

**IMPLEMENTING HRM SYSTEMS:  
THE ROLE OF EMPLOYEES' CO-PRODUCTION BEHAVIOR AND  
HRM ATTRIBUTIONS**

Anna BOS-NEHLES and Jeroen MEIJERINK

University of Twente  
School Behavioural, Management and Social Sciences  
P.O. Box 217  
7500 AE Enschede  
The Netherlands  
Tel: (0031) 53489 3648  
Fax: (0031) 53489 2159  
e-mail: [a.c.nehles@utwente.nl](mailto:a.c.nehles@utwente.nl)

**Keywords:** HRM implementation, employee co-production, HRM attributions, HRM perceptions, employee job performance

## **Introduction**

Motivated by the vast amount of evidence that human resource management (HRM) systems yield desirable organizational outcomes (Combs, Lui, Hall, & Ketchen, 2006; Jiang, Lepak, Hu, & Baer, 2012), strategic HRM researchers have recently turned their attention to the factors that allow organizations to effectively implement them. In combination with calls for a more employee-centered perspective (Nishii & Wright, 2008; Wright & Boswell, 2002), this has resulted in a growing body of literature that studies employees' perceptions of HRM systems as a measure of their effective implementation (Khilji & Wang, 2006; Liao, Toya, Lepak, & Hong, 2009). Driven by the fact that these employee perceptions are associated with higher employee satisfaction (Macky & Boxall, 2007), affective commitment (Gilbert, De Winne, & Sels, 2011; Kehoe & Wright, 2013) and performance (Ayree, Walumbwa, Seidu, & Otake, 2012; Kehoe & Wright, 2013), existing studies have sought to explain why employees differ in their reports of HRM systems. This stream of literature has suggested, mostly through the use of the process model of Nishii and Wright (2008), that employee experiences of HRM systems follow from the intended and actual HRM practices enacted by managers (Den Hartog, Boon, Verburg, & Croon, 2013; Jensen, Patel, & Messersmith, 2012; Liao et al., 2009).

Although these studies help to advance our understanding of how employees perceive HRM systems, at the same time, several authors have raised concerns that they are too management-centered (Janssens & Steyaert, 2009; Keegan & Boselie, 2006; Lepak & Boswell, 2012). Prior research has primarily focused on managerial actions in HRM implementation, ignoring employees as important implementers of HRM systems. In fact, "little or no attention has been given to the possibility that different employees actively engage in different ways with HR practices, undermining, delaying or supporting the implementation of HR practices" (Janssens & Steyaert, 2009: 150). This omission has been

attributed to the dominant assumption in strategic HRM literature that (1) managers determine which HRM practices are implemented and (2) employees are passive recipients of HRM (Keegan & Boselie, 2006; Lepak & Boswell, 2012). This assumption becomes best explicit in studies that exclusively examine managerial attributes such as their knowledge and skills (Kuvaas, Dysvik, & Buch, 2014), transformational leadership (Vermeeren, in press) or reports of HRM practice usage (Den Hartog et al., 2013; Liao et al., 2009) to explain employee perceptions of HRM systems. Remarkably however, those same studies find that the majority (up to 90%) of the variability in HRM perceptions resides on the employee level. This variability cannot be explained by attending to higher-level variables such as managerial actions, but instead requires a study of employee level variables (Klein & Kozlowski, 2000). Although it has been shown that employees actively engage in managerial processes, e.g. through career self-management (Kossek, Roberts, Fisher, & Demarr, 1998), idiosyncratic deals (Rousseau, 2005) and job crafting (Wrzesniewski & Dutton, 2001), the strategic HRM literature has not yet answered the call to study whether such employee actions in turn affect the effective implementation of HRM systems (Janssens & Steyaert, 2009; Lepak & Boswell, 2012).

The key purpose of this study is to respond to this call and contribute to the understanding of HRM implementation in three ways. First, we introduce the new concept of *HRM co-production* which conceptualizes the active involvement of employees in HRM implementation. We argue that this concept is needed because existing ones (such as job crafting) only partially capture the active involvement of employees in HRM implementation. Second, using the HRM system strength concept (Bowen & Ostroff, 2004), we argue that HRM co-production makes HRM systems more distinctive for employees and therefore, positively affects their perceptions of HRM systems for yielding high employee performance. By doing so, we contribute by showing how employee actions explain the variability in

employee perceptions of HRM systems that cannot be explained by the management-centered perspective that dominates the HRM literature. Our last contribution is to uncover one of the drivers of HRM coproduction. We do so, by studying employee attributions of the ‘why of HRM practices’ (Nishii, Lepak, & Schneider, 2008). We propose that their attributions either motivate or discourage employees to co-produce HRM systems. We know of the positive effects of HRM attributions on employee outcomes and performance (Nishii et al., 2008), but not yet whether they also encourage employees to actively become involved in HRM implementation.

To achieve these aims, we report on the findings of a three-wave survey study that involved three rounds of data collection. Our data was collected among employees in the Dutch subsidiary of a multinational engineering firm. While we studied a single organizational unit and excluded outsourced workers from our sample, we could control for between-firm and employment mode differences (see Liao et al., 2009) when examining the effect of employee co-production on HRM perceptions and performance. After presenting our data which lend support for most of our hypotheses (summarized in Figure 1), we finalize with discussing the practical and theoretical implications of our findings.

-----  
Insert Figure 1 about here  
-----

## **Theoretical Background and Hypotheses**

### *Employee Actions in Implementing HRM Systems*

Before turning to a discussion how employees can be seen as active players in HRM system implementation, it is needed to define the concepts of implementation and HRM systems. In the literature, HRM systems have been seen as comprising several interrelated components that reside on four levels: HRM philosophies, HRM policies, HRM practices and HRM processes (Jiang, Lepak, Han, et al., 2012; Kepes & Delery, 2007; Monks et al., 2013; Posthuma, Campion, Masimova, & Campion, 2013). At the highest level of abstraction, *HRM philosophies* represent the guiding principles of how the organization manages its employees for realizing organization success, for example, through gaining commitment, providing service quality or developing innovative ideas (Jiang, Lepak, Han, et al., 2012). In other words, the HRM philosophy reflects how the employee adds value and in doing so, links the HRM system with the organization strategy. On a lower level of abstraction, *HRM policies* represent more specific guidelines on what the organization is intending to achieve regarding staffing (e.g. external recruitment), performance management (e.g. performance improvement), compensation (e.g. incentives) and so on, to realize the HRM philosophy (Posthuma et al., 2013). In turn, *HRM practices* help to realize these guidelines, while they represent the “activities and techniques to ensure the implementation of the HRM policies” (Kepes & Delery, 2007: 390). As an example, to implement an external recruitment policy, an organization could rely on HRM practices such as advertising via the company website and newspapers, or relying on the help of headhunters. At the lowest level of abstraction, *HRM processes* are detailed explanations of how HRM practices are to be executed by various actors such as line managers and HR professionals. As an example, recruitment processes might involve a line manager who recognizes the need for a new employee, an HR professional that develops a job description, a headhunter that approaches potential employees, and so on. It is on the HRM process level that “the actual implementation of HRM practices takes place”, which in turn results into implementation of HRM policies and

practices (Kepes & Delery, 2007: 290). That is, HRM processes help to implement HRM practices which in turn institutionalize HRM policies and the HRM philosophy. Therefore, if we talk about the notion of implementation of HRM systems, we refer to the enactment of HRM processes as this ultimately allows the organization to realize higher-level HRM system components.

Given that HRM implementation takes place on the HRM process level, employees cannot be left out of the equation to explain the implementation of HRM systems, because employees have to take concrete actions to guarantee HRM processes enactment. For example, Monks et al. (2013) empirically showed that employees seek feedback for implementing performance management practices, gain knowledge through participating in projects for implementing development practices, and stick to their job description to help implementing job design practices. In fact, employees are nowadays expected to initiate HRM processes, for example, by applying for leave and other secondary benefits through online platforms (Meijerink, Bondarouk, & Maatman, 2013). Ultimately, it is through these actions of employees in HRM processes, and in combination with those of others (e.g. line managers and HR professionals), that HRM practices and thus HRM policies and HRM philosophies are implemented. Therefore, employees should be seen as one of the implementers of HRM systems, such that a study of their actions and behavior is required to explain their perceptions of HRM systems.

#### *Existing Conceptualizations of Employee Actions in HRM Processes*

Although strategic HRM researchers implicitly assume employees to be passive recipients of HRM (Janssens & Steyaert, 2009; Lepak & Boswell, 2012), other streams of literature have shown that this assumption is open to question. In fact, several concepts exist in the literature that capture the involvement of employees in HRM processes. However, each of these

concepts has its limitations, which motivates the introduction of a more valid conceptualization of employee involvement in HRM implementation.

The first concept is the idiosyncratic deal (i-deal) which refers to the non-standard employment conditions that an employee negotiates and the employer approves (Rousseau, 2005). I-deals can include a variety of HRM practices such as training possibilities or job tasks which are proactively negotiated by individual employees. However, as noted by Hornung, Rousseau, and Glaser (2008), the promise of an i-deal might not always be realized. This implies that i-deals represent idiosyncratic HRM practices that remain to be implemented through the enactment of HRM processes by line managers. Therefore, i-deal negotiation by employees does not reflect the active involvement of employees in implementing HRM practices, and instead, can be seen as a boundary condition that allows employees to enact particular HRM processes (e.g. possibility to engage in an idiosyncratic training).

