

**COMPLEX PATHWAYS THROUGH THE HRM-PERFORMANCE BLACK
BOX: A STUDY OF THE INTENDED-IMPLEMENTED-PERCEIVED HR
CAUSAL PROCESS MODEL**

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CANDIDATE STATEMENT

Except where indicated by specific reference, the work submitted is the result of my own investigation and the views expressed are my own. No portion of the work presented has been submitted in substance for any other degrees or award at this or any other university or institution. Macquarie University Human Research Ethics Committee approval was obtained for this research and all work was conducted in line with these approvals (Appendix 1).

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ABSTRACT

A continuing challenge for HR practitioners is translating well-designed HR systems into organisational outcomes. Central to this challenge is the distance between HR practices as they are intended by the firm, and the effect of those practices on organisational outcomes. Conceptualisation of this gap has centred around two frameworks. Firstly, the HR causal process model, which posits that HR practices are developed by HR practitioners in a firm, those practices are then implemented by line managers, and then perceived by employees. At the point of perception, HR practices translate into employee outcomes, and ultimately into business unit and firm-wide performance outcomes. The HR causal process model theorises that variability across each of these steps is a determinant of the ultimate outcomes of the HR system. Secondly, there is the process approach to HRM, an idea which is based around the concepts of HR system strength and HR attributions and focuses on the way in which employees attach meaning to the content of the HR system. Within these two conceptualisations, the role of line managers is of central importance. This thesis examines the relationship between HR practices and performance outcomes by integrating the HR causal process model and the process approach to HRM, and affirms the central role of line managers.

Presented as a thesis by publication, this thesis adopts a mixed methods approach, comprising four studies. Study 1, a structured literature review, analysed 96 papers that are most central to the HR causal process model. The study used a mixture of analytical processes and content analysis to synthesise the current understanding of the HR causal process model to provide a brief critique of the literature to date and to present an agenda for future research. Study 2 reports on data from 33 interviews across two locations of an Australian accounting firm. Content analysis was used to investigate variability across intended, implemented and perceived levels of the HR process. The study found four drivers

of inconsistency related to line manager implementation, alignment, prioritisation, managerial style, and capability. Study 2 provides support for the HR causal process model and demonstrates the potential reasons for variability in the HR process. Study 3 reports on survey data gathered in eight mid-tier Australian accounting firms ($n = 407$). The study used a moderated mediation analysis to understand the strength of the relationship between intended, implemented and perceived HR practices, and three outcome measures as moderated by managerial effectiveness and HR system strength. The study found partial support for both mediated relationships and moderated relationships. Study 3 provides support for the influence of HR system strength and HR attributions on the HR causal process model and emphasises the role of managerial effectiveness in the employee experience of HRM. Study 4 reports on the employee sample of data collected in Study 3 ($n = 237$). The study examined the indirect relationship between perceived HR practices and employee outcomes, mediated by the employee-organisation relationship. Results show the mediated relationship between perceived HRM and employee outcomes is complex and varies depending on the employee outcome of interest. The findings of Study 4 have both theoretical and practical implications for firms that may seek to drive specific employee outcomes.

In concert, these studies provide new insights for understanding the HR causal process model. The influence of managerial effectiveness, which has received limited attention in the literature to date, is an important contribution to a greater understanding of HR practice implementation. Moreover, the findings of the indirect relationship between perceived HR practices and employee outcomes emphasise the need to better understand this critical point in the model.

LIST OF PUBLICATIONS

Two of the four papers in this thesis have been accepted as refereed conference papers.

1. Chapter 3. Sykes, M., Heys, A., & Jepsen, D. 2018. Lost in translation? Investigating the relationship between intended, implemented and perceived human resources practices and its effect on perceptions of organizational performance. European Academy of Management Annual Conference 2018. Reykjavik, Iceland.
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Soli Deo Gloria

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LIST OF ABBREVIATIONS

Acronym	Definition
AMO	Ability-motivation-opportunity framework
EOR	Employee-organisation relationship
HPWS	High-performance work system
HR	Human resources
HRM	Human resource management
KSA	Knowledge, skills and abilities
LMX	Leader-member exchange
POS	Perceived organisational support
PSF	Professional services firm
RBV	Resource-based view of the firm
SHRM	Strategic human resource management

Chapter 1
General Introduction

“Besides being complicated, reality, in my experience, is usually odd. It is not neat, not obvious, not what you expect.” – C.S. Lewis

HR practitioners often see a simple, neat, causal relationship between human resource management (HRM) and organisational performance yet are often unable to demonstrate the measurable impact of HRM on performance. The expectation of a link between HRM and performance is not without merit or evidence. Early research in the field of HRM confidently established the existence of a statistical relationship, with an initial first wave of studies that found consistent positive correlations between HR practices and organisational performance (Delery & Doty, 1996; Guthrie, 2001; Huselid, 1995; Macduffie, 1995). However organisations, as complex systems, are at the heart of the HRM-performance link, as are people with their idiosyncratic and collective psychological and sociological complexity (Ansari, Fiss, & Zajac, 2010; Kozlowski & Klein, 2000). The multifaceted complexity of the HRM-performance relationship means that developing a clear understanding of the nature of the HRM-performance link is challenging (Huselid & Becker, 2011; Wright & Gardner, 2003). The process by which HRM transmits through an organisation together with the way that individuals respond to HRM are promising avenues to search for answers to the question of how HRM is related to performance (Jiang & Messersmith, 2018; Wright & Ulrich, 2017).

A promising line of inquiry has recognised that HRM is not merely found at the level of the firm as policies, procedures, and practices crafted by HR specialists. Rather, HR practices are then implemented by line managers, and then perceived by employees and it is therefore at the level of employee perception that HR is believed to influence outcomes (Khilji & Wang, 2006; Piening, Baluch, & Ridder, 2014; Wright & Nishii, 2007). The influence on outcomes is believed to occur initially through the employee behavioural response, and then into work unit and firm-wide operational and financial outcomes (Paauwe, 2009; Purcell & Hutchinson, 2007). In parallel theoretical and, increasingly, empirical

research suggests that the HR system is not made up merely of the content of HR practices but that the processes through which the HR system operates are important, particularly the psychological mechanisms through which managers and employees interpret and respond to signals sent by the firm (Bowen & Ostroff, 2004; Nishii, Lepak, & Schneider, 2008; Sanders, Shipton, & Gomes, 2014).

This thesis examines the intervening mechanisms that shed light on the ways in which the HRM-performance link can be strengthened. The four studies contained in this thesis provide new insights into the way that the HR system transmits through the levels of intention, implementation and perception, to then influence employee outcomes as a means of ultimately influencing organisational outcomes. Drawing on the intended-implemented-perceived HRM framework (Wright & Nishii, 2007), the process approach to HRM (Bowen & Ostroff, 2004), and the employee-organisation relationship (Tsui, Pearce, Porter, & Hite, 1995), this thesis explores the way in which HR practices are translated, understood and transmitted through the different levels of a firm, and the process through which employee interpretations subsequently influence outcomes (Bartram & Dowling, 2013; Boxall, Ang, & Bartram, 2011). As understanding of the process of transmission develops, important gaps in understanding the HRM-performance link will be addressed.

This introductory chapter provides an overview of the literary landscape that is the location of this thesis, illustrated in Figure . The resource-based view and human capital theory, together with the behavioural perspective and social exchange theory, are described as the principal theoretical bases for expecting a relationship between HRM and performance (Jiang & Messersmith, 2018; Jiang, Takeuchi, & Lepak, 2013). The resource-based view and human capital theory approach the HRM-performance relationship from an economic and strategic perspective, while the behavioural perspective and social exchange theory approach the HRM-performance relationship from a psychological and sociological perspective. Taken

together, these perspectives provide a theoretical expectation for the HRM-performance link, but they do not provide an adequate explanation for what causes the link, how the link works, or why it occurs. For this reason, scholars have invoked a metaphor commonly referred to as the HRM black box (Becker & Gerhart, 1996). This chapter discusses four areas of research that shed light on the inner workings of the HR black box: the intended-implemented-perceived HRM framework (Nishii & Wright, 2008), the process approach to HRM (Bowen & Ostroff, 2004; Nishii et al., 2008), the employee-organisation relationship (Shore et al., 2004; Tsui et al., 1995), and from a research design perspective, multilevel research (Kozlowski & Klein, 2000). Following this literary overview, further background is provided regarding the research context of professional service firms generally and accounting firms specifically, and finally an overview of the thesis is provided.

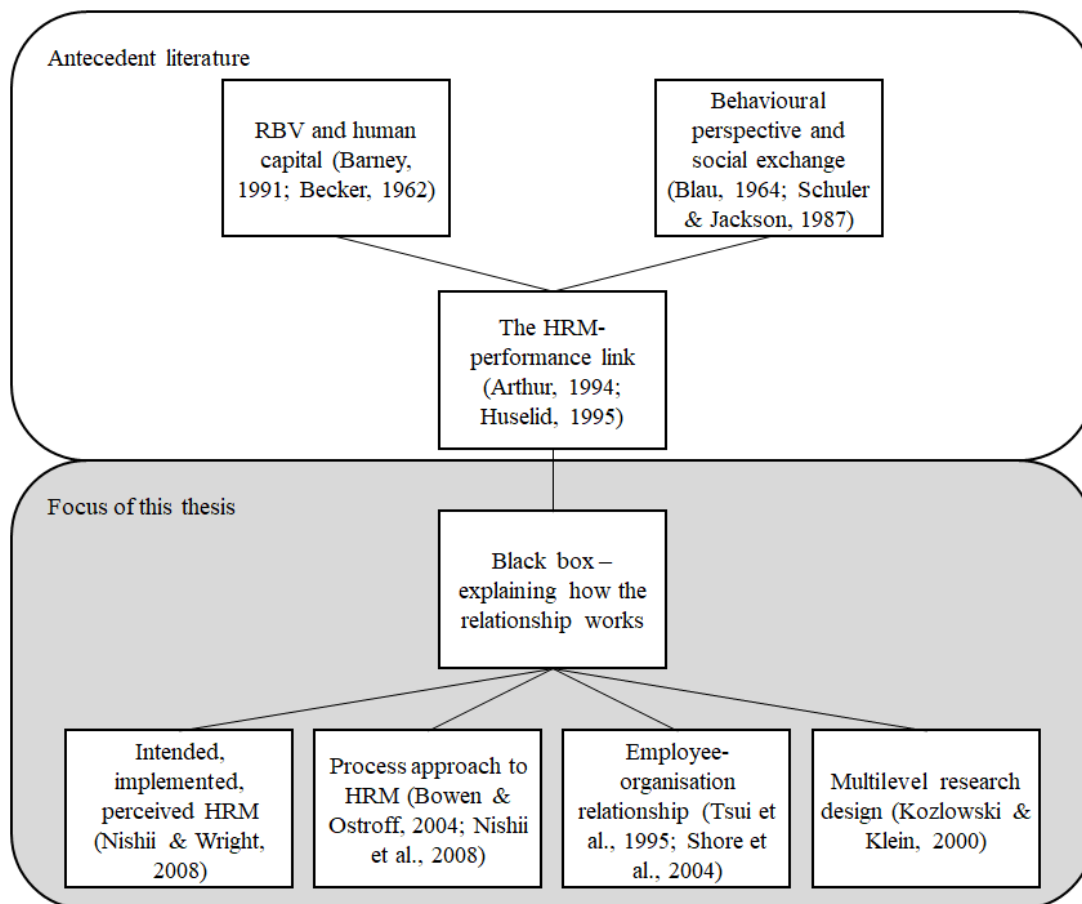


Figure 1. Literary landscape of thesis

Review of the literature on human resource management and performance

Managers, as agents and trustees of the firm, have a responsibility to manage the resources of the firm to maximise advantage for stakeholders (Kay & Silberston, 1995; Mitchell, Agle, & Wood, 1997). Those resources include physical capital, organisational capital, and human capital (Barney, 1991; Wright, McMahan, & McWilliams, 1994). To manage those resources effectively, managers require appropriate means to attract, organise and maximise the effective deployment of a firm's various resources. HRM seeks to provide direction, coordination and sustainable deployment of human capital resources (Boxall & Purcell, 2015). It is through the advantage gained by managing distinctive human capital resources that performance is expected to be positively derived (Grant, 1996).

