioning at work (Warr, 1990)	
		Trust in management: the employee's "faith in corporate goal attainment and organizational leaders, and the belief that ultimately, organizational action will prove beneficial for employee" (Whitener, 2001, p. 5)	
	Undesirable attitude: employee attitudes that are undesirable to the goals of an organization (Avey, et al., 2011), e.g. turnover intention, cynicism toward change, job stress and anxiety	Turnover intention: the extent to which an employee plans to leave the organization (Lacity, Iyer, & Rudramuniyaiah, 2008)	
		Cynicism toward change: a disbelief in management's stated or implied motives for decisions or actions in general (Stanley, Meyer, & Topolnytsky, 2005)	
		Job stress: "an unpleasant emotional experience associated with elements of fear, dread, anxiety, irritation, annoyance, anger, sadness, grief, and depression" (Bolino & Turnley, 2005)" resulting from the work experience	
		Anxiety: being restless, fatigued, worried, and irritable, having poor concentration, and having sleeping problems affecting the job performance negatively (Haslam, Atkinson, Brown, & Haslam, 2005)	
Employee behavior: "a series of dynamic reactions of the employee, as a member of the organization, to the internal and the external environmental stimuli" (Zhu, 2013, p. 1), either being desirable or undesirable for the organization	Desirable behavior: employee behaviors that are desirable to the goals of an organization, including in-role behavior and extra-role behavior (Katz, 1964)	In-role behavior (IRB): behavior that is required as part of performing the duties and responsibilities of an assigned work role and are recognized by the firm's formal reward systems (Zhu, 2013), e.g. task performance, work effort, work quality, productivity, customer focus and innovative work behavior	Task performance: the effectiveness with which job incumbents perform activities that contribute to the organization's technical core either directly by implementing a part of its technological process, or indirectly by providing it with needed materials or services (Borman & Motowidlo, 1993)
			Work effort: Physical or mental effort or activity directed toward performing the duties of one's work role
			Work quality: the quality of the outcomes of the employee's work
			Productivity: the output of an employee's work relative to the employee's input

First-order construct	Second-order construct	Third-order construct	Fourth-order construct
			Innovative work behavior (IWB): a broad set of behaviors related to the generation of ideas, creating support for them, and helping their implementation (Janssen, 2000)
		Extra-role behavior (ERB): behavior that benefits the organization and goes beyond the existing role expectations, e.g. organizational citizenship behavior (OCB), whistle-blowing and principled organization dissent	OCB: individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization (Organ, et al., 2006)
			Whistle-blowing: the expression of dissent to external organizations such as the media (Near & Miceli, 1985)
			Principled organization dissent: the “expression of disagreement or contradictory opinions about organizational practices and policies” (Kassing, 1998)
	Undesirable behavior: employee behaviors that are undesirable to the goals of an organization, e.g. deviance and absenteeism,	Deviance: voluntary behavior that violates significant organizational norms ( leaving early, taking excessive breaks, intentionally working slow, wasting resources, sabotaging equipment, accepting kickbacks, lying about hours worked and stealing) and in so doing threatens the well-being of the organization (Robinson & Bennett, 1995)	
		Absenteeism: behavior related to non-attendance at work for all, or a part, of a given time period (Avey, Patera, & West, 2006)	