A second concept that does capture the enactment of HRM processes by employees is job crafting which represents “the physical and cognitive changes individuals make in the task or relational boundaries of the work” (Wrzesniewski & Dutton, 2001: 179). Both conceptual and empirical works (Tims, Bakker, & Derks, 2012; Wrzesniewski & Dutton, 2001) have shown that job crafting involves three types of employee acts: changing task boundaries (i.e. altering type and number of job tasks), changing cognitive task boundaries (i.e. alter view on work tasks) and changing relational boundaries (i.e. alter with whom one interacts). Although these job crafting behaviors represent employee involvement in job design HRM practices, it does not include the enactment of other HRM processes that implement training, appraisal or staffing practices.

The last concept, career self-management by employees, represents the degree to which an employee regularly collects information and plans for career problem solving and decision making (Kossek et al., 1998). It is seen as including two types of employee

behaviors: developmental feedback seeking and job mobility preparation (Kossek et al., 1998; Sturges, Guest, Conway, & MacKenzie Davey, 2002). As such, career self-management involves seeking feedback on past performance to assess probable career plans and attending trainings to improve employability. As these examples show, career self-management mainly captures employee actions in training & development and performance management processes. Therefore, career-self management cannot be entirely equated with HRM implementation by employees, for the same reason that relates to job crafting: it only reflects a portion of the potential form of enactment of HRM processes by employees.

In order to arrive at a concept that captures all possible forms of employee involvement in HRM process enactment, we propose a measure which is new to the HRM field: HRM co-production.

#### *HRM Co-Production by Employees*

The co-production concept originates from the service management literature and has been used to conceptualize the active involvement of customers in the production and delivery of services (Bendapudi & Leone, 2003; Skaggs & Youndt, 2004). As noted by service management researchers, services are (to varying degrees) co-produced by customers through engaging in production activities such as selecting from menus, picking items from shelves or sitting up straight during a haircut. As such, co-production has been defined as “the degree to which customers participate in the design and delivery of the service offering” (Skaggs & Youndt, 2004: 89).

HRM practices can also be seen as services provided to employees, which are co-produced by employees. For example, training renders a service in terms of skill advancement and employability, performance appraisal allows employees to assess their career potential and job enlargement satisfies their need for achievement. Similarly to other services,



employees are involved in the delivery of HRM practices, through enacting HRM processes such as feedback seeking, participating in projects and following job descriptions (Monks et al., 2013). As such, in an HRM environment, co-production refers to the degree to which an employee participates in the delivery of HRM practices and thus, the enactment of HRM processes for implementing HRM systems.

Co-production is neither restricted to one particular type of service, nor one particular HRM practice. Therefore, HRM co-production is less restrictive in conceptualizing HRM implementation by employees as job crafting or career-self management. However, to avoid leaving the reader with an understanding of HRM co-production that is too broad, we draw from the ability-motivation – opportunity (AMO) framework to propose three types of HRM co-production by employees. As noted by others, the AMO framework allows to classify HRM practices into three categories: ability-enhancing HRM practices (i.e. staffing and training/development), motivation-enhancing HRM practices (i.e. performance management and compensation/benefits) and opportunity-enhancing HRM practices (i.e. job design and participation) (Chuang, Jackson, & Jiang, in press; Jiang, Lepak, Han, et al., 2012; Lepak, Liao, Chung, & Harden, 2006; Subarmony, 2009). As co-production involves the enactment of HRM processes that implement HRM practices, we follow this classification and propose three forms of HRM co-production.

The first, co-production of *ability-enhancing HRM processes* by employees, involves employee behaviors that support the management of human capital (i.e. knowledge, skills and abilities). Following the notion that organizations can ‘make’ or ‘buy’ human capital (Lepak & Snell, 1999), we distinguish two sets of employee behaviors. The first relates to the ‘buy’ option and reflects employee actions in staffing processes that help bringing in new human capital. Examples of this first type of ability-enhancing HRM processes enactment are promoting the organization as an attractive employer, introducing potential new employees or

formulating job descriptions for job openings. The second relates to the ‘make’ option and reflects employee actions that help to develop their own knowledge and skills. This could involve activities such as attending training workshops, engaging in learning-on-the-job or joining project teams.

Second, co-production of *motivation-enhancing HRM processes* by employees reflects employee actions that contribute to the implementation of performance management practices. Although employees are generally not involved in the administration of compensation and benefits (and hence, are mere recipients of these HRM practices), they are involved in performance appraisal that serves as the tool to decide whether to grant an incentive. Therefore, the co-production of motivation-enhancing HRM processes involves employee acts such as asking feedback from supervisors and co-workers as well as seeking advice on how to improve performance.

Lastly, the co-production of *opportunity-enhancing HRM processes* by employees involves acts that supports the implementation of job design practices, while job design provides employees the opportunity (e.g. time and leeway) to allocate their human capital (Jiang, Lepak, Han, et al., 2012). The job design practices which are most often studied in the strategic HRM literature are job enlargement, job enrichment, participation and (project) teams (Posthuma et al., 2013). Following this body of literature, we conceptualize co-production of opportunity-enhancing HRM processes as the employee actions such as taking initiatives in starting new projects, taking on additional tasks and proactively joining (project) teams.

As discussed by others, the ability-, motivation-, and opportunity-enhancing HRM practices are highly interrelated and so conceptually are represented by an overarching HRM systems (Jiang, Lepak, Han, et al., 2012; Lepak et al., 2006). The same logic likely applies to the HRM co-production concept. For example, employees may seek to improve their

knowledge and skills in the process of performance management, which implies that ability- and motivation-enhancing HRM processes are related. Also, promoting the company as an attractive employer can be seen as a form of job enrichment, which implies that ability- and opportunity-enhancing HRM processes can occur at the same time. The participation in a project also reflects the simultaneous enactment of ability- and opportunity-enhancing HRM processes as it helps to develop knowledge and skills (Monks et al., 2013) and engage in team work (Posthuma et al., 2013). Due to the interrelated nature of the three forms of co-production, we expect that they are conceptually represented by the overarching concept of HRM co-production.

#### *Relating HRM Co-Production to Employee Perceptions of HRM and Performance*

Employees who co-produce HRM practices actively participate in the delivery of these practices. We propose that this form of active participation improves the degree to which employees experience the presence of HRM practices. This likely occurs as employees who co-produce HRM practices perceive them as distinctive, that is they capture their attention and arouse their interest (Bowen & Ostroff, 2004). Distinctiveness is a process feature of HRM systems that defines whether a HRM system is visible, understandable, legitimate and relevant (Bowen & Ostroff, 2004).

*Visibility* is defined as “the degree to which internal customers have a clear idea of HR practices, know which HR programs are implemented, and what can and cannot be expected from the HR department” (Delmotte, De Winne, & Sels, 2012). By means of co-producing HRM practices, employees are likely to be exposed to HRM stimuli which make HRM practices more visible. For example, an employee who co-produces performance management will know which performance indicators the organization values and thus better know what type of performance management program is implemented. Furthermore, co-production by

employees requires interaction with HRM professionals. Social information processing theory (Salancik & Pfeffer, 1978) predicts that these interactions add to the learning experience of employees, such that they better understand what can be expected from the HRM department. Therefore, higher levels of co-production likely make HRM practices more visible to employees.

*Understandability* further adds to the distinctiveness of HRM practices and “refers to a lack of ambiguity and easy comprehension of the content of HRM practices” (Bowen & Ostroff, 2004: 209). When employees put time and effort in co-producing HRM practices, they should be able to understand what the HRM practices are about through learning by doing. For example, active participation in the delivery of an HRM practice will make an employee understand the policy behind performance management and the procedures necessary to be rewarded. Also, by engaging in the selection of job candidates, an employee likely gains experience with the content of staffing practices and thus, better understands the purpose and procedures behind them. Meijerink (2013) confirms this assumption, by showing that the usage of HRM practices by employees positively relates to their understanding of HRM practice content. Therefore, we assume that higher levels of HRM co-production by employees makes HRM more distinctive through making HRM practices more understandable for employees.

*Legitimacy of authority* is achieved when the HR function is perceived to have a high status and high credibility. When employees participate in the delivery of HRM practices together with their supervisor and perceive that their supervisor seriously engages in HRM issues this will positively influence their perceptions of HRM credibility. Based on the idea of signaling theory (Connelly, Certo, Ireland, & Reutzel, 2011), through co-producing HRM practices employees observe that their supervisor takes HRM initiatives seriously, and interpret these as signals about what is valued and which interests and priorities the

organization has. This signal will show employees that HRM is legitimate. For example, during a performance appraisal interview, employee and supervisor engage in a discussion about the best developmental opportunities for the employee and which HRM trainings offered by the company would suit best to develop this employee. Discussing the different options HRM offers to develop employees increases the distinctiveness of this practice through increasing its legitimacy of authority.