Human capital and the resource-based view

Human capital can be defined as the capital that is embedded in the employees of the firm (Becker, 1962). While human capital resides in individuals, a firm holds a "stock" of human capital, the totality of human capital held in the form of its employees (Snell & Dean, 1992). Through investment in HR practices and procedures a firm sets out to both enhance that collective human capital and translate the value of that human capital into value for the firm (Schultz, 1961; Wang, Jaw, & Tsai, 2011). The economic view evolved from Lewis (1954) and Mincer (1958) who recognised the inherent value of human labour as a form of capital, and continued to develop in the early 1960s (Becker, 1962, 1964; Schultz, 1961). However the notion of human capital, thought of simply as the capabilities of labour, may be directly traced back to Adam Smith's *Inquiry into the Nature and Causes of the Wealth of Nations* (1776). Human capital in this traditional economic view was seen as a form of capital alongside other forms of capital a firm might hold, such as physical capital and financial capital (Bell, 1984; Boon, Eckardt, Lepak, & Boselie, 2018). However, there was a growing recognition of the linkage between human capital and the evolving field of HRM, such as

Parnes (1984, p. 32) observing that it is “but a short intellectual hop from the concept of human resources to the economist’s concept of human capital.” The increasing integration of theory drew out the importance of the knowledge, skills and abilities of employees and their uneven distribution within and between firms, seen as the operationalisation of human capital and a source of competitive advantage (Hitt, Biermant, Shimizu, & Kochhar, 2001; Ployhart, Nyberg, Reilly, & Maltarich, 2014).

Interest in human capital and its contribution to firm success extended to the field of strategic management. Notably, the development of the resource-based view of the firm (RBV) provided “a theoretical explanation for why superior human capital might lead to sustainable performance advantages for firms” (Crook, Todd, Combs, Woehr, & Ketchen, 2011, p. 444). Based on the work of Penrose (1959) and Wernerfelt (1984), Barney’s foundational paper (1991) created significant impetus in this field of study. Growth in understanding through the RBV increasingly explained the nature of firm resources, and how, when and why they contributed to sustained competitive advantage. A competitive advantage is said to be sustained when it outlasts all efforts by competitors to duplicate it (Wright et al., 1994). To create sustained competitive advantage, resources will need to demonstrate value, rarity, inimitability, and be well-organised (Barney, 1991, 1997). As initial theorising on the RBV turned to question what resources might create sustained competitive advantage, “...researchers quickly pointed to knowledge embedded in human capital as being among the most universal of resources that meet these criteria” (Crook et al., 2011, p. 444). With a focus on human capital and knowledge, the importance of the field of HRM was quickly recognised, including Wright et al. (1994) who observed that advantage comes only when both human resource practices and the human capital pool are superior. Through the layered theories of human capital and the RBV, researchers had a strong economic and strategic theoretical basis to expect that HRM and the performance of the firm were linked.

The behavioural perspective and social exchange theory

If human capital theory and the RBV provide the basis for expecting a relationship between HRM and performance through an economic and strategic lens, the behavioural perspective and social exchange theory provide the basis for expecting such a relationship through a psychological and sociological lens (Boon et al., 2018; Wright & Ulrich, 2017). The behavioural perspective suggests that “...employers use personnel practices as a means for eliciting and controlling employee attitudes and behaviours” (Jackson, Schuler, & Rivero, 1989, p. 728). Drawing on role theory (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Katz & Kahn, 1978), the behavioural perspective suggests that HRM is a means of communicating desired role behaviours and role expectations, and ultimately influencing individual performance (Jackson & Schuler, 1995; Schuler & Jackson, 1987). When combined with strategic management, the behavioural perspective suggests that an organisation’s strategy will require distinctive behaviours from its employees to achieve desired strategic outcomes, and will therefore require different combinations of, and emphases on, human resource practices (Snell, 1992). The behavioural perspective brings a central focus on employee behaviours, but draws attention to the varying needs of organisations in the context of their strategy, the internal and external influences on the organisation, and the way in which HR policies and practices are shaped (Jackson, 2013; Lengnick-Hall, Lengnick-Hall, Andrade, & Drake, 2009). As a means of explaining the relationship between management decisions around HR practices and employee behaviours, the behavioural perspective is an important theoretical basis for understanding the transmission of HR practices into outcomes.

Drawing on a more sociological foundation, social exchange theory (Blau, 1964; Emerson, 1976; Homans, 1958) concerns the way in which organisations and individuals take resources from each other, and in exchange give resources to each other (Gong, Law, Chang, & Xin, 2009). Social exchanges are “favours that create diffuse future obligations, not

precisely specified ones, and the nature of the return cannot be bargained about but must be left to the discretion of the one who makes it” (Blau, 1964, p. 92). As an exchange of present obligations for unspecified future obligations, social exchange theory relies on the norm of reciprocity (Gouldner, 1960), and, consequently, trust between the two parties to the exchange is central to the strength of the relationship (Aryee, Budhwar, & Chen, 2002). Social exchange relationships are present with the employer (e.g. perceived organisational support), the manager (e.g. leader-member exchange), and with other employees, and relationships within each dyad tending to be mutually reinforcing for other dyadic relationships (Ertürk, 2014; Takeuchi, Lepak, Wang, & Takeuchi, 2007). Positive social exchange relationships have been found to associate with organisational citizenship behaviours and other extra-role behaviours (Chen & Jin, 2014; Cohen, Ben-Tura, & Vashdi, 2012). Both the behavioural perspective and social exchange theory have been referenced as the basis for explaining mediating mechanisms in the HRM-performance relationship, a central concern of the process approach to HRM (Jiang & Messersmith, 2018; Wright & Ulrich, 2017) and central to this thesis.

The HRM-performance link and the black box

Strategic HRM is a term that has evolved to capture the expectation of HRM contributing to firm performance through its strategic positioning within the firm (Fu, Ma, Bosak, & Flood, 2015). Strategic HRM suggests that HR practices, bundled in a deliberate manner as a system, will contribute to improved firm performance (Chang & Chen, 2011). A number of terms are used interchangeably for such systems, including high commitment HRM, high involvement work practices, and high performance work systems (HPWS). As distinct ways of describing HR systems within strategic HRM, these terms are quite differentiated. Where high commitment HRM is focused on increasing employee commitment as a means to achieving desired outcomes, high involvement work practices are

oriented to involving employees in the work process, while HPWS tend to be oriented towards achieving performance by employees (Boxall & Macky, 2009; Guest, 2001). The emphasis of each of these terms is an important differentiator between them. Despite these differences, the terms tend to be used quite interchangeably, and at times without real regard for the differences between them (Boon, Den Hartog, & Lepak, 2019; Jackson, Schuler, & Jiang, 2014). HPWS has been found to be the most widely used term for such HR systems (Boon et al., 2019), and is therefore seen as the most appropriate term to capture the concept of strategic HR systems within the literature and will be used through this thesis.

High performance work systems. The development of HPWS was thought originally to be a response to advanced work systems in manufacturing across Europe and Asia, such as lean production and flexible specialisation (Boxall & Macky, 2009). HPWS have been described as “[systems] of HR practices designed to enhance employees' skills, commitment, and productivity in such a way that employees become a source of sustainable competitive advantage” (Datta, Guthrie, & Wright, 2005, p. 136). There is agreement that a systems approach is most appropriate for HRM research, where the unit of analysis is HR systems rather than individual practices (Jiang, Lepak, Han, et al., 2012). While the term HPWS is used within this thesis, there are a number of labels used that are comparable to that of HPWS, including high commitment work systems and high involvement work systems, which also richly capture the concept of HR systems, their character and the intention behind the system such as employee involvement, employee commitment or high performance. The breadth of labels for HR systems, and non-specification of differences between labels, has been criticised as a source of confusion and a challenge for advancing understanding (Boon et al., 2019). The challenge of specificity notwithstanding, understanding on the potential components of a firm's HR system and what practices might form part of an HPWS has advanced, both through meta analyses that estimate effect sizes (Combs, Liu, Hall, &

Ketchen, 2006; Subramony, 2009), and through taxonomical development delineating different categories of HR practices that comprise most characterisations of a HPWS (Posthuma, Campion, Masimova, & Campion, 2013).

The HRM-performance link. In parallel with the development of understanding around HPWS and HR systems more generally, researchers sought to understand how HRM is related to firm performance. Led by a number of influential studies in the mid-1990s, a statistical relationship between HRM and performance was supported (Arthur, 1994; Huselid, 1995; Macduffie, 1995). From this research, a burgeoning of studies and evidence ensued defining a central concern of SHRM that has endured as a centrepiece of empirical research and theorising in the field (Camps & Luna-Arocas, 2009). As more empirical evidence began to emerge, special issues in both the *Academy of Management Journal* and the *International Journal of Human Resource Management* applauded the initial research focused on the HRM-performance relationship, yet also called for stronger theorising, for more targeted research design, and for research that would influence policy and practice (DeNisi, 1996; Paauwe & Richardson, 1997).

As evidence accumulated for the statistical relationship between HRM and performance, criticism emerged as to the reliability and generalisability of some of the findings. For example, the dominance of single-respondent studies was the subject of sustained debate, with acknowledgement that multiple respondents are preferable for findings to be reliable (Gerhart, Wright, & McMahan, 2000; Gerhart, Wright, McMahan, & Snell, 2000; Huselid & Becker, 2000; Wright, Gardner, et al., 2001). Initial questions were also raised as to the causal effect (Wall & Wood, 2005), including evidence from Guest, Michie, Conway, and Sheehan (2003) that while HRM and performance is positively related, the relationship is not found when controlling for past performance. A decade after initial calls for stronger theorising (DeNisi, 1996; Paauwe & Richardson, 1997), criticisms concerning a

lack of theory, and consequently a lack of explanatory power, continued to emerge (Fleetwood & Hesketh, 2006).

The combination of growing empirical evidence, methodological critique, theoretical development and an awareness of the indirect nature of the HRM-performance link presented a significant challenge for researchers. As the challenge was increasingly recognised, the use of the *HRM black box* as a metaphor for explaining the research challenge that lay in front of the field of HRM started to become widely used.

The HRM black box. The simultaneous growth of firm-level evidence and critique of the insight that evidence provided gave rise to what quickly became termed the black box of HRM and performance (Becker & Gerhart, 1996; Becker & Huselid, 1998). Used widely as a term for unexplained or opaque linkages, the concept of a black box is found across many research fields. A research agenda proposed by Guest (1997) provides a helpful reference for conceptualising the black box, considering research on HRM, research on performance, and research on the linkage between the two. The black box question has been described as asking “what are the key intervening variables and constructs that help to explain the link between HRM practices and policies on the one hand and the bottom-line performance of the firm on the other hand” (Paauwe, 2009, p. 131). By its nature, the question of how the black box works is unlikely to be answered through a simple relationship. Rather, unlocking answers to the inner workings of the HRM black box is expected to involve a series of interrelated mechanisms that may vary across different contexts and levels within the organisation (Ferris, Hochwarter, Buckley, Harrell-Cook, & Frink, 1999). There is expectation that the black box as generally conceptualised may indeed be a series of boxes, each with their own complexity (Wright & Gardner, 2003). For example, while the employee-organisation relationship may form part of the understanding the HRM-performance black box, Hom et al. (2009) discuss the black box of the employee-organisation

relationship, which would suggest a box within a box that also requires explanation.

Research seeking to demystify or explain the black box has taken a range of forms. The initial HRM-performance studies, which identified the need for a systems approach, focused particularly on the mix of HR practices, and the way in which HR practices mix, to better understand the HRM-performance link, particularly through the lens of universal, contingency, and configurational perspectives (Delery & Doty, 1996). Later, there was a recognition that part of the answer to the black box mechanics might be found by identifying which HR practices influence employee attitudes and behaviours (Gardner, Moynihan, Park, & Wright, 2001). Subsequent research focused on the way in which HR practices are implemented and perceived (Jiang et al., 2013; Wright & Nishii, 2007), on the interplay of HRM through employee abilities and context in behavioural frameworks such as the ability-motivation-opportunity framework (Lepak, Liao, Chung, & Harden, 2006), and also in the *process* of HRM as opposed to the content (Bowen & Ostroff, 2004; Nishii et al., 2008), meaning how HR was implemented, not what practices were implemented.

While these various avenues of research have brought some light to the black box, a greying of the black if you will, a comprehensive answer to the black box question remains elusive and is a central concern of this thesis. The present research draws from three specific approaches to address the black box. First, a discussion of viewing HRM through intended, implemented, and perceived practices provides a means of understanding the process of transmitting practices through the organisation. Second, the process approach to HRM provides a means of understanding how and why HR practices have an impact. Finally, the employee-organisation relationship is an important construct for understanding how HR practices translate into outcomes. From a research design perspective, the importance of multilevel research is discussed. These theoretical framework and design approaches are now discussed in turn.

Intended, implemented and perceived HRM

The importance of understanding HRM through multiple perceptions is now well recognised and accepted (for example, Ostroff & Bowen, 2000; Truss, 2001; Wright & Boswell, 2002). Building on this work, Wright and Nishii (2007) provide a concise framework that emphasises the need to understand the transmission of HR practices through three organisational levels: the firm level at which HR policy and practice was set (intended), the business unit level at which HR practices were put in place by line managers (implemented), and the individual level at which HR practices are then interpreted by employees (perceived). Central to measuring the successful transmission of HR practices is the degree of variability between the three levels. Nishii and Wright (2008) explain that as line managers implement HR practices, there is likely to be variability in the way those practices are implemented, both variability among line managers, and even variability in emphasis by an individual manager with their employees. At the employee level, employees are also likely to perceive HR practices differently, both employees of different managers and employees of the same manager (Renkema, Meijerink, & Bondarouk, 2017). Variability, it is posited, dilutes those HR practices, creating divergence between what was intended at the firm level, to what was perceived and then translates into unintended employee reactions and behavioural outcomes.

At the level of intention, the role of HR professionals and the inherent conflict in their role as both company representative and advocate of employees has been recognised by Hope Hailey, Farndale, and Truss (2005). At the implementation step, there is wide recognition in the literature of the central role that line managers play in the transmission of HR practices to employees (Brewster, Gollan, & Wright, 2013; Fu, Flood, Rousseau, & Morris, 2018; Gilbert, De Winne, & Sels, 2015; Nishii & Paluch, 2018). At the employee level, employee perceptions of HRM and their effect on outcomes has also received increasing interest (Alfes,

Shantz, Truss, & Soane, 2013; Boon, Den Hartog, Boselie, & Paauwe, 2011; Piening, Baluch, & Salge, 2013). However, evidence focused on the relationship between intended, implemented and perceived practices is incomplete. Piening et al. (2014) provide strong qualitative evidence for aspects of the relationship, and identify what they term an “implementation gap” between intended and implemented HR practices, and an “interpretation gap” between implemented and perceived HR practices. Vermeeren (2014), Yang and Arthur (2019) and Ali, Lei, Freeman, and Khan (2019) have each tested models of implemented and perceived HRM, with a range of outcomes, while Kehoe and Wright (2013) introduced a model that tests group-level perceptions of HRM against three outcome measures, with both group and individual level commitment mediating the relationship. These advances notwithstanding, there remain gaps in understanding the transmission of HR practices from intended, to implemented, and then to employee-perceived levels. For example, a recent special issue of the International Journal of Human Resource Management focused on HRM implementation noted that it was the fourth special issue in recent years on the subject, and noted that “this topic is far from being fully explored and understood” (Bondarouk, Trullen, & Valverde, 2018, p. 2995). Research across the entire intended-implemented-perceived HRM model together with performance outcomes is early in its development, a fact that emphasises the size of the research challenge that the black box represents.

The process approach to HRM

With a focus on *how* HR practices influence firm performance, Bowen and Ostroff (2004) distinguished between the *content* of an HR system and the *process* of an HR system. The content of an HR system is often conceptualised as the individual practices of the system (Katou, Budhwar, & Patel, 2014; Sanders & Yang, 2016), though it can incorporate the entire HRM architecture, the principles, policies, practices and products of the HR system, as

described by Posthuma et al. (2013). A content approach to HRM research seeks to explain the way in which the content of the system influences performance. The content approach was the underlying frame of reference during the first decade of HRM-performance research following Huselid's (1995) study, and continues to be an important component of enquiry (Delmotte, De Winne, & Sels, 2012).

The process approach to HRM research seeks to explain the processes that take place psychologically and sociologically, through which meaning is attached to HR practices by employees (Sanders et al., 2014). Since Bowen and Ostroff's (2004) seminal study, research has evolved in seeking to understand the HR process, while at the same time considering both the content and the process of the HR system. The interaction between content and process is important: the process approach concerns itself with the process through which employees interpret the HR system, that system being made up of the content of HR practices and policies (Katou et al., 2014). The process approach seeks to explain the way in which the content of the HR system influences performance (Delmotte et al., 2012). The process approach, as currently conceptualised, includes two principal theoretical constructs: HR system strength and HR attributions (Hewett, Shantz, Mundy, & Alfes, 2018). The content of the HR system and the two arms of the process approach each answer different questions: the content of the HR system answers the *what*, HR system strength explains the *how*, and HR attributions are said to address the *why* (Ostroff & Bowen, 2016).

Strength in an HR system is determined by "signals [sent] to employees that allow them to understand the desired and appropriate responses and form a collective sense of what is expected" (Bowen & Ostroff, 2004, p. 204). A strong HR system is one that displays distinctiveness, consistency, and consensus (Bowen & Ostroff, 2004; Ostroff & Bowen, 2016). HR system strength has been found to positively relate to effectiveness of HRM implementation, HRM target achievement, and affective commitment (Cafferkey, Heffernan,

Harney, Dundon, & Townsend, 2018; Gilbert et al., 2015; Hauff, Alewell, & Katrin Hansen, 2017). There is debate as to the level at which HR system strength should be measured. In their original study, Bowen and Ostroff (2004; also Ostroff & Bowen, 2016) suggested HR system strength is a higher-order construct, measured at either the business unit or the organisational level. In contrast, the majority of studies have measured HR system strength at the individual level, arguing that individual employee idiosyncrasies will determine the effect of HR system strength (Sanders et al., 2018). Further theorising and empirical evidence is needed to establish the effect of HR system strength when conceptualised at various levels within the organisation. HR system strength answers the *how* of the HR system by explaining the way in which the employee's psychological climate is shaped by the combination of HR practices that form the HR system (Li, Frenkel, & Sanders, 2011). The utility of HR system strength has been tested cross culturally, with variance in employee outcomes dependent on the level of uncertainty avoidance within each country (Sanders et al., 2018). Further, Farndale and Sanders (2017) suggested that national culture (Hofstede, 1980), represented by power distance, uncertainty avoidance, performance orientation, collectivism, and how tightly the national culture is held, would moderate the relationship between HR system strength and employee outcomes.

The attribution an employee makes concerning why an HR practice exists is expected to influence their attitudes and behaviours, and in turn influence organisational outcomes (Nishii et al., 2008). The attribution or attributions that an individual places on an event or a phenomena acts as a means of explaining the event and understanding its cause and its meaning (Hewett et al., 2018). Recent attribution theory draws on the original work of Heider (1958), which was developed as a covariation principle by Kelley (1967, 1973) and as attributions in specific domains by Weiner (1985). These theories suggest that attributions are an important causal mechanism in the relationship between an event and a subsequent

outcome. HR attributions have been found to influence line manager implementation of HR practices, subsequent employee perceptions and organisational citizenship behaviours (Yang & Arthur, 2019), and with individual employee outcomes such as commitment and job strain (Van De Voorde & Beijer, 2015). Within the context of this thesis, the process approach to HRM is an important point of explanation for the way in which HRM influences performance, because it seeks to explain how and why employees respond to HR interventions.

The HR causal process model

The process model of SHRM as proposed by Nishii & Wright (2008; Wright & Nishii, 2007) goes beyond the intention, implementation, and perception of HRM to explain employee reactions and ultimately organisational performance. As a mediated model of HR practices and performance outcomes, the process model provides a skeleton of a causal framework for the HRM-performance relationship. Indeed, Purcell and Hutchinson (2007, p. 7) proposed a similar model, the “people management-performance causal chain,” which suggested a transmission from intended practices to actual practices, to perceptions of practices, to employee attitudes, to employee behaviour, and finally to unit level outcomes. Drawing from these two models, the term *HR causal process model* is used within this thesis to describe this framework.