HRM systems are perceived to be more distinctive when their *relevance* increases, which refers to the degree to which employees view them as useful (Delmotte et al., 2012) and relevant for an important goal (Bowen & Ostroff, 2004). Employees who co-produce HRM practices are more likely to view them as relevant, because HRM co-production allows employees to make HRM practices more instrumental for meeting their personal needs and goals. This idea follows from the service-dominant logic which predicts that co-production facilitates users to tailor a service to their personal needs (Vargo & Lusch, 2008). For example, through actively participating in performance evaluation an employee can try to secure that it meets his/her need for career advancement. The notion that HRM co-production adds to the relevance of HRM practices echoes evidence that co-production is positively related to the perceived usefulness of services (Chan, Yim, & Lam, 2010; Gallan, Jarvis, Brown, & Bitner, 2013). Therefore, we predict that higher levels of HRM co-production by employees make HRM practices more distinctive through increasing their relevance.

As the discussion above suggests, higher levels of HRM co-production by employees cause employees' perceptions of HRM practice presence to improve, as the active involvement of employees in HRM processes make HRM practices more distinctive (i.e. more visible, understandable, legitimate and relevant). Therefore, we propose the following:

*Hypotheses 1:* HRM co-production is positively related with employee perceptions of HRM.

Besides affecting employee perceptions of HRM, HRM co-production is also likely related to employee performance. Following the notion that employee performance is multi-dimensional and includes in-role and extra-role behavior, we distinguish between (1) task performance which refers to behaviors that are specified by job descriptions and (2) organization citizenship behavior (OCB) which reflects “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization” such as helping and introducing newcomers (Organ, 1988: 4).

We assume that HRM co-production is positively related to both types of employee performance, given that employee perceptions of HRM, which follow from HRM co-production, induce employee performance. As reflected in Hypothesis 1, higher levels of HRM co-production result into higher levels of perceived intensity of HRM systems by employees. Others have argued that these perceptions of HRM system intensity induce employees to engage in task performance and OCB (Kehoe & Wright, 2013; Kuvaas & Dysvik, 2010). In doing so, they have mostly build on the social exchange theory to conceptualize the performance effects of HRM practices (Blau, 1964). It is argued that employees view their organization to be investing in them and recognizing their contribution through the provision of HRM practices, which employees reciprocate with high performance (e.g. Piening, Baluch & Salge, 2013). Prior research found that the perceived intensity of HRM systems is positively related with employee task performance (Kooij, Jansen, Dikkers, & De Lange, 2010; Kuvaas & Dysvik, 2010) and OCB (Alves, Shantz, Truss, & Soane, 2013; Kehoe & Wright, 2013). Given that employee perceptions of HRM systems follow from the

degree to which employees co-produce them, we predict a relationship between HRM co-production and employee performance, which is mediated by the employee reports of HRM systems. This likely occurs because HRM co-production by employees make HRM systems more distinctive such that employees are more aware of the inducements provided by the organization which they reciprocate through higher levels of task performance and OCB.

However, the employee perceptions of HRM systems do not fully explain the relationship between HRM co-production and employee performance, because other mediating mechanisms likely exist. Whereas HRM co-production likely affects the HRM perceptions of the employee, it could be possible that it also induces the employer to offer benefits that employees reciprocate with high performance. To implement HRM practices, the employer is dependent on the involvement of the employee because most HRM practices require their participation. In this respect, HRM co-production can be seen as a form of employee support in implementing HRM systems, which is perceived as desirable employee behavior by the employer. Following social exchange theory, the employer likely reciprocates such supportive employee behavior (Blau, 1964; Gouldner, 1960). For example, Gouldner (1960: 173) argues that there might be altruism in egoism made possible through reciprocity such that “if you want to be helped by others you must help them first”. In this respect, employees might act strategically to pro-actively elicit employer reciprocates through engaging in HRM co-production. Besides offering more HRM practices, the employer might offer other benefits to reciprocate employee HRM co-production, such as perceived organization support (Wayne, Shore, & Liden, 1997) or empowerment of the employee (Peccei & Rosenthal, 2001). In other words, mediating variables other than employee perceptions of HRM can explain the relationship between HRM co-production and employee performance. Therefore, we propose that employee perceptions of HRM only partially explain the relationship between HRM co-production and employee performance:

*Hypothesis 2a:* Employee perceptions of HRM partially mediates between HRM co-production and employee task performance.

*Hypothesis 2b:* Employee perceptions of HRM partially mediates between HRM co-production and OCB.

#### *Antecedents to HRM Co-Production: The Role of HRM Attributions*

Nishii et al. (2008) taught us that employees have different attributions for why HRM practices exist, which cause differences in employees' work attitudes and behaviors. Employee HRM attributions are defined as causal explanations that employees make regarding management's intentions for offering specific HRM practices (Nishii et al., 2008). Although several studies found that employees' HRM attributions are significantly related to motivational states such as affective commitment (English & Chalon, 2011; Fontinha, Chambel, & De Cuyper, 2012) and job satisfaction (Nishii et al., 2008), it remains unclear whether employee attributions of HRM motivate employees to engage in HRM co-production.

Based on the work of Nishii et al. (2008), we distinguish between internal and external HRM attributions. Internal HRM attributions are dispositional causal explanations and consist of two 'positive' HRM attributions (i.e. attributions that HRM practices are implemented to enhancing *service quality* and *employee well-being*) and two 'negative' HRM attributions (i.e. attributions that HRM practices are implemented to *reduce costs* and *exploit workers*). The theory of planned behavior (Ajzen, 1991) conceptualizes the relationship between beliefs and behavior, and therefore is helpful to explain why HRM attributions (i.e. beliefs) affect HRM co-production (i.e. employee behavior). It predicts that employee behavior depends on



motivation which is a function of employee attitudes that represent the degree to which a person has a favorable or unfavorable evaluation of the behavior of interest. Employees who have a favorable evaluation of a particular course of action are more likely to behave accordingly as they expect that a certain level of effort will produce a desired outcome (Ajzen, 1991). The results of Nishii et al. (2008) suggest that the service quality and well-being HRM attributions represent ‘favorable’ evaluations as employees respond favorably to these HRM attributions through displaying high affective commitment and job satisfaction. Employees who believe that HRM practices improve service quality and employee well-being therefore likely develop a favorable attitude towards co-producing HRM practices as they view this as supporting their needs. On the contrary, cost and attribution HRM attributions are unfavorable employee beliefs as they relate negatively with affective commitment and job satisfaction (Nishii et al., 2008). As such, cost reduction and worker exploitation HRM attributions likely generate unfavorable attitudes towards getting involved in implementing HRM practices, as employees will likely view that HRM co-production will harm their needs. We therefore propose the following:

*Hypothesis 3a:* Attributions that HRM practices have been implemented to increase quality and improve employee well-being are positively related with HRM co-production.

*Hypothesis 3b:* Attributions that HRM practices have been implemented to reduce costs and exploit employees are negatively related with HRM co-production.

Although all internal HRM attributions are considered relevant for explaining HRM co-production, we expect differences in effect sizes as some HRM attributions are more relevant

to employees than others. In this respect, Nishii et al. (2008) distinguish between HRM attributions that underlie an overall strategic focus (i.e. quality improvement and cost reduction) versus those that underpin an employee-oriented philosophy (i.e. improving employee well-being and exploiting employees). We expect that employee-oriented HRM attributions are more important to employees than strategy-oriented HRM attributions because securing personal well-being and the avoidance of being exploited is more intrinsically rewarding to employees than improving quality and cutting costs which are more instrumental to the firm. Based on the ideas of cognitive evaluation theory (Gagne & Deci, 2005), external factors such as an overall strategic focus of the company tend to diminish feelings of autonomy and change the locus of causality from internal to external (Heider, 1958), resulting in lower levels of intrinsic motivation. In other words, it is likely that employee-oriented HRM attributions have stronger motivational effects on the co-production of HRM practices by employees than strategy-oriented HRM attributions. Therefore, we propose the following:

*Hypothesis 3c:* Attributions that HRM practices have been implemented to improve employee well-being/exploit employees are more strongly related to HRM co-production than attributions that HRM practices have been implemented to increase quality/ reduce costs.

Next to the internal attributions, employees can make external attributions, which represent beliefs that HRM practices are offered because of a response to situational pressures that are external to management (Nishii et al., 2008). In other words, external HRM attributions are employee beliefs that HRM practices had to be adopted by the management to comply with external constraints and are not a result of local “management’s voluntary intentions” (Nishii et al., 2008: 509) based on what they perceived as valuable additions to existing HRM policy.

Although Nishii et al. (2008) focused on compliance with union regulations, other forms of external constraints likely exist. In this paper we focus on another external HRM attribution in the form of headquarter pressures. Multinational corporations (MNCs) are constantly seeking to balance between globally integrating and locally responding HRM practices (Schuler, Dowling, & De Cieri, 1993). Several studies found that employees within MNC subsidiaries developed beliefs that HRM practices are required by the corporate headquarters (Ferner, 2007). We build on these findings to examine whether HRM co-production is affected by employee beliefs that subsidiary management offers HRM practices because the corporate headquarter requires them to do so.