The HR causal process model is conceptualised as both the framework that demonstrates the transmission of HR practices from intention through to outcomes as described by both Nishii and Wright (2008) and Purcell and Hutchinson (2007), and the influence of the key constructs of the process approach to HRM, HR system strength and HR attributions on that framework. Progress of research around these lines of inquiry are promising, suggesting that the HR causal process model is an important conceptual framework that has strong theoretical evidence and early empirical evidence to support its

continued exploration.

Causality. Drawing from the Purcell and Hutchinson (2007) term for the relational chain, causality has been included in the term *HR causal process model*. A distinction should be made between the expectation of causality and a claim for causality. The HR causal process model provides a sound theoretical and conceptual explanation of a phenomenon that may have a causal nature to it, albeit influences beyond the foundational description provided may exist. This explanation sets an expectation of causality which must be proven. A claim for causality, on the other hand, must meet a high bar to be legitimate. Cook and Campbell (1979) provide clear criteria to establish causality: an effect must be present when the cause is present, absent when the cause is absent, the cause must exist before the outcome exists, and, if possible, control any other variables that might cause the outcome that is being measured. To make a claim for causality, the research design must be longitudinal in nature, must include ex ante measures of the proposed cause and effect, and will potentially require the ability to control the causal variable. The research presented in this thesis does not make a claim for causality, rather it addresses the expectation of causality that is found within the literature. Whether it is ever possible to adequately test the HR causal process model in its entirety such that a claim for causality can be made is questionable.

The employee-organisation relationship

A further construct that helps to frame the present study is termed somewhat broadly the employee-organisation relationship (EOR). Tsui and her colleagues (1995; Tsui, Pearce, Porter, & Tripoli, 1997) originally used the term to describe the employer's perspective on the employment relationship, specifically considering the inducements the employer might offer to employees, and the contributions the employer might consequently gain from the employee. However, this construct has now come to more broadly describe the employer-employee relationship, particularly through the lens of social exchange and economic

exchange that exists between an employee and an organisation (Shore, Tetrick, Lynch, & Barksdale, 2006; Shore et al., 2004; Wu, Chen, & Liu, 2010). In this stream of HRM research, EOR is used as a broad term that captures a number of forms of relationship between employees, the organisation, and the manager. The EOR includes constructs such as perceived organisational support (POS), perceived supervisor support (PSS), leader-member exchange (LMX), commitment, the psychological contract, and notions of justice. HR practices within the firm are seen as a form of inducement by the employer to the employee in the exchange relationship, however the perception of those practices are moderated or mediated by the EOR, a form of virtuous or vicious circle (Kuvaas, 2008; Wright & Boswell, 2002).

Extensive support for the positive relationship between aspects of the EOR and desirable organisational outcomes exist, including LMX (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Ilies, Nahrgang, & Morgeson, 2007), POS (Byrne & Hochwarter, 2008; Kurtessis et al., 2017) and trust (Aryee et al., 2002; Ertürk, 2014). Understanding of the EOR and its interaction with HR practices has also been found, including POS mediating the relationship between employee-perceived HRM and job engagement (Zhong, Wayne, & Liden, 2016) and corporate entrepreneurship (Zhang & Jia, 2010), and trust mediating the relationship between employee-perceived HRM and individual, unit, and organisational perceived performance (Vanhala & Dietz, 2015).

The EOR has the potential to be an important mediating and moderating influence within the HR causal process model. One of the key questions of the HR causal process model is how HR practices transmit through intention, implementation and perception. This transmission relies on both the content that is found at each stage, but also on the social exchanges that take place at each step of the process. The EOR is a helpful frame for some of those social exchanges, in particular those that occur with the employee as they are

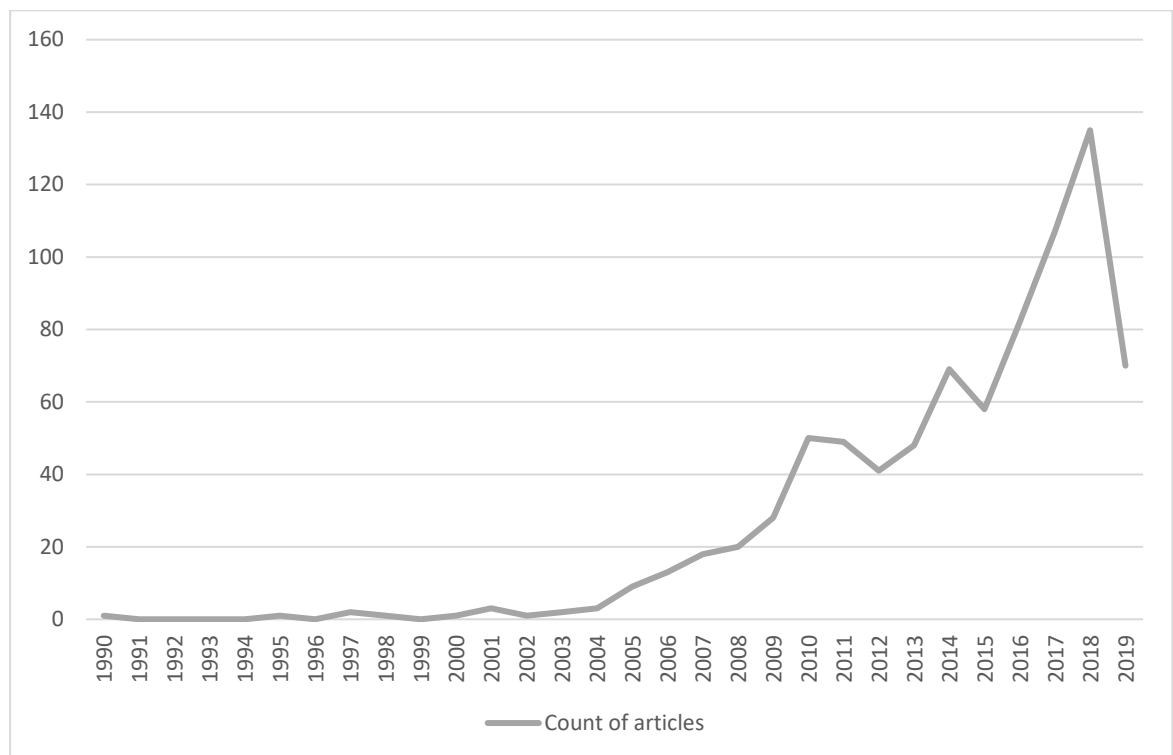
perceiving HR practices. Indeed, the EOR has been identified as both a mediator and a moderator between perceived HRM and employee-oriented outcomes (Kuvaas, 2008; Latorre, Guest, Ramos, & Gracia, 2016; Zhong et al., 2016). As a mediating influence, the EOR is concerned with the manner in which an employee's perception of HRM, as implemented in the firm, creates feelings of reciprocity directly influencing employee reactions to those practices, which result in measurable employee outcomes. As a moderating influence, the EOR is viewed as an influence that increases or decreases the strength of the perceived HRM-employee outcome relationship (Wright & Nishii, 2007).

There is an expectation that the EOR interacts with the process approach to HRM, particularly with HR attributions. Where there is a positive EOR, employees are likely to make positive attributions toward HR practices and, consequently, they will reciprocate in ways that are beneficial to the organisation. Similarly, where employees make positive attributions toward HR practices it is likely to engender a positive EOR, again creating reciprocal actions (Fontinha, Chambel, & Cuyper, 2012). Indeed, a recent study found that fairness and cynicism, both forms of EOR, were antecedents to the commitment-oriented attributions of performance and employee wellbeing (Hewett, Shantz, & Mundy, 2019). The EOR is therefore an important construct for this thesis because it provides a clear explanation for employee responses to HR interventions.

Multilevel research design

The multilevel nature of organisations has been recognised since the earliest theoretical development of organisational systems (Kozlowski & Klein, 2000). While there was theoretical understanding, exploration of how multilevel interactions operate was largely absent due to both the limitation of statistical procedures for testing such relationships and the tendency of HRM and management research to focus on firm level research questions, while industrial/organisational psychology research focused on the individual level (Wright &

Nishii, 2013). Despite a lack of multilevel research in HRM historically, there has been a significant shift in the volume of multilevel research in the past 10 years, as Figure 2 shows.



Search term: TOPIC: (multilevel OR "multi level") AND TOPIC: ("human resource management"), search run on Web of Science, 12th October 2019

Figure 2. Growth of journal articles containing multilevel research in HRM

The HRM-performance relationship has been described as “fundamentally a multilevel phenomenon” (Jiang et al., 2013, p. 1454). The need to conduct research not just at the macro or micro levels but across multiple levels is well recognised for a number of reasons (Takeuchi, Chen, & Lepak, 2009; Wright & Boswell, 2002). Because organisations are multilevel in their nature, it is important to investigate the way in which each of the levels interrelate. The interrelationship of levels can be seen through a number of frames of reference. For example, levels can be conceived structurally through the firm, business unit, and individual, or relationally through top management, line management, and employee. Dyadic relationships exist across levels, and these relationships are seen as important for

explaining the broader relationship between HRM and outcomes (Gooty & Yammarino, 2011). Where research is either performed at a single level or using an inappropriate multilevel design, there is risk of levels-based misspecification, which is testing a construct at the wrong level (Arthur & Boyles, 2007). The use of multilevel research design, particularly where data is collected from multiple respondents at multiple levels, allows researchers to adopt an increasingly pluralist approach to research, incorporating the perceptions of multiple actors in the development of findings (Boselie, Brewster, & Paauwe, 2009). Multilevel design makes testing variance across levels possible, which is central to understanding the HRM process (Wright & Nishii, 2013).

Professional services firms and the field of accounting

Knowledge has been identified as possibly the single most important resource that can deliver sustained competitive advantage (Grant, 1996; Spender, 1996; Zack, 1999).

Knowledge-intensive firms are particularly reliant on knowledge, because it is knowledge, broadly including the intellectual capability of employees, that forms the basis of output for such firms (Alvesson, 2004). The way in which line managers support knowledge workers is an important influence on employee performance (Edgar, Geare, & O'Kane, 2015).

The notion of a knowledge worker has become increasingly widespread, which led Swart (2007, p. 452) to define knowledge workers “as employees who apply their valuable knowledge and skills (developed through experience) to complex, novel, and abstract problems in environments that provide rich collective knowledge and relational resources.” In parallel with the recognition of knowledge workers and their importance within the firm, knowledge intensive firms, which Alvesson (2004, p. 17) describes as “organisations that offer to the market the use of fairly sophisticated knowledge or knowledge-based products,” have grown in prominence particularly as advanced economies become increasingly service-based and knowledge-oriented (Rodwell & Teo, 2004; Tether, Li, & Mina, 2012).

Professional service firms (PSFs), a form of knowledge-intensive firm, have been identified as an important context for research. The knowledge workers of PSFs are central to production outcomes, therefore the effective management of those workers in a single-firm environment is expected to inform understanding of the effectiveness of management practices (Kaiser, Kozica, Swart, & Werr, 2015; Swart & Kinnie, 2010). Taking this further, it is believed that understanding of how knowledge workers are managed in a PSF environment will inform research in other contexts, and have the potential for generalisability (Kaiser et al., 2015; Teo, Lakhani, Brown, & Malmi, 2008; Von Nordenflycht, 2010). While research investigating the institutional aspects of PSFs is rich, exploration of the way that PSFs use HRM for organisational gain is under-developed which means the opportunity for new understanding remains open to researchers (Jensen, Poulfelt, & Kraus, 2010; Kaiser et al., 2015). Without detracting from these reasons for research focused on PSFs, caution is needed in generalising findings due to the specific and distinctive features of PSFs. Notably, the prevalence of the partnership as a form of organisation and the formalised and structured professional and career development within PSFs less commonly found outside the professions (Bévort & Poulfelt, 2015; Greenwood & Empson, 2003; Greenwood, Hinings, & Brown, 1990).

PSFs are a type of knowledge intensive firm that are characterised by three traits: knowledge intensity, a professionalised workforce, and the professional partnership as a governance form (Kaiser et al., 2015). Knowledge intensity in PSFs goes beyond the way knowledge workers use knowledge in general, to being bound to the social identity and legitimacy of the professional (Kaiser et al., 2015; Von Nordenflycht, 2010) and to knowledge being central to both the input (employee expertise) and output (client outcomes) of the firm (Swart & Kinnie, 2013). The professionalised workforce in PSFs adopt a particular and generally codified knowledge base, subject themselves to regulations that

control the profession, and adhere to a professional ideology demonstrated through explicit professional ethics (Von Nordenflycht, 2010). While some PSFs are adopting corporate forms, the prevalence of the partnership model as a form of governance persists, and indeed even where firms have corporatised, the institutional logic that is grounded in professionalism remains (Bévort & Poulfelt, 2015; Lander, Heugens, & van Oosterhout, 2017).

The research presented in this thesis is located in the Australian professional accounting industry. Accounting firms are considered “classic PSFs” (Bévort & Poulfelt, 2015; Von Nordenflycht, 2010). The Australian accounting industry is dominated by the “Big Four” professional service firms (Deloitte, EY, KPMG, PwC), who make up around 70% of the top 100 accounting firms in Australia, and over 20% of the entire industry (Do, 2019; Tadros, 2018). The next largest firms, commonly known as the “mid-tier,” are on average a tenth the size of the Big Four (Tadros, 2018). These mid-tier firms are characterised by national associations, often associated with global networks of firms (for example, Grant Thornton, Crowe Horwath, BDO and PKF). While governance and ownership structures vary within the mid-tier, a common form is where each office, or a small group of offices, is an independent firm, while the national association provides brand recognition, client marketing, and to an extent to share cross-learnings and benchmarking of firm management approaches (Sykes & Heys, 2013). The dynamic nature of the mid-tier is evidenced by a number of recent moves by independent firms in Australia from one association to another (King, 2012, 2015).

PSFs generally, and accounting firms specifically, are an attractive research context. In light of their need to effectively manage knowledge workers as a direct input to production, the impact of effective HRM should be more pronounced than in other sectors or industries where manufacturing processes or physical capital may have an equal or greater influence on organisational performance.

Overview of the thesis

This thesis has been prepared as a thesis by publication. As such, the following four chapters present four studies which are either published, revised following review, or are ready for publication. Each study contains a discrete reference list, and a consolidated reference list for the entire thesis is included following the final chapter. Figure 3 provides an overview of the nature of data used in each of the studies. In the detailed description of each study below, a diagram illustrates the relationships examined in that study, and the entire study framework is then illustrated. In common with standard practice for theses by publication, each chapter contains a discrete paper prepared for publication. Thus, the reader is likely to notice some repetition between chapters in the literature reviews that frame the papers.

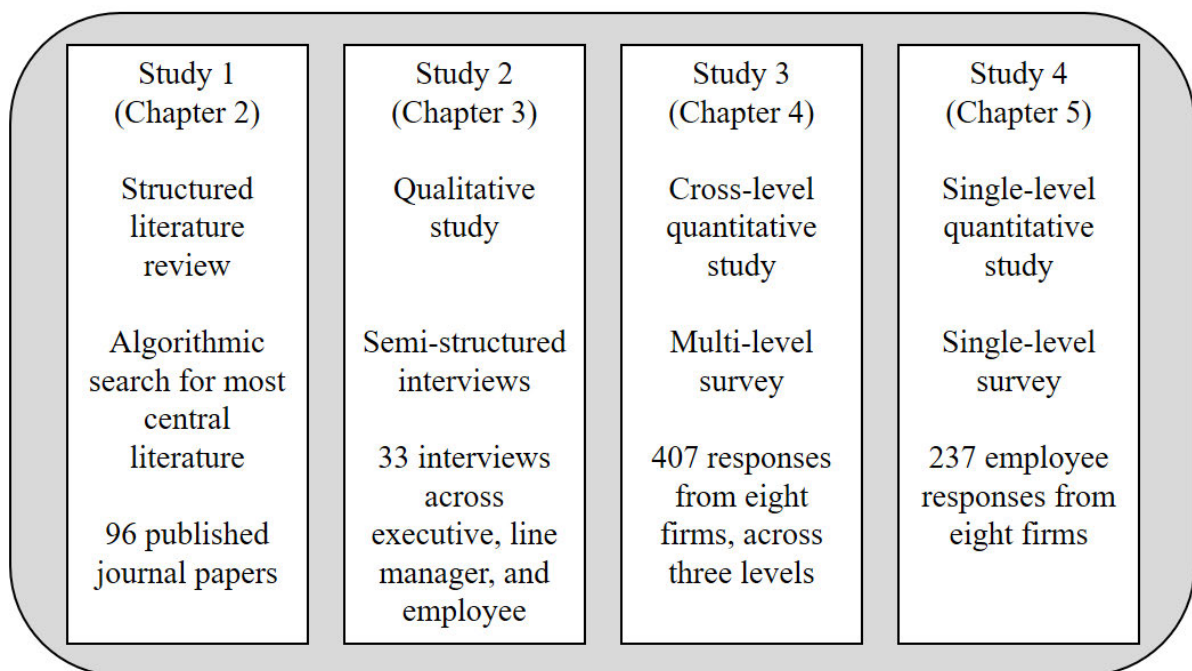


Figure 3. Structure of thesis, types of study and nature of data collected

Study 1, a structured literature review, reviews the most central literature concerning the HR causal process model, to understand the progress of the field and set a research

agenda. A multi-round search was adopted to identify relevant papers, and after considering references in each paper and the literature that cited each paper, an algorithmic centrality method was used to identify papers most central to the HR causal process model. Study 1 reviews the literature and sets out a research agenda.

Study 2 was the first of three studies drawing from field data. The study aimed to determine the nature of divergence of HR practices across levels, geographies and business units within a single case study firm. Figure 4 illustrates the relationship that was explored. In-depth interviews with executives, managers and employees were conducted at two offices of a single firm, and a content analysis using NVivo (QSR International, 2018) was performed to draw insights from the data. Study 2 found there were four drivers of inconsistency in HR implementation by line managers and discusses why there was divergence in the implementation and perception of HR practices across business units of the firm and across different cities.

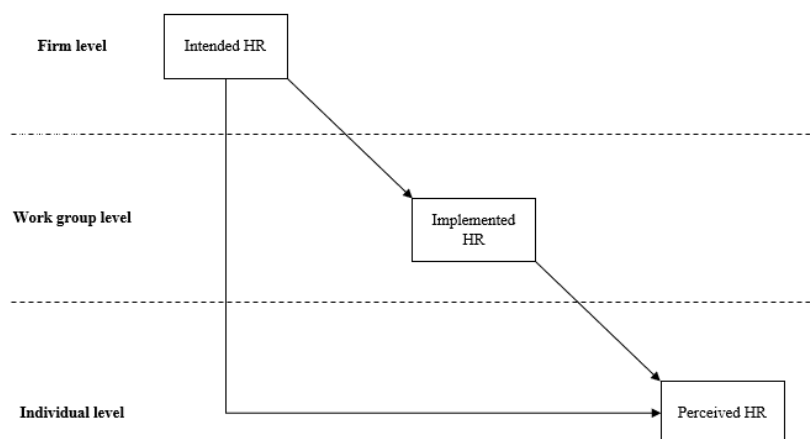


Figure 4. Study 2, intended, implemented and perceived HRM inconsistency

Study 3, a quantitative study, sought to understand the degree of relationship across the HR causal process model, allowing for mediated and moderated relationships with HR process variables and managerial effectiveness, a key finding from Study 2. Figure 5

illustrates the relationship that was explored. Study 3 reports on a multi-firm multi-level survey of eight accounting firms with 407 valid responses across three levels. A moderated mediation model was tested on the survey data. Study 3 finds that managerial effectiveness and HR system strength demonstrate significant relationships with the HR causal process model, however only limited support is found for their moderating influence.

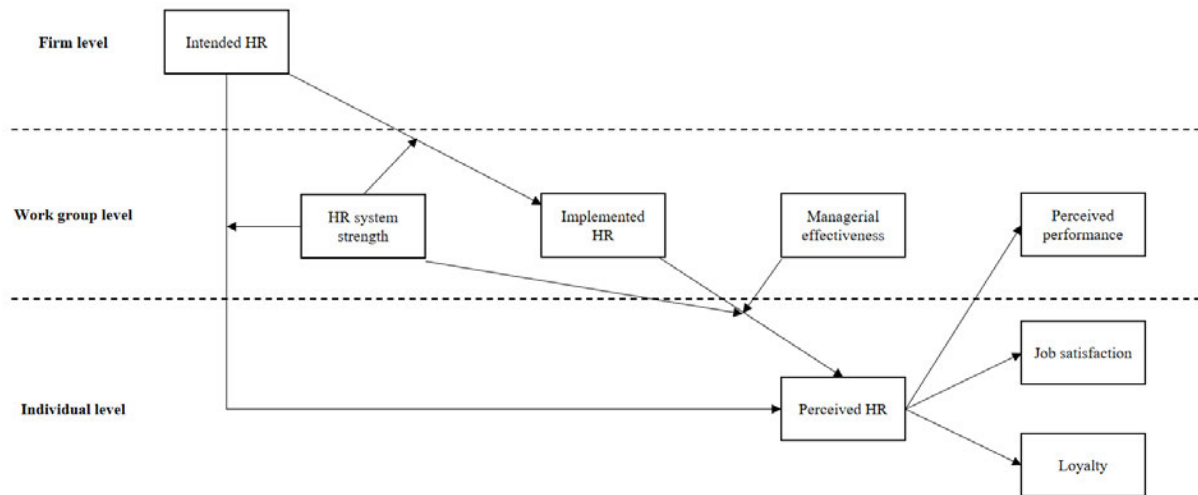


Figure 5. Study 3, mediation and moderation of the HR causal process model

The final study of this thesis, Study 4, explains the nature of the relationship at what is described as the hinge point of perceived HRM and employee outcomes, specifically including a range of EOR measures. Figure 6 illustrates the relationships that were investigated. The employee-level data of the survey described in Study 3 was analysed using parallel and serial mediation models. Study 4 found a complex series of pathways mediating the perceived HRM-employee outcome relationship.