We expect that these external attributions will exhibit a non-significant relationship with HRM co-production, for three reasons. First, attributional theorist have argued that external situational explanations of behavior are less helpful to explain behavior than internal attributions because they are more subject to change than more dispositional causal explanation (Jones & Davis, 1965). Second, corporate demands can be seen as coercive pressures that force subsidiary managers to adopt global initiatives (Rupidara & McGraw, 2011). As a result, external attributions do provide little information about the underlying values of subsidiary managers and therefore, are unlikely related to employees' desire to engage in HRM co-production. Employees perceive that these practices are implemented not as a result of local needs but as a result of integration policy with the result that they feel that co-producing is not worth while for these practices. Lastly, even if employees were to develop beliefs about the values of the management, they can be evaluated both positively and negatively for rendering non-significant effects on HRM production. In some cases, employees could view corporate headquarters to require HRM practice adoption to enforce global standards that could conflict with employees' idiosyncratic needs, making them reluctant to co-produce HRM practices. In other cases, employees might perceive that standardizing HRM

practices across various subsidiaries is a result of developing best practices that is worth sharing between subsidiaries and thus, develop favorable attitudes towards co-producing these HRM practices. In other words, employees can respond both favorably and unfavorably to the compliance with global HRM practices. Therefore, we propose the following:

*Hypothesis 4:* Attributions that HRM practices have been implemented in response to headquarter pressures will be unrelated to HRM co-production.

## **Methodology**

### *Sample and Procedure*

To test our hypotheses, we relied on survey data obtained from the Dutch subsidiary of a US-headquartered multinational corporation (hereafter called EngiCo). EngiCo employs about 300 employees and specializes in offering engineering services and producing electronic devices for high-tech companies from the medical, aerospace and semi-conductor industries. The EngiCo management offers a range of HRM practices such as extensive training, job enlargement, feedback provision and personal development to employees. This makes EngiCo a useful empirical setting, while it provides ample opportunities for employees to co-produce HRM processes. Furthermore, by studying HRM co-production in a single organizational unit, we could control for the effect of the HRM policies (i.e. intended HRM) on HRM co-production, HRM attributions and employee perceptions of HRM systems. Lastly, studying a multinational corporation subsidiary allowed use to examine the effect of HQ pressure attributions on HRM co-production.

To test the temporal linkages among the study variables and reduce common method bias, we conducted a longitudinal study that involved three rounds of data collection. In each

of these rounds, the employees of EngiCo filled out a survey, with a time interval between two adjacent phases that ranged from 3 to 5 weeks. At Time 1, we measured the employees' attributions of the why of HRM practices. At Time 2, the employees filled out a survey that measured their HRM co-production behavior. Although line managers might be more objective in assessing HRM co-production by employees, we nevertheless decided to invite employees to report on their enactment of HRM processes. The most important reason is that these actions can occur out of sight of the supervisor. For instance, employees can seek feedback from peers or promote the organization as an attractive employer without the presence of the supervisor. As a result, supervisors are not entirely able to assess the HRM co-production actions of employees in a reliable way. Therefore we decided to inquire employees themselves. Lastly, at Time 3, the employees reported on their perceptions of HRM systems and performance. By separating employee responses in three surveys at three times, we aim to minimize common method bias.

We only invited the retained / exempt workers (i.e. the engineers) to administer the surveys. By excluding outsourced workers from our sample, we could control for differences in our variables of interest that result from employment mode differences (Lepak & Snell, 1999; Liao et al., 2009). To guarantee an acceptable response rate, we personally delivered and collected paper and pencil surveys, that included a cover letter which explained the relevance of the study and anonymity of the respondents. We invited all 236 engineers to fill out the survey in all of the three phases. At the end of Time 3, a total of 75 employees responded to all three surveys, a response rate of 32%<sup>1</sup>. Of those who filled out all three surveys, 23% were female, 84% had a permanent full-time contract, 67% finalized at least a higher vocational education or had a university degree, had an average age of 48 years (SD =

---

<sup>1</sup> After Time 1 we received 114 completed surveys (= 48%) and after Time 2, we received 88 completed questionnaires (=37%).

10 years) and an average tenure of 19 years (SD = 15 years). Lastly, 21% of the respondents came from outside the Netherlands.

### *Measures*

Whenever possible, we relied on existing scales. Employees could respond using 5-point Likert scales that range from “strongly disagree” to “strongly agree”.

*Employee attributions of the why of HRM practices.* To measure the HRM attributions of employees, we relied on the scales developed by Nishii et al. (2008). Each scale measures one of the five HRM attributions and presents the HRM practice in question before asking employees to assess why it is utilized by EngiCo. We decided to add three items to measure the attributions of three HRM practices (i.e. performance appraisal, information sharing and participation) as these were excluded by Nishii et al. (2008), but nevertheless offered by EngiCo. The original ‘union compliance’ attribution scale was adapted to measure employee attributions of HQ compliance. In doing so, we changed the original word ‘union contract’ with ‘the headquarters in the US’. An example item was: “EngiCo provides employees the training that it does because they are required by the headquarters in the US.” The five scales that measure the HRM attributions all had an acceptable reliability (i.e. Cronbach alphas ranged from .66 to .87).

*Employee perceptions of HRM.* To measure the employee perceptions of HRM, we used the scales of Liao et al. (2009) and added two scales from Takeuchi, Lepak, Wang, and Takeuchi (2007) to measure the employee perceptions of staffing and appraisal practices that were excluded by Liao et al. (2009). We did so, in order to guarantee consistency with the taxonomy of HRM practices examined in previous studies, which resulted from the review of

Posthuma et al. (2013). In doing so, we measured employee perceptions of seven HRM practices: staffing (6 items), training (6 items), performance management (3 items), compensation & benefits (6 items), job design (5 items) and participation (5 items). The scales that measured each of these individual HRM practices were all acceptably reliable (Cronbach alphas ranged from .72 to .87). Consistent with Liao et al. (2009) we ran a confirmatory factor analysis using item parcels. Each item parcel measured the employee perceptions of one HRM practice. We tested a model which proposed that all item parcels together represent the overarching construct of employee perceptions of HRM. The factor analysis confirmed the validity of this model ( $\chi^2_{(8)} = 4.85$ ;  $p = .77$ ; CFI = 1.00; GFI = .98; RMR = .00; RMSEA = .00).

*HRM co-production.* Given that no scale that holistically measures HRM co-production existed, we first inquired the extant literature to search for validated scales that could measure one of the three dimensions of HRM co-production (i.e. ability-, motivation- and opportunity-enhancing HRM processes enactment). We started with the service management literature, however, this resulted in scales which measure general co-production behaviors (e.g. “we required customers to become heavily involved in producing the service” (Skaggs & Youndt, 2004)). We proceeded with reviewing the job crafting and career self-management literatures, because these forms of employee involvement reflect one of the three HRM co-production dimensions. We managed to find scales for all three types of HRM co-production, except for the co-production of staffing HRM processes, which we had to develop ourselves.

To measure the co-production of *ability-enhancing HRM processes*, we relied on two scales as they reflect employee involvement in either the ‘buying’ or ‘making’ of human capital. To measure the co-production of staffing processes (i.e. buy option), we developed

three items ourselves by drawing on HRM systems literature that identified the activities that related to the attraction of new employees. The three items were: (1) “I help with formulating job descriptions of job vacancies”, (2) “I recommend potential new employees”, (3) and I promote EngiCo as an attractive employer”. The reliability of this scale was acceptable ( $\alpha = .74$ ). To measure the co-production of training and development processes (i.e. make option), we relied on the ‘increasing structural job resources’ scale of Tims et al. (2012) as it reflects the degree to which employees are involved in developing their knowledge, skills and abilities. We decided to drop two items (i.e. “I make sure that I use my capabilities to the fullest” and “I decide on how I do things”), because these measure the utilization of knowledge, rather than its development. The remaining three items (e.g. “I try to learn new things at work”) formed a scale with high reliability ( $\alpha = .94$ ).

To measure the *co-production of motivation-enhancing HRM processes*, we relied on the ‘increasing social job resources’ scale of Tims et al. (2012) as it measures the degree of employee involvement in the two main activities of performance management: feedback seeking (e.g. “I ask others for feedback on my job performance”) and seeking help to improve performance (e.g. “I ask my supervisor to coach me”). The factor analysis showed that this scale has two Eigenvalues greater than 1.0.. Therefore, we decided to split this scale based on whether the employee co-produces with a supervisor (3 items, e.g. “I ask my supervisor to coach me”) or co-workers (2 items, e.g. “I ask colleagues for advice on how to improve my job performance”). Both scales showed to be acceptably reliable ( $\alpha = .84$  and  $.88$  respectively).

To measure the *co-production of opportunity-enhancing HRM processes*, we relied on the ‘increasing challenging job demands’ scale of Tims et al. (2012) as it measures employees involvement in enacting job design. An example item is: “I regularly take on extra tasks even though I do not receive extra salary for them”. The scale had a strong reliability ( $\alpha = .84$ ).



We ran a confirmatory factor analysis, to assess the convergent validity of the HRM scale. To do so, we estimated a model of HRM co-production as a second-order construct which is represented by the co-production of ability-, motivation- and opportunity enhancing HRM processes (see Figure 2). This measurement model had an acceptable fit ( $\chi^2_{(95)} = 100.97$ ;  $p = .32$ ; CFI = .99; GFI = .99; RMR = .06; RMSEA = .03).