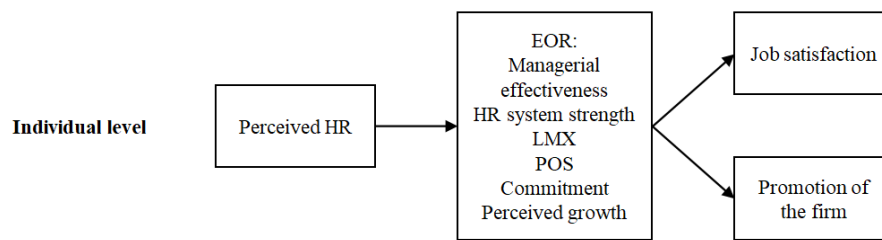


Figure 6. Study 4, mediation of perceived HRM and subsequent outcomes

Taken together, the thesis examines a multidimensional set of relationships in the HR causal process model. Illustrated at Figure 7, the thesis sets out to provide insight into the intended, implemented and perceived levels of HRM within the firm, to assess the mediating and moderating influence of two key variables in the transmission of HR practices from intention to perception, and to further explain the way perceived HRM finally translates into performance outcomes.

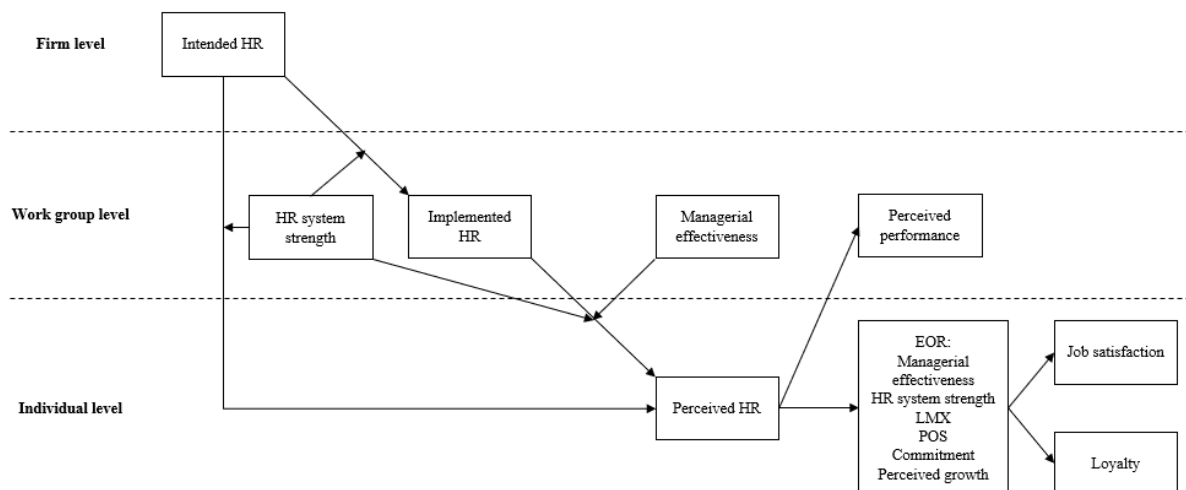


Figure 7. Consolidated relational framework of the thesis

Use of novel research methods

Through this thesis, a number of research methods have been employed that have either rarely or not been used in the HRM field. These methods have been used because the

research method was suitable for the research question of each study, and to investigate the utility of each research method and make a methodological contribution through the thesis to the extant literature. The following research methods are noted:

- The use of an analytical centrality methodology for the selection of literature in Chapter 2. Using a design typically found in social network analysis (Otte & Rousseau, 2002; Wasserman & Faust, 1994), this technique identified a sample from the HRM literature that was most central to the research questions, based on references within and citations of each successively selected paper. As far as is known, this technique has not been used before to conduct a structured literature review in HRM research.
- The use of serial moderated mediation and serial parallel mediation in Chapters 4 and 5. These techniques test moderated and mediated relationships in a sequential manner, allowing a robust test of causality on the data (Hayes, 2017; Preacher, Rucker, & Hayes, 2007). While causal inference requires more substantive validation, the results from such tests give researchers the ability to understand the sequential, and therefore potentially causal, nature of the relationships under investigation.
- The use of multiple techniques to measure constructs in Chapters 4 and 5. The survey instrument used in Chapters 4 and 5 included a short scale for HR system strength. Prior to distributing the survey, two methods were identified to test HR system strength: first, the scale included in the instrument, and secondly a dispersion compositional model (Chan, 1998; Dello Russo, Mascia, & Morandi, 2018). The scale results were used for Chapter 5 as that study tested a single level research design. The dispersion compositional model, which creates a synthetic measure of variance based on standard deviations, was used for Chapter 4, as this was a multilevel research design. It is also notable that across these two studies, HR system strength was

included both as a moderator of the intended HRM relationship, and as a mediator of the perceived HRM-employee outcome relationship. The literature largely suggests the moderating role, but also provides evidence for a mediating role between perceived HRM and employee reactions (Katou et al., 2014).

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Chapter 2

A review and research agenda for the HR causal process model

Introduction to Study One

The first study presented in this thesis is a structured literature review, which sought to understand the research conducted to date as it relates to the HR causal process model. The aim of the study was to gain insight of the current state of research within the field, and to identify gaps within the research, some of which were addressed in later studies for this thesis.

Structured literature reviews are recognised as a rigorous approach to selecting and analysing a field of literature to provide meaningful insights to research questions (Tranfield, Denyer, & Smart, 2003). The approach adopted for the structured literature review has been taken from Massaro, Dumay, and Guthrie (2016), and provides a methodical ten-step approach to conducting such reviews. Study 1 introduces a novel and empirical research design for selecting literature most central to the research questions. Adopting a methodology used in social network analysis (Otte & Rousseau, 2002; Scott, 1988), successive rounds of selection were conducted, using the references and citations of each paper in previous rounds to quantifiably identify the most central literature. A page rank algorithm based on a “random walk” approach (White & Smyth, 2003) was used. A random walk means that if a reader starts at any paper in the overall dataset and if they are seeking to address the research questions posed, they will reliably and efficiently find their way to the literature that has been selected.

This paper has been prepared according to the publication guidelines of the *International Journal of Management Reviews*.

The centrality of implementation and perception to the HRM-performance relationship: a review and research agenda

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Mr Matthew Sykes was responsible for the design of this study, collection of data, analysis and write-up of this paper. Dr Andrew Heys conducted additional data analysis. Dr Andrew Heys and Associate Professor Denise Jepsen provided research supervision through all stages of the research.

Abstract

The black box of HRM, the relationship between HRM on the one hand and firm performance on the other, continues to draw sustained research. One promising line of inquiry seeks to provide understanding of the inner workings of the black box through the framework of intended, implemented and perceived HRM. This paper provides a review of the central literature concerned with the relationship between intended, implemented and perceived HRM and organisational performance. Adopting a structured approach to the review, including a rigorous selection process that drew from a dataset of 31,580 papers, a content analysis is performed on the 99 papers most central to the intended-implemented-perceived HRM and performance relationship. Evidence for a robust, but nascent, field of research that has a strong theoretical basis and sound research methodology was found through the review. Findings from this research has validated and substantiated the intended-implemented-perceived relationship. A research agenda is subsequently proposed.

Keywords: centrality, HRM-performance, intended-implemented-perceived HRM, literature review, multilevel, process approach

Introduction

The relationship between human resource management (HRM) and organisational performance has been a central concern of researchers in the field of HRM. Delivering improved organisational performance has been referred to as the *raison d'être* of HRM (Becker & Huselid, 1998; Snell & Youndt, 1995). Early empirical evidence emerged in the mid-1990s demonstrating a measurable relationship between HR practices with both employee and financial outcomes (Arthur, 1994; Huselid, 1995; Youndt, Snell, Dean, & Lepak, 1996). More recent research has demonstrated that HRM influences three types of outcome – financial, employee, and operational (Den Hartog, Boon, Verburg, & Croon, 2013; Paauwe, 2009). The relationship between HRM and desired organisational outcomes has been found to not simply be an aggregation of individual HR levers, but to also be derived from different types of HR systems in which the interactive effects of system components work together in the broader organisational context to contribute to positive organisational outcomes (Jackson et al., 2014; Lepak et al., 2006; Lepak & Snell, 1999, 2002).

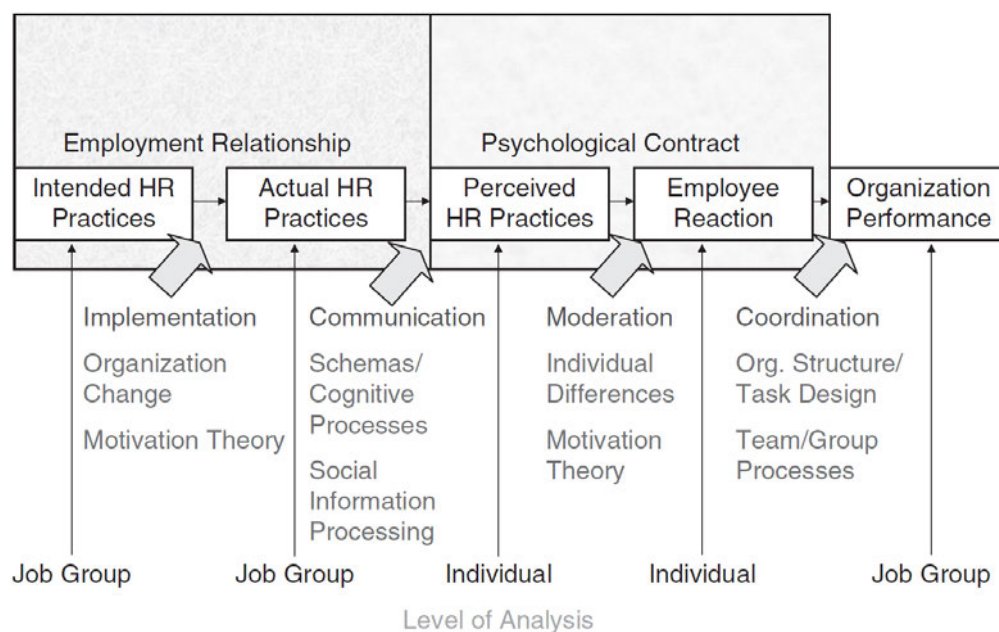
While there has been a steadily growing body of evidence suggesting a positive relationship between HRM and organisational performance (Combs et al., 2006; Crook et al., 2011), there has also been an increased recognition that the nature of the relationship between HRM and organisational performance is both complex and intermediated (Alfes, Truss, Soane, Rees, & Gatenby, 2013; Guest, 1997). The need to advance from research designs centred around large-scale, cross-sectional, single-respondent surveys has received sustained attention as a critique of the field (Wall & Wood, 2005; Wright, Gardner, Moynihan, & Allen, 2005). Further concerns have been raised about a tendency to report on evidence for the HRM-performance relationship without accompanying effort toward theoretical advancement (Fleetwood & Hesketh, 2006). These critiques have brought focus to the challenge of understanding the complex nature of the HRM-performance relationship, often

described as the black box of HRM (Becker & Huselid, 2006; Ferris et al., 1999). Research efforts around the HRM black box seek to identify whether there is an identifiable causal pathway that can be better understood, and whether such an understanding can positively contribute to how the work of HR practitioners may influence organisational and employee outcomes when put into practice (Gerhart, 2012; Purcell & Hutchinson, 2007).