-----  
Insert Figure 2 about here  
-----

Lastly, we explored the discriminant validity of HRM co-production concept. It could be possible that HRM co-production and employee perceptions of HRM practices are two representations of the same construct, given that both are components of an overarching HRM system. To rule out this possibility, we ran an exploratory factor analysis for each of the sub-dimensions of HRM co-production and employee perceptions of HRM. As an example, we explored whether the items of co-production of training processes and the items of employee perceptions of training practices load on the same factor. All exploratory factor analyses yielded two Eigenvalues > 1.0 and none of the HRM co-production items loaded highly on the employee perceptions factor (i.e. the highest cross loading was .22). Finally, we ran a confirmatory factor analysis of a model where all HRM co-production and employee perceptions of HRM dimensions were assumed to load onto a single factor. This model had a poor fit ( $\chi^2_{(200)} = 294.16$ ;  $p = .00$ ; CFI = .87; GFI = .75; RMR = .14; RMSEA = .08). Instead, an alternative model which assumed that HRM co-production and employee perceptions of HRM are two distinct, yet interrelated constructs had a much better fit ( $\chi^2_{(198)} = 254.62$ ;  $p = .01$ ; CFI = .93; GFI = .78; RMR = .07; RMSEA = .06). This shows that both constructs are

conceptually and empirically distinct and confirms the discriminant validity of the HRM co-production construct.

*Employee performance.* We measured employee performance in terms of their task performance and OCB using the measures of Kluemper, DeGroot, and Choi (2013) who relied on the five items with the highest loadings reported in previous studies. Sample items included, “Adequately complete assigned duties assigned” (task performance) and “assist others with their duties” (OCB). The consistency of both scales was acceptable (alpha of task performance = .84 and alpha of OCB = .74).

*Control variables.*

*Age and tenure.* We controlled for employee age and tenure while older workers and those with longer tenures are in less favor of HRM practices (Bal, Kooij, & De Jong, 2013) and therefore, might be less likely to co-produce them. The data on employee age and tenure was obtained from EngiCo’s databases.

*Contract type.* Contract type was measured by the number of working hours in order to assess the degree to which employees work full-time. We controlled for this variable as those who have a part-time contract are less often on the work floor which could affect their perceptions of HRM practices. Data on contract type was obtained from EngiCo’s databases.

*Educational level.* Education was measured using an ordinal scale with employees asked to indicate the highest educational level they had completed. This variable was included as it likely affects the degree of HRM co-production.

*Leader-member exchange.* Employees were asked to indicate the quality of the relationship with their supervisor (leader member exchange – LMX), because employees with a high-quality LMX with their supervisor are likely to receive more HRM practices (Liao et al., 2009) and more likely to co-produce HRM processes as a reciprocation for the relationship with their supervisor. We used the 7-item scale of Scandura and Graen (1984) which had an internal consistency of .89.

### *Data Analysis*

Given the restrictions of our sample size, we could not rely on structural equation modelling to test our hypotheses. Therefore, our hypotheses testing was done with the use of hierarchical ordinary-least square regression analysis.

## **Findings**

### *Descriptive Statistics*

The means, standard deviations, and correlations for the variables of interest are presented in Table 1. The strong correlations between the quality attribution and well-being attribution indicated that multicollinearity could be a concern. As a check, we conducted an exploratory Harman one-factor test including all the quality and well-being attribution measures. The eigenvalues of the two factors yielded were all  $> 1.0$ , which suggests that multicollinearity is not a pressing issue.

-----  
Insert Table 1 and 2 about here

---

### *Relating HRM Co-Production with Employee Perceptions of HRM*

Hypothesis 1 suggests that employee perceptions of HRM are positively affected by HRM co-production of employees. Model 2.2, shown in Table 2, indicates that HRM co-production does indeed have a positive and significant effect on employee perceptions of HRM ( $\beta = .23$ ,  $p < .05$ ), after controlling for confounding effects. This lends support for Hypothesis 1. Furthermore, LMX ( $\beta = .41$ ,  $p < .001$ ), and educational level ( $\beta = .35$ ,  $p < .001$ ) are positively related with employee perceptions of HRM. This implies that employees perceive more HRM practices to be provided to them when their educational level increases and the quality of the relationship with their supervisor improves.

### *Relating HRM Co-Production with Task Performance*

Hypothesis 2a suggests that employee perceptions of HRM partially mediate the positive relationship between HRM co-production and employee task performance. To test this effect, we followed the four-step procedure suggested by Baron and Kenny (1986). First, as shown by Model 3.2 in Table 2, HRM co-production is significantly and positively related with task performance ( $\beta = .30$ ,  $p < .05$ ). Second, as already reported, HRM co-production is also positively related to employee perceptions of HRM. Third, Model 3.3 in Table 2 shows that employee perceptions of HRM are significantly and positively related with task performance ( $\beta = .32$ ,  $p < .05$ ). Lastly, when controlling for employee perceptions of HRM (see Model 3.4 in Table 2), the effect of HRM co-production on task performance turns insignificant. This shows that employee perceptions of HRM fully mediate the relationship between HRM co-production and task performance. Therefore, we partially accept Hypothesis 2a.

### *Relating HRM Co-Production with Organization Citizenship Behavior*

Hypothesis 2b suggests that employee perceptions of HRM partially mediate the positive relationship between HRM co-production and OCB. First, as shown by Model 4.2 in Table 2, HRM co-production is significantly and positively related with OCB ( $\beta = .36, p < .01$ ). Second, HRM co-production is also positively related to employee perceptions of HRM. Third, Model 4.3 in Table 2 shows that employee perceptions of HRM are significantly and positively related with OCB ( $\beta = .35, p < .01$ ). Lastly, when controlling for employee perceptions of HRM (see Model 4.4 in Table 2), the effect of HRM co-production on OCB remains significant and positive, but turns out to be less strong ( $\beta = .30, p < .05$ ). This shows that employee perceptions of HRM partially mediates between HRM co-production and OCB. Therefore, we can accept Hypothesis 2b.

### *Relating HRM attributions with HRM Co-Production*

The last hypotheses suggest that the internal attributions of the why of HRM differ in effect sizes for either driving or impeding the co-production of HRM processes by employees (Hypothesis 3a-c), and that external attributions have a non-significant effect on HRM co-production (Hypothesis 4). Model 1.2, shown in Table 2, shows that only one attribution type is significantly related to HRM co-production. It shows that higher levels of the well-being attribution result in a higher level of HRM co-production by employees ( $\beta = .49, p < .05$ ), such that employees are more involved in enacting HRM processes when they view their employer to be offering HRM practices with the goal of enhancing their well-being. We therefore can partially accept Hypotheses 3a, and have to reject Hypothesis 3b and 3c. Furthermore, we can accept Hypothesis 4 because attributions that HRM practices have been implemented in response to HQ pressures are unrelated to HRM co-production.

## Discussion

The primary goal of this study was to propose a new concept for capturing employee involvement in HRM implementation and empirically uncover some of its antecedents and outcomes in terms of employee perceptions of HRM and employee performance. This was motivated by the call for research into employee actions in HRM processes to better explain the variability in employee perceptions of HRM and outcomes they generate, which cannot be accounted for by the management-centered approach that currently dominates the strategic HRM literature.

With this study we contribute to the literature in four ways. First, by introducing employee co-production as a central factor of HRM implementation into the HRM-performance discussion, we suggest a new concept that captures the various concepts of employee involvement in implementing HRM practices. Using the AMO model, we find that employees involve in the implementation of HRM practices along three ways: the co-production of ability-, motivation- and opportunity-enhancing processes. Second, we could highlight that co-producing HRM practices results in employees perceiving more HRM practices and performing better in their jobs, that is they experience more task performance and OCB. We contribute here by showing that future research should consider employee actions to explain effective HRM implementation and that we should consider individual level variables to explain differences in employee perceptions of HRM. Third, we could demonstrate that employee perceptions mediate the relationship between employee co-production and job performance. This implies that employees can also be initiators of employment relationships. This further gives evidence for a direct relationship between HRM perceptions and performance, as was suggested by Piening et al. (2013). Whereas they could not demonstrate that employees' perceptions of HRM systems increased performance, our results show strong evidence of this relationship on an individual level. Fourth, HRM

attributions partially explain employees' co-production behaviors. Based on the ideas of Nishii et al. (2008), we proposed positive relationships between commitment-oriented HRM attributions (employees' attributions about their own well-being and service quality) and employee behavior to engage in co-production and negative relationships between control-oriented HRM attributions (employees' attributions about cost reduction and exploitation) and co-production, as well as a non-relationship between external HRM attributions and employee behavior. We only found a significant relationship between attributions of employee well-being and co-production, implying that employees will only actively participate in implementing HRM practices when they feel that these practices provide them with benefits, such as better employee development programs. Self-determination theory can help us understand this finding, as it distinguishes between autonomous motivation and controlled motivation (Gagné & Deci, 2005). Autonomy involves that people feel they experience a choice and act with a sense of volition, whereas control involves acting with a sense of pressure and engaging in actions because they feel they have to. Individuals behaviors can be characterized in terms of the degree to which they are autonomous versus controlled. Employee attributions about employers adopting HRM practices to increase employee well-being make people feel autonomously motivated to engage in co-production behaviors, whereas attributions about employers adopting HRM practices to increase service quality, cost reduction and employee efficiency result in employees experiencing controlled motivation to co-produce. Thus, employee attributions about well-being result in the wish to engage in co-producing these HRM practices, and thus they do it. On the other hand, employees experiencing HRM practices are designed to exploit them, reduce costs and lead to better service qualities will feel pressured to co-produce these practices, and thus will not do it. Our finding that cost-reduction attributions and employee efficiency attributions are unrelated to co-production could be explained with the fact that employees in manufacturing

firms, as in our example, do not have negative attributions about these practices as they often apply lean management practices to reduce waste and cut costs. In contexts where employees are used to management intentions to reduce costs and aim for more employee efficiency or even see the need for these practices, control-focused practices might not result in negative employee attributions but in no attributions.

### *Implications for Research*

Although previous studies into concepts such as job crafting and career-self management already suggested that employees are active players in HRM processes, these only studied one of the potential ways in which employees can contribute to HRM implementation. In this study we have drawn on the ability-motivation-opportunity model to propose HRM co-production as a concept that holistically captures the ways in which employees participate in HRM processes. Next to showing the value of the concept HRM co-production, we could also show that it positively affects employee perceptions of HRM systems. An active participation of employees in implementing HRM practices results in employees experiencing the presence of HRM practices because they perceive these practices as distinctive (Bowen & Ostroff, 2004). The literature stressing that employees need to perceive HRM practices to affect HRM or performance outcomes (Liao et al., 2009; Piening et al., 2013) will benefit from the understanding that perceptions of employees about HRM systems are largely influenced by the fact that they actively engage in these practices.

### *Implications for Practice*

Building on the theoretical implications of the positive effect of co-production on employee perceptions of HRM systems, task performance and OCB, this result also has valuable implications for HRM managers and line managers. Managers will want their employees to



experience the presence of HRM practices if they now of the positive effects this can have on job performance. Our results stress that they need to invite employees to co-produce HRM practices together with them as this active participation of employees in the delivery of HRM practices will make them perceive these practices as distinctive and will result in more task performance and OCB. The results of this paper also show that leader-member exchange will positively affect employee perceptions of HRM systems, which implies an even stronger engagement of managers with their subordinates, e.g. by co-producing activities with employees. However, our research also highlights that employees will engage in co-production when they attribute that HRM practices are designed due to management's intent to enhance employee well-being. This shows two roles for managers: (1) to design HRM practices that will enhance employee well-being, and (2) to positively influence employees' attributions that they offer these HRM practices to stimulate employee well-being.

#### *Limitations and Suggestions for Future Research*

As with any study, the results of our study must be viewed in light of its limitations too. First, we used a self-report scale for job performance. Employees might use socially desire answers about their own job performance. Therefore, future studies should use multiple stakeholders to measure job performance to compare self-report data of employees against line management or co-worker judgments of the job performance of employees.

Second, since we decided to collect data within a single organization, we could not test the relationship between actual HRM practices and HRM attributions. We could imagine that systems of HRM practices that are horizontally and vertically aligned with the business strategy would always result in certain HRM attributions. Enacting these practices on the work floor by line managers will lead to more positive HRM attributions, especially when managers and employees had a positive leader-member exchange. Employee attributions of

HRM systems will have a higher chance of being co-produced as employees attribute these practices as valuable and worth the effort. This would question the negative effect of cost reduction attributions and efficiency enhancing attributions on employee attitudes or HRM outcomes. In case of an alignment of HRM practices with a cost reduction strategy employees could view this strategy as a means to an end and we would find a positive effect of cost reduction and efficiency enhancing attributions on employee co-production. We could also imagine a positive effect of external attributions about HRM practice being implemented as a response to headquarter pressures on co-production if employees perceive a global integration strategy. Therefore we suggest that future researchers control for the effect of business strategy or, maybe better, explore moderation effects of business strategy.

Third, we framed employee HRM co-production positively and assumed that employees who co-produce would positively contribute to HRM implementation effectiveness. However, it could be possible that employees engaging in co-production will actually obstruct HRM implementation or implement HRM practices that were not intended by the organization. By e.g. recommending friends for selection, employees will co-produce this practice idiosyncratically, which might work against a talent management strategy of the organization. Our measure of co-production does not give us the chance to explore this opportunity as low levels of co-production do not necessarily mean employee obstruction. We suggest future researchers to either extend the co-production scale to explore obstruction behaviors or use an alternative scale to explore the results of negative frames of co-production.

### **Conclusion**

Despite these limitations, we believe that the results of this study provide important insights into how employees engaging in HRM co-production will perceive more HRM practices and

will perform better in their jobs. This study highlights that perceptions of HRM practices might be better understood by considering employee actions in the form of HRM co-production by employees. We showed that managers can influence the quantity of co-production to some extent by designing HRM practices that employees attribute as enhancing their well-being since we found a positive effect of well-being attributions on HRM co-production. When the aim is co-production, managers do not seem to need to care about developing HRM practices that are attributed as favoring cost-reduction, exploiting employees or enhancing service quality as these attributions did not result in more HRM co-production. We call for more research about the effect of HRM co-production of employees, but believe that this study provides a valuable foundation for future studies to explore the impact of HRM co-production to understand HRM-performance relationships.

## References

- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Alves, K., Shantz, A.D., Truss, K., & Soane, E.C. (2013). The Link Between Perceived Human Resource Management Practices, Engagement and Employee Behavior: A Moderated Mediation Model. *International Journal of Human Resource Management*, 24(2), 330-351.
- Ayree, S., Walumbwa, F.O., Seidu, E.Y.M., & Otake, L.E. (2012). The Impact of High-Performance Work Systems on Individual- and Branch-Level Performance: Test of a Multilevel Model of Intermediate Linkages. *Journal of Applied Psychology*, 97(2), 287-300.
- Bal, M.P., Kooij, D.T.A.M., & De Jong, S.B. (2013). How Do Developmental and Accommodative HRM Enhance Employee Engagement and Commitment? The Role of Psychological Contract and SOC Strategies. *Journal of Management Studies*, 50(4), 545-572.
- Baron, R.M., & Kenny, D.A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Bendapudi, N., & Leone, R.P. (2003). Psychological Implications of Customer Participation in Co-Production *Journal of Marketing*, 67(1), 14-28.
- Blau, P.M. (1964). *Exchange and Power in Social Life*. New York: John Wiley.
- 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.

- Chan, K.W., Yim, C.K., & Lam, S.S.K. (2010). Is Customer Participation in Value Creation a Double-Edged Sword? Evidence from Professional Financial Services Across Cultures. *Journal of Marketing*, 74, 48-64.
- Chuang, C., Jackson, S.E., & Jiang, Y. (in press). Can Knowledge-Intensive Teamwork Be Managed? Examining the Roles of HRM Systems, Leadership, and Tacit Knowledge. *Journal of Management*.
- Combs, J., Lui, Y., Hall, A., & Ketchen, D.J. (2006). How Much Do High-Performance Work Practices Matter? A Meta-Analysis of Their Effects on Organizational Performance. *Personnel Psychology*, 59(3), 501-528.
- Connelly, B.L., Certo, S.T., Ireland, D.R., & Reutzel, C.R. (2011). Signaling Theory: A Review and Assessment. *Journal of Management*, 37(1), 39-67.
- Delmotte, J., De Winne, S., & Sels, L. (2012). Toward an Assessment of Perceived HRM System Strength: Scale Development and Validation. *International Journal of Human Resource Management*, 23(7), 1481-1506.
- Den Hartog, D.N., Boon, C., Verburg, R.M., & Croon, M.A. (2013). HRM, Communication, Satisfaction, and Perceived Performance: A Cross-Level Test. *Journal of Management*, 39(6), 1637-1665.
- English, B., & Chalon, C. (2011). Strengthening Affective Organizational Commitment: The Influence of Fairness Perceptions of Management Practices and Underlying Employee Cynicism. *Health Care Manager*, 30(1), 29-35.
- Ferner, A. (2007). Country of Origin Effects and HRM in Multinational Companies. *Human Resource Management Journal*, 7(1), 19-37.
- Fontinha, R., Chambel, M.J., & De Cuyper, N. (2012). HR Attributions and the Dual Commitment of Outsourced IT Workers. *Personnel Review*, 41(6), 832-848.
- Gagne, M., & Deci, E.L. (2005). Self-Determination Theory and Work Motivation. *Journal of Organizational Behavior*, 26, 331-362.
- Gallan, A.S., Jarvis, C.B., Brown, S.W., & Bitner, M.J. (2013). Customer Positivity and Participation in Services: An Empirical Test in a Health Care Context. *Journal of the Academy of Marketing Science*, 41, 338-356.
- Gilbert, C., De Winne, S., & Sels, L. (2011). The Influence of Line Managers and HR department on Employees' Affective Commitment. *International Journal of Human Resource Management*, 22(8), 1618-1637.
- Gouldner, A.W. (1960). The Norm of Reciprocity: A Preliminary Statement. *American Sociological Review*, 25(2), 161-178.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York, NY: Wiley.
- Hornung, S., Rousseau, D., & Glaser, J. (2008). Creating Flexible Work Arrangements Through Idiosyncratic Deals. *Journal of Applied Psychology*, 93(3), 655-664.
- Janssens, M., & Steyaert, C. (2009). HRM and Performance: A Plea for Reflexivity in HRM Studies. *Journal of Management Studies*, 46(1), 143-155.
- Jensen, J.M., Patel, P.J., & Messersmith, J.G. (2012). High-Performance Work Systems and Job Control: Consequences for Anxiety, Role Overload, and Turnover Intentions. *Journal of Management*.
- Jiang, K., Lepak, D.P., Han, K., Hong, Y., Kim, A., & Winkler, A. (2012). Clarifying the Construct of Human Resource Systems: Relating Human Resource Management to Employee Performance. *Human Resource Management Review*, 22, 73-85.
- Jiang, K., Lepak, D.P., Hu, J., & Baer, J. (2012). How Does Human Resource Management Influence Organizational Outcomes? A Meta-Analytic Investigation of the Mediating Mechanisms. *Academy of Management Journal*, 55(6), 1264-1294.
- Jones, E.E., & Davis, K.E. (1965). From Acts To Dispositions The Attribution Process In Person Perception. *Advances in Experimental Social Psychology*, 2, 219-266.