One of the most important recent advances of HRM research in explaining the interactions within the black box has been the process approach to HRM. Early research on the HRM-performance link sought to understand which HR practices or combination of practices were important for achieving performance outcomes. Such research is referred to as a content approach to HRM (Sanders et al., 2014). This important line of enquiry provided understanding of the content of the HR system, and research on high performance work systems provided a helpful means of consolidating researchers' understanding of how HR system content is related to performance. There has been a focus on the process through which the HR system influences employee attitudes and behaviours. HR system strength, as conceptualised by Bowen and Ostroff (2004), is one theory that seeks to explain the process of how HR practices influence employee attitudes and behaviours. HR system strength is understood as the degree of consistency of perceptions of HRM across individuals, the psychological climate, and groups, the organisational climate (Bowen & Ostroff, 2004; Peccei & Van De Voorde, 2019). Drawing from signalling theory, the argument suggests that when an HR system is strong it creates clear, unambiguous understanding and commonly understood messages between all participants within the HR system (firm leadership, HR practitioners, line managers and employees) (Ostroff & Bowen, 2016). Conversely, low levels of HR strength results in employee perceptions forming independently and in smaller work groups, thereby reducing a firm's ability to implement an HR system as it was intended. While HR system strength as a theory has wide acceptance, there are limited examples of

studies where the inter-relationships between the theorised variables that comprise HR system strength are empirically tested. Consequently, HR system strength “remains largely underexplored” (Ostroff & Bowen, 2016, p. 197), notable exceptions including Den Hartog et al. (2013) and Gilbert et al. (2015).

An overarching framework for the process approach is to understand HRM as embodied by three sub-processes: HRM as intended by the firm, HRM as implemented by line managers, and HRM as perceived by employees. A levels-based approach was contemplated in earlier research (for example, Ostroff & Bowen, 2000), and a cohesive model, the “process model of HRM,” was proposed by Nishii & Wright (2008, p. 227, refer Figure 1; also Wright & Nishii, 2013). A similar model proposed by Purcell and Hutchinson (2007, p. 7), termed the “people management-performance causal chain,” suggests a more detailed progression in employee reactions, firstly as employee attitudes and then employee behaviour. Herein, this overarching relationship is referred to as the HR causal process model.



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Figure 1. Nishii and Wright’s (2008) process model of SHRM

Due to both the development of the HR causal process model and criticisms surrounding the single-respondent research design which was pervasive in earlier HRM-performance research, a consensus seems to have now been reached that multilevel research designs must become a central feature of future research if the HRM-performance relationship is to be properly understood (Gerhart, Wright, McMahan, et al., 2000; Lepak et al., 2006). The complexity of social systems, and in particular the multiple levels that form them, has long been recognised (for example, Dyer, 1984). With advances in theory and evidence combined with increasingly powerful analytical tools, sophisticated multilevel designs are now both desirable and achievable (Kozlowski & Klein, 2000). There is potential for multilevel research designs to bridge gaps in theory (Klein, Tosi, & Cannella, 1999; Ostroff & Bowen, 2000) and to test complex relationships across processes and outcomes at different levels simultaneously (Liao, Toya, Lepak, & Hong, 2009). Multilevel research seeks to identify, understand, and explain the effect of variability across levels (Wright & Boswell, 2002; Wright & Nishii, 2007).

The theoretical corollary of multilevel designs is the confluence of the fields of HRM and organisational behaviour (Snape & Redman, 2010). HRM has traditionally focused on the firm level unit of analysis and has often neglected to incorporate insights at the individual level. Similarly, organisational behaviour scholars have traditionally focussed on insights at the individual level and on investigating individual-team relationships (Guest, 2017; cf. Wright & Boswell, 2002). To develop effective multilevel designs with explanatory power to further reveal the nature of the HRM-performance black box, research must draw from both HRM and organisational behaviour, and at multiple levels. Indeed, Paauwe (2009, p. 134) described the bringing-together of the organisational and the individual perspectives as “bringing employees back into the equation.”

In 2010, it was observed that there was a lack of multilevel studies investigating HRM (Snape & Redman, 2010). As part of the current study, an analysis of Web of Science data shows that since there has been a six-fold increase in multilevel HRM research from 136 papers in 2010 to 731 papers at January 2019. The growing base of research includes promising empirical evidence on the nature of the HR causal process model (Kuvaas, Dysvik, & Buch, 2014; Piening et al., 2014; Vermeeren, 2014) and important conceptual development of the multilevel relationships that form the core of HR system strength (Nishii & Paluch, 2018; Renkema et al., 2017).

The review contained in this paper is therefore timely. While a number of reviews and meta analyses have contributed to understanding around the broader areas of the HRM-performance link and strategic HRM content (for example, Jiang, Lepak, Hu, & Baer, 2012; Jiang & Messersmith, 2018; Wright & Ulrich, 2017), there is an absence of systematic reviews of the literature that synthesise the advances of multilevel HRM research and the process approach to HRM. Adopting a structured literature review (SLR) approach, this study presents a clear picture of the current state of research around the HR causal process model and an agenda for future research. Additionally, it presents an analytical approach to the selection of literature based around social network analysis that has not been used in review studies to date.

Method

Approach to the review

Systematic and structured literature reviews are widely used in management research (Lee & Lee, 2018; Sheehan, Fenwick, & Dowling, 2010; Wollard & Shuck, 2011). SLRs have been suggested as a means of informing emerging research concepts through the identification and analysis of existing data points in the literature (Wollard & Shuck, 2011). To bring rigour to an SLR, Massaro and his colleagues (2016) describe a ten step process for

performing an SLR. This process ensures the findings are “defensible” (Massaro et al., 2016, p. 769). The present study adopts this ten-step process as a means of maintaining rigour and developing defensible findings.

Selection of literature

The literature search was conducted in two stages. The first stage identified an initial group of high-quality papers that are central to the research question. The second stage used a scientifically rigorous centrality methodology to select additional literature up to the point where the search process measurably demonstrated that the literature selection was exhaustive.

The first stage of the search commenced by identifying a sample of relevant journals in HR, management and strategy fields that represented both specifically HR-focused scholarship and general management scholarship that may include HRM research. As the selection process described will demonstrate, the initial journal selection is not of great importance for the final identification of papers. The journals selected to identify an initial set of papers were Academy of Management Journal, Academy of Management Review, Administrative Science Quarterly, Human Resource Management, Human Relations, Journal of Management, Journal of Management Studies, Journal of Organizational Behavior, Personnel Psychology, and Personnel Review. Using Web of Science, a topic search was performed on each journal using the search term [(HRM OR "human resource") AND (intended OR implemented OR perceived)]. Topic searches mine paper titles, abstracts and keywords, including terms that stem from keywords. This cumulative search produced 504 papers. This initial set was reduced by removing 171 papers not related to HR management, based on the absence of the terms “HR”, “HRM” or “human resource” in either the title or the abstract. With an objective of identifying papers relevant to the HR causal process model, a review of the remaining 333 papers identified papers that had either “intended,”

“implemented” or “perceived” or their variants and synonyms referred to in relation to HR practices, the HR system, or HRM in general in the title or the abstract. This step first used a text search for “intended,” “implemented” and “perceived” and their variants, and then used a visual inspection of each remaining title and abstract. Examples of papers excluded at this stage include Tsui and Wu (2005), which discusses the employment relationship and where the term “perceived” is found in relation to the attractiveness of the economic value of the new employee relationship, and Ulrich, Brockbank, Yeung, and Lake (1995), which performs an empirical assessment of HR competences, and concludes on the effectiveness of HR professionals as perceived by their associates. This stage reduced the selection population from 333 papers to 26 papers. Table 1 shows the journal of these 26 papers, with publication year. These papers provided the starting point for the second stage of the literature search. As a matter of interest, 202 of the 504 papers originally identified at this stage were brought into the dataset in the subsequent selection process.

Table 1. First stage selection of papers by journal and publication year

Journal	pre- 2000	2000- 04	2005- 09	2010- 14	2015- 18 (a)	Total
Human Relations			1			1
Human Resource Management				8	7	15
Journal of Management				1		1
Journal of Management Studies		1		1		2
Journal of Organizational Behaviour				1		1
Personnel Review	1		2	3		6
Total	1	1	3	14	7	26

(a) Covers 3.3 years, rather than 5 years

The second stage of the literature search was designed to identify the literature which is most central in explaining the HR causal process model. Centrality, which in its broadest sense is an indicator of influence, is also a measurable quality in data and is used extensively

in social network analysis for ranking the relative importance of units (Freeman, 1978; Otte & Rousseau, 2002). Centrality analysis identifies units that are most prominent in a dataset, determined by their visibility to other units in the dataset (Wasserman & Faust, 1994).

Network analyses that measure centrality are based around three foundational features: nodes (also called vertices) which are data points in the network, edges which are binary relationships between data points, and dyads which are pairs of data points and the possible relationship between them (Scott, 1988). Figure 2 illustrates a social network diagram, in which two papers from the original round, Edgar and Geare (2005) and Marescaux, De Winne, and Sels (2013), are shown in grey. References in those articles, including Guest (1997) which was subsequently selected due to its centrality, are shown as inbound links. Papers that cite those two articles, including Snape and Redman (2010) and Schmidt, Pohler, and Willness (2018) which were subsequently selected due to their centrality, are shown as outbound links. The research design used a centrality calculation known as PageRank¹ (Brin & Page, 1998) to determine the centrality of literature. Based on the original Google search

¹ A number of centrality algorithms exist, including betweenness, closeness, eigenvector, and PageRank centrality. PageRank was selected because the algorithm considers both the direction of the relationship, and the relative importance of nodes within the network. Rovira Kaltwasser and Spelta (2019) provide a detailed discussion on these advantages of the PageRank algorithm