- Keegan, A., & Boselie, P. (2006). The Lack of Impact of Dissensus Inspired Analysis on Developments in the Field of Human Resource Management. *Journal of Management Studies*, 43(7), 1491-1511.
- Kehoe, R., & Wright, P.M. (2013). The Impact of High Performance Human Resource Practices on Employees' Attitudes and Behaviors. *Journal of Management*, 39(2), 366-391.
- Kepes, S., & Delery, J. (2007). HRM Systems and the Problem of Internal Fit. In P. Boxall, J. Purcell & P. Wright (Eds.), *The Oxford Handbook of Human Resource Management* (pp. 385-405). Oxford: Oxford University Press.
- Khilji, S.E., & Wang, X. (2006). 'Intendend' and 'Implemented' HRM: The Missing Linchpin in Strategic Human Resource Management Research. *International Journal of Human Resource Management*, 17(7), 1171-1189.
- Klein, K.J., & Kozlowski, S.W.J. (2000). *Multilevel Theory, Research, and Methods in Organizations: Foundations, Extensions, and New Directions*. San Francisco, CA: Jossey-Bass.
- Kluemper, D.H., DeGroot, T., & Choi, S. (2013). Emotion Management Ability: Predicting Task Performance, Citizenship, and Deviance. *Journal of Management*, 39, 878-905.
- Kooij, D.T.A.M., Jansen, P.G.W., Dijkers, J.S.E., & 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 Behaviour*, 31(8), 1111-1136.
- Kossek, E.E., Roberts, K., Fisher, S., & Demarr, B. (1998). Career Self-Management: A Quasi-Experimental Assessment of the Effects of a Training Intervention. *Personnel Psychology*, 51(4), 935-962.
- Kuvaas, B., & Dysvik, A. (2010). Exploring Alternative Relationships Between Perceived Investment in Employee Development, Perceived Supervisor Support and Employee Outcomes. *Human Resource Management Journal*, 20(2), 138-156.
- Kuvaas, B., Dysvik, A., & Buch, R. (2014). Antecedents and Employee Outcomes of Line Managers' Perceptions of Enabling HR Practices. *Journal of Management Studies*, 51(6), 845-868.
- Lepak, D.P., & Boswell, W. (2012). Strategic HRM and Employee Organizational Relationship (EOR). In L. M. Shore, J. Coyle-Shapiro & L. Tetrick (Eds.), *The Employee-Organization Relationship: Applications for the 21st Century* (pp. 455-483). New York: Routledge.
- Lepak, D.P., Liao, H., Chung, Y., & Harden, E.E. (2006). A Conceptual Review of Human Resource Management Systems in Strategic Human Resource Management Research. In J. Martocchio (Ed.), *Research in Personnel and Human Resource Management: A Research Annual* (pp. 217-271). Greenwich, CT: JAI Press.
- Lepak, D.P., & Snell, S.A. (1999). The Human Resource Architecture: Toward a Theory of Human Capital Allocation and Development. *Academy of Management Review*, 24(1), 31-48.
- Liao, H., Toya, K., Lepak, D.P., & Hong, Y. (2009). Do They See Eye to Eye? Management and Employee Perspectives of High-Performance Work Systems and Influence Processes on Service Quality. *Journal of Applied Psychology*, 94(2), 371-391.
- Macky, K., & Boxall, P. (2007). The Relationship Between 'High-Performance Work Practices' and Employee Attitudes: An Investigation of Additive and Interaction Effects. *International Journal of Human Resource Management*, 18(4), 537-567.
- Meijerink, J.G. (2013). *Beyond Shared Savings: A Multilevel Analysis of the Perceived Value of HR Shared Services*. Unpublished doctoral thesis: University of Twente, Enschede, The Netherlands.

- Meijerink, J.G., Bondarouk, T.V., & Maatman, M. (2013). Exploring and Comparing HR Shared Services in Subsidiaries of Multinational Corporations and Indigenous Organisations in the Netherlands: A Strategic Response Analysis. *European Journal of International Management*, 7(4), 469-491.
- Monks, K., Kelly, G., Conway, E., Flood, P., Truss, K., & Hannon, E. (2013). Understanding How HR Systems Work: The Role of HR Philosophy and HR Processes. *Human Resource Management Journal*, 23(4), 379-395.
- Nishii, L.H., Lepak, D.P., & Schneider, B. (2008). Employee Attributions of the "Why" of HR Practices: Their Effect on Employee Attitudes and Behaviours and Customer Satisfaction. *Personnel Psychology*, 61, 503-545.
- Nishii, L.H., & Wright, P.M. (2008). Variability Within Organizations: Implications for Strategic Human Resources Management. In B. Smith (Ed.), *The People Make the Place: Dynamic Linkages Between Individuals and Organizations* (pp. 225-248). New York: Taylor & Francis.
- Peccei, R., & Rosenthal, P. (2001). Delivering Customer-Oriented Behavior Through Empowerment: An Empirical Test of HRM Assumptions. *Journal of Management Studies*, 38(6), 831-857.
- Piening, E.P., Baluch, A.M., & Salge, T.O. (2013). The relationship between employees' perceptions of HR systems and organizational performance: Examining mediating mechanisms and temporal dynamics. *Journal of Applied Psychology*, 98, 926-947.
- 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*, 39(5), 1184-1220.
- Rousseau, D. (2005). *I-Deals: Idiosyncractic Deals Employees Bargain for Themselves*. New York: M.E. Sharpe, Inc.
- Rupidara, N.S., & McGraw, P. (2011). The Role of Actors in Configuring HR systems within Multinational Subsidiaries. *Human Resource Management Review*, 21(3), 174-185.
- Salancik, G.R., & Pfeffer, J. (1978). A Social Information Processing Approach to Job Attitudes and Task Design. *Administrative Science Quarterly*, 23(2), 224-253.
- Scandura, T.A., & Graen, G.B. (1984). Moderating Effects of Initial Leader-Member Exchange Status on the Effects of a Leadership Intervention. *Journal of Applied Psychology*, 69(3), 428-436.
- Schuler, R.S., Dowling, P.J., & De Cieri, H. (1993). An Integrative Framework of Strategic International Human Resource Management. *Journal of Management*, 19(2), 419-459.
- Skaggs, B.C., & Youndt, M.A. (2004). Strategic Positioning, Human Capital, and Performance in Service Organizations: A Customer Interaction Approach. *Strategic Management Journal*, 25(1), 85-99.
- Sturges, J., Guest, D., Conway, N., & MacKenzie Davey, K. (2002). A Longitudinal Study of the Relationship Between Career Management and Organizational Commitment Among Graduates in the First Ten Years at Work. *Journal of Organizational Behavior*, 23, 731-748.
- Subarmony, M. (2009). A Meta-Analytic Investigation of the Relationship Between HRM Bundles and Firm Performance. *Human Resource Management*, 48(5), 745-768.
- Takeuchi, R., Lepak, D.P., Wang, H., & Takeuchi, K. (2007). An Empirical Examination of the Mechanisms Mediating Between High Performance Work Systems and the Performance of Japanese Organizations. *Journal of Applied Psychology*, 92(4), 1069-1083.
- Tims, M., Bakker, A.B., & Derks, D. (2012). Development and Validation of the Job Crafting Scale. *Journal of Vocational Behavior*, 80, 173-186.

- Vargo, S.L., & Lusch, R.F. (2008). Service-Dominant Logic: Continuing the Evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10.
- Vermeeren, B. (in press). Variability in HRM Implementation Among Line Managers and its Effect on Performance: A 2-1-2 Mediation Multilevel Approach. *International Journal of Human Resource Management*.
- 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.
- Wright, P.M., & Boswell, W. (2002). Desegregating Human Resource Management: A Review and Synthesis of Micro and Macro Human Resource Management Research. *Journal of Management*, 24, 247-276.
- Wrzesniewski, A., & Dutton, J.E. (2001). Crafting a Job: Revisioning Employees as Active Crafters of Their Job. *Academy of Management Review*, 26(2), 179-201.

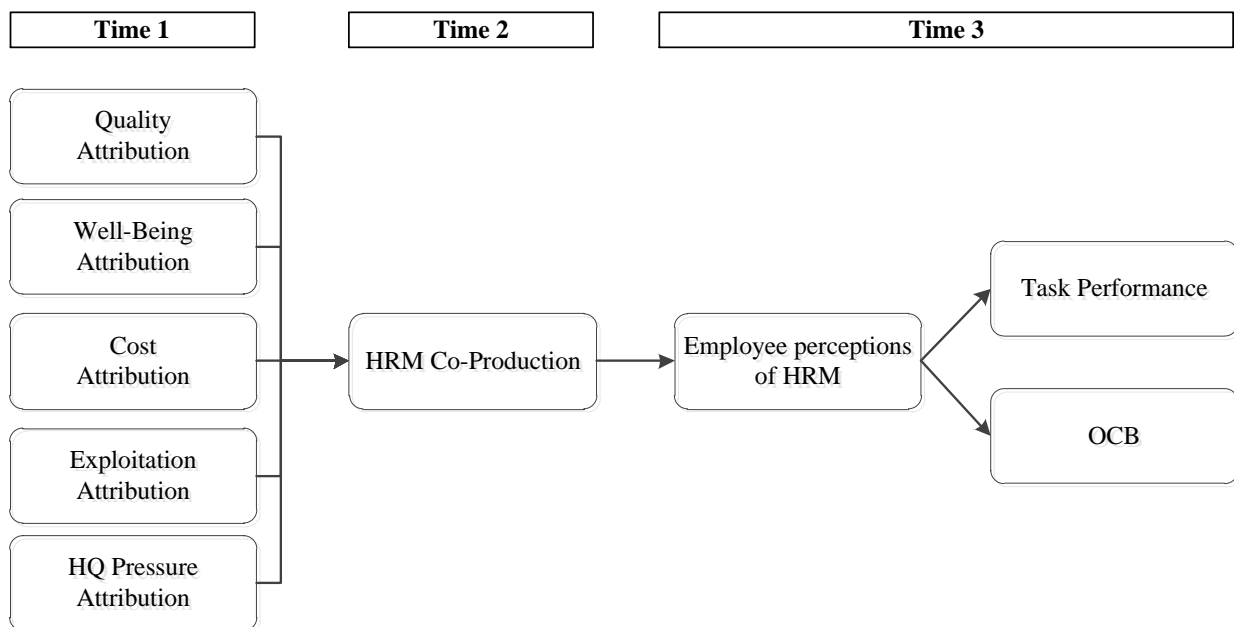


Figure 1: Conceptual Model on the Antecedents and Consequences of HRM Co-Production

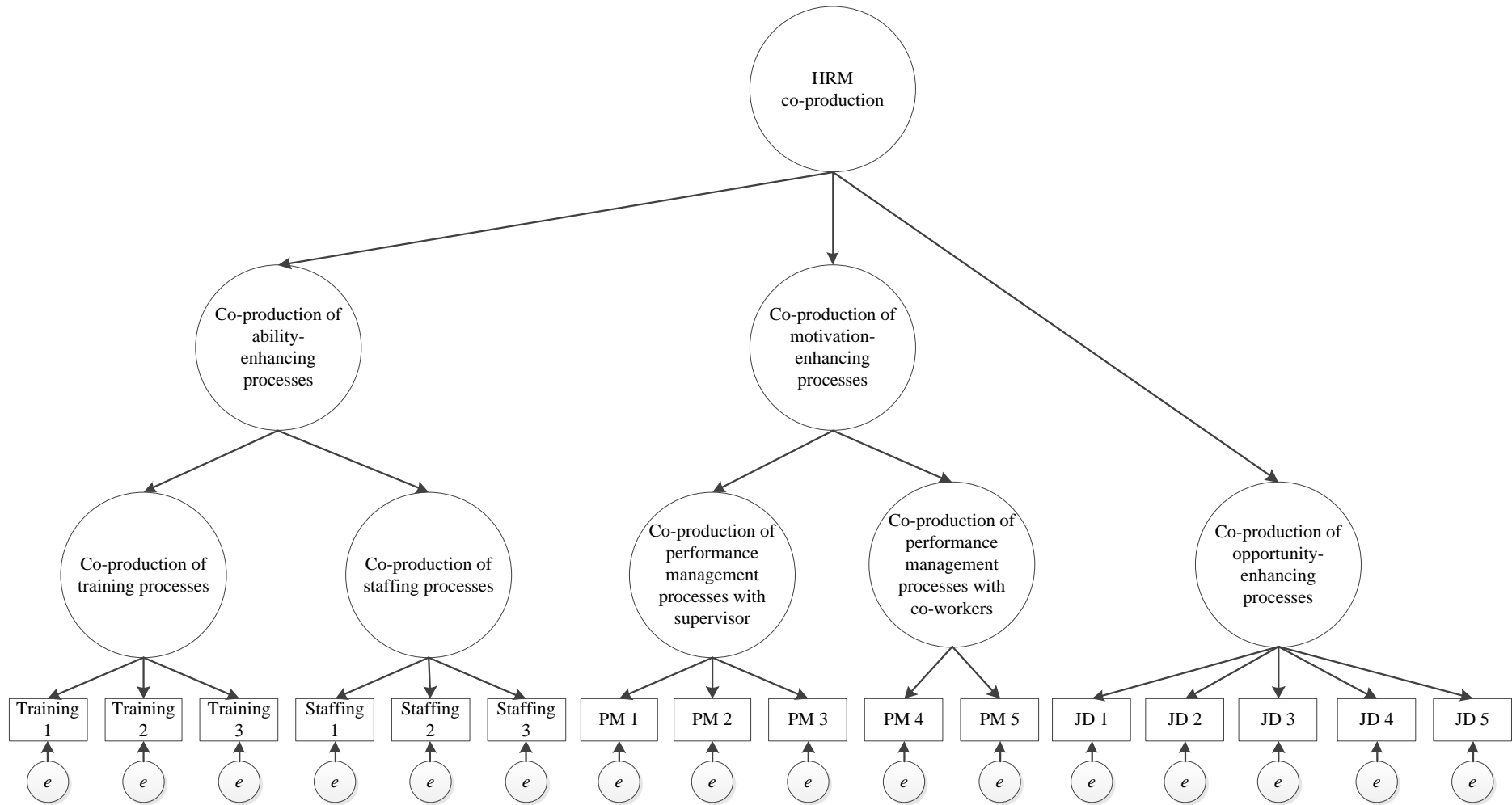


Figure 2: Measurement model of HRM Co-Production



Table 1: Means, standard deviations and correlations among the study variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	48.20	10.75													
2. Tenure	19.16	15.31	.75**												
3. Contract type	.97	.07	.04	-.04											
4. Educational level	3.24	1.08	-.36**	-.35**	.11										
5. LMX	3.61	.62	-.06	-.04	-.19	-.16									
6. Well-being attribution	2.91	.67	-.09	-.07	-.09	-.07	.58**								
7. Quality attribution	3.05	.65	-.11	-.14	-.11	-.14	.57**	.87**							
8. Exploitation attribution	3.12	.63	.04	.11	-.11	-.15	.37**	.58**	.57**						
9. Cost attribution	3.32	.53	-.19	-.06	-.01	.17	.00	.12	.08	.35**					
10. HQ attribution	3.05	.52	-.15	.04	-.03	-.12	.15	.13	.13	.14	.34**				
11. HRM co-production	3.36	.55	-.39**	-.39**	-.05	.32**	.03	.22	.11	.12	.31**	.06			
12. Perceptions of HRM	3.20	.41	-.12	-.09	-.04	.31**	.35**	.42**	.33**	.25*	.12	-.08	.30**		
13. Task performance	3.97	.52	-.13	-.07	.11	.17	.11	.06	-.07	-.01	-.02	-.02	.30**	.34**	
14. OCB	3.78	.47	-.07	-.03	.09	.31**	-.14	-.02	-.08	.11	.18	-.01	.35**	.32**	.40**

\*\* p < .01; \* p < .05

N = 75 individual employees

Table 2: Multiple regression analysis

Variables	1. HRM co-production		2. Perceptions of HRM		3. Task performance				4. OCB			
	Model 1.1	Model 1.2	Model 2.1	Model 2.2	Model 3.1	Model 3.2	Model 3.3	Model 3.4	Model 4.1	Model 4.2	Model 4.3	Model 4.4
Constant	3.95***	3.27***	1.70*	1.00	2.55*	1.41	1.86	1.08	3.32***	2.08*	2.63**	1.77
<b>Control variables</b>												
Age	-.17	-.07	.00	.04	-.17	-.12	-.17	-.13	-.06	-.00	-.06	-.02
Tenure	-.19	-.30	.07	.11	.13	.19	.11	.16	.12	.18	.09	.15
Contract type	-.07	-.08	.00	.01	.14	.15	.14	.15	.05	.07	.05	.07
Educational level	.21	.15	.40***	.35***	.17	.10	.04	.01	.31*	.24*	.17	.14
LMX	.04	-.08	.42***	.41***	.15	.14	.02	.04	-.08	-.10	-.23	-.21
<b>Main effects</b>												
Well-being attribution		.49*										
Quality attribution		-.34										
Exploitation attribution		.04										
Cost attribution		.21										
HQ attribution		.00										
HRM co-production				.23*		.30*		.24		.36**		.30*
Perceptions of HRM							.32*	.26*			.35**	.28*
<b>Model F</b>	3.53	2.98	4.88	4.93	1.08	1.89	1.94	2.23	1.75	3.11	2.89	3.52
<b>F Change</b>		.55		.05		.81	.86	.34		1.36	1.14	.41
<b>R<sup>2</sup></b>	.21	.32	.26	.31	.07	.15	.15	.19	.11	.22	.21	.27
<b>Δ R<sup>2</sup></b>		.11		.05		.08	.08	.04		.11	.10	.05

\*\*\* p < .001; \*\* p < .01; \* p < .05

N = 75 employees.

Standardized coefficients are shown.