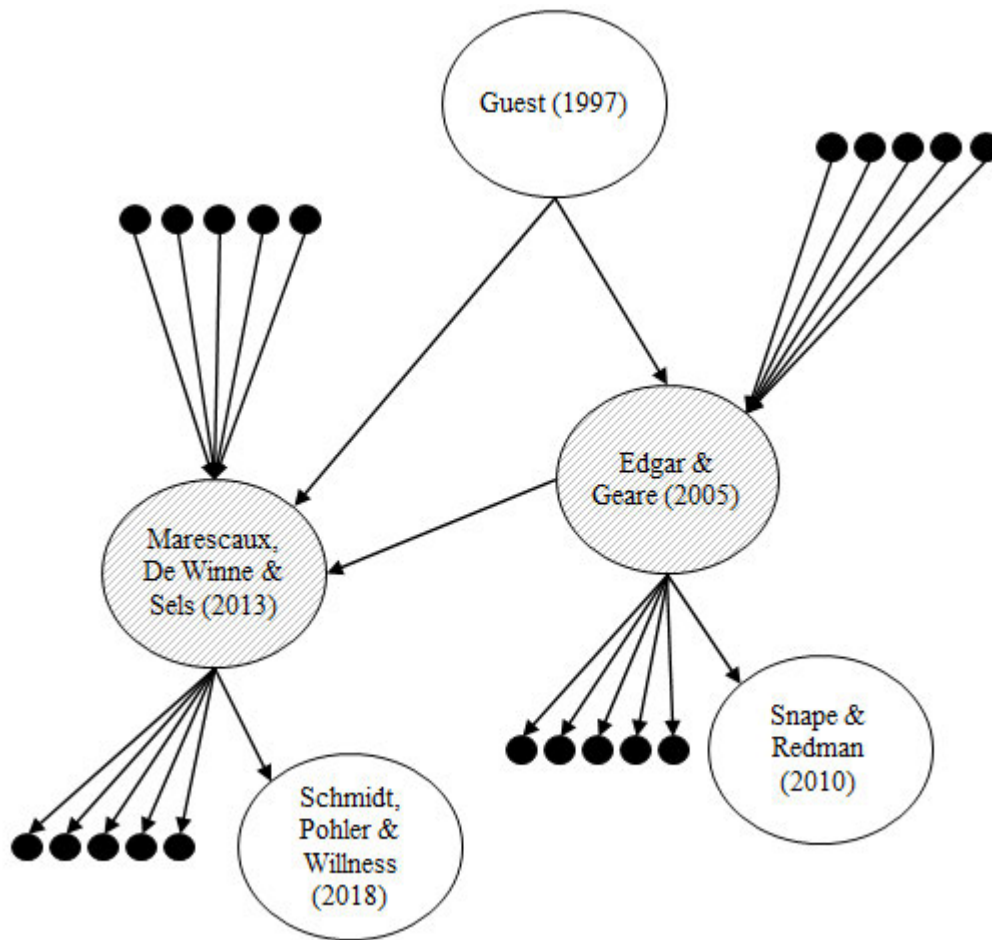


Figure 2. Illustration of social network diagram

algorithm, the PageRank calculation simulates where, when starting at a random location in a network, users will tend to congregate (Leskovec, Rajaraman, & Ullman, 2014). The analysis was conducted using NodeXL (Smith et al., 2010), a Microsoft Excel plugin used extensively in social network research (Choi, Park, & Park, 2012; Groeger & Buttle, 2014; Quinn, Woehle, & Tiemann, 2012).

The search process commenced with the 26 papers selected in the first stage. All references in those papers and citations to those papers were identified through a search for each paper using both Web of Science and Scopus. The reference and citation capture created a dataset of literature (the nodes in the social network) and relationships in that dataset (the edges of the social network). The PageRank analysis was then run to rank the most central to

the least central paper. The next 10 most-central papers were added to the selection based on the centrality analysis. The selection process was then run again, identifying referenced and citing literature for the newly selected papers, which expanded the overall literature dataset and allowed continued selection of next-most-central literature to the literature sample. The process was conducted in successive rounds until the point of saturation. Figure 3 graphically illustrates the social network at round 4 of the selection process, with one paper, Bowen and Ostroff (2004), selected to show its network relationships. When the literature search was completed, 96 papers had been selected from a total literature dataset of 31,580 papers.

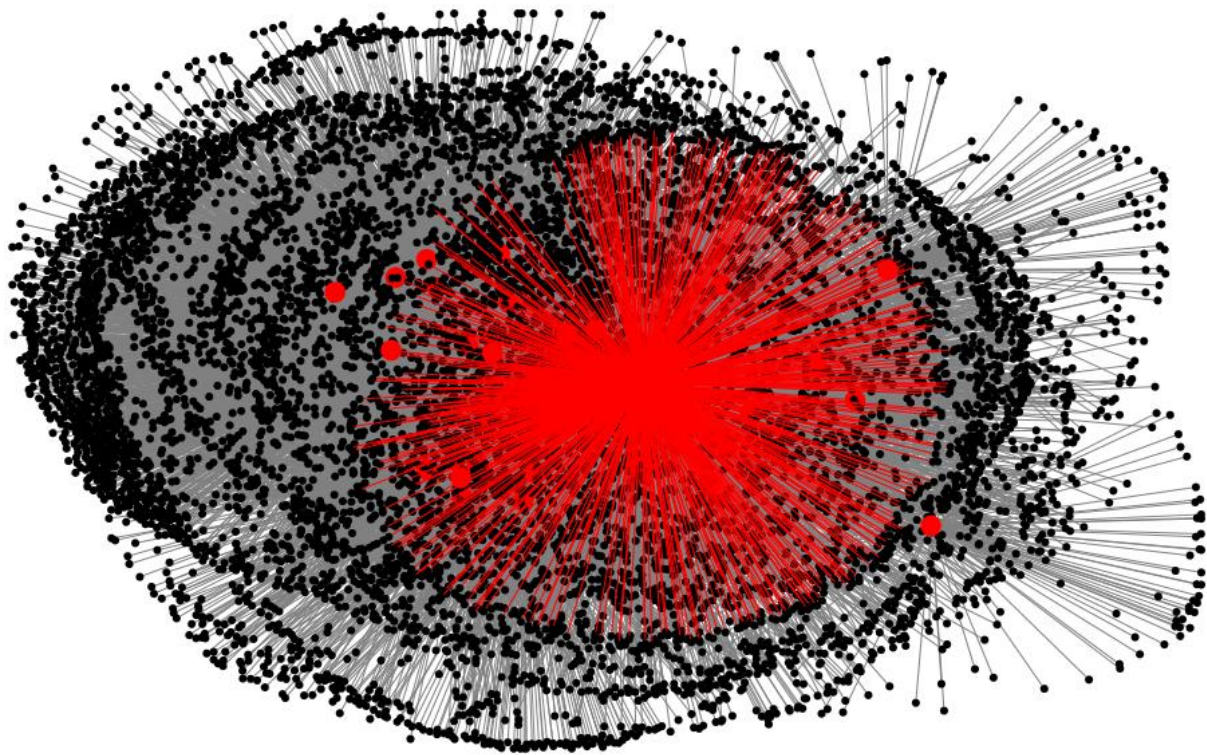


Figure 3. Graphical representation of paper dataset at round 4 of the selection process

In a similar manner to the collection of qualitative data, the researchers must assess the point of saturation, when “no additional data are being found whereby the [researcher] can develop properties of the category” (Glaser & Strauss, 1967, p. 61). As new papers enter the dataset, an assessment must be made to determine when the literature search should cease,

to ensure the selected literature remains relevant to the research questions. In each selection round, the newly selected papers were reviewed in the same manner as the initial selection (that is, reviewing for “intended”, “implemented” and “perceived” in titles and abstracts). Papers that specifically dealt with strong HR systems and with employee attributions were also considered directly relevant. Papers were coded as directly relevant, or as not directly relevant. As the selection rounds progressed, the proportion of the most-central papers that were directly relevant, and the number of directly relevant papers added in each round, was tracked (Table 2). By round 6, there was only one directly relevant paper in the top 15 most-central of the sample, and at round 7, no new directly relevant papers were added to the selection list. One further round was run as a final check and determined the search had been exhaustive. In total, 96 papers were selected, of which 42 papers directly addressed the HR causal process model.

Table 2. Number of papers that are directly relevant and most central by round

	Round							
	1	2	3	4	5	6	7	8
Number of papers added	26	10	10	10	10	10	10	10
New papers selected that are directly relevant – total	26	6	3	3	3	1	0	0
Number of directly relevant papers in top 15 most central	15	15	11	4	2	1	1	1
Number of papers in total dataset	1,984	7,158	9,185	10,522	11,832	12,607	30,526	31,580

The original literature search was conducted in April 2018. To ensure all relevant research was included, an additional supplementary search was performed in January 2019. Web of Science was searched using the same term as in round 1 of the selection process for literature in 2018 and 2019. Any literature that was not related to HRM or which appeared in the primary dataset was removed, and the resultant literature was reviewed for directly

relevant papers in prominent journals. This supplementary search resulted in the addition of three further papers, Gill, Gardner, Claeys, and Vangronsveld (2018), Nishii and Paluch (2018), and Pak and Kim (2018) to the selection for the final analysis. The final selection population was therefore 99 papers. Table 3 lists the literature that was selected, and the round in which it was selected.

Table 3. Selected literature

Paper	Round	Paper	Round
Aït Razouk (2011)	8	Khilji and Wang (2006)	2
Alfes, Truss, et al. (2013)	1	Korff, Biemann, and Voelpel (2017)	4
Arthur (1992)	7	Kuvaas (2008)	2
Arthur (1994)	3	Kuvaas et al. (2014)	1
Arthur and Boyles (2007)	3	Lepak et al. (2006)	5
Arthur, Herdman, and Yang (2016)	1	Lepak and Snell (1999)	4
Bae and Lawler (2000)	8	Lepak and Snell (2002)	3
Barney (1991)	7	Liao et al. (2009)	4
Batt (2002)	7	Luffarelli, Gonçalves, and Stamatogiannakis (2016)	1
Becker and Gerhart (1996)	3	Macduffie (1995)	2
Becker and Huselid (1998)	6	Marchington, Rubery, and Grimshaw (2011)	1
Becker and Huselid (2006)	4	Marescaux et al. (2013)	1
Beltrán-Martín, Roca-Puig, Escrig-Tena, and Bou-Llusar (2008)	8	McConville and Holden (1999)	1
Bondarouk, Looise, and Lempsink (2009)	1	McDermott, Fitzgerald, Van Gestel, and Keating (2015)	1
Boon et al. (2018)	7	Messersmith, Patel, Lepak, and Gould-Williams (2011)	6
Boselie, Dietz, and Boon (2005)	3	Nishii and Paluch (2018)	Supp
Bos-Nehles, Van Riemsdijk, and Looise (2013)	1	Nishii et al. (2008)	2
Bowen and Ostroff (2004)	2	Ostroff and Bowen (2016)	4
Brewster et al. (2013)	5	Paauwe (2009)	3
Camps and Luna-Arocas (2012)	8	Pak and Kim (2018)	Supp
Chang (2005)	1	Paracha, Wan Ismail, and Amin (2014)	6
Collins and Smith (2006)	5	Piening et al. (2014)	1
Combs et al. (2006)	2	Posthuma et al. (2013)	6
Datta et al. (2005)	5	Purcell and Hutchinson (2007)	2
Delaney and Huselid (1996)	5	Rabl, Jayasinghe, Gerhart, and Kühlmann (2014)	8
Delery (1998)	6	Renkema et al. (2017)	2
Delery and Doty (1996)	3	Ridder, Baluch, and Piening (2012)	4
Den Hartog et al. (2013)	1	Sanders and Yang (2016)	1
Dysvik and Kuvaas (2012)	1	Schmidt et al. (2018)	1
Edgar and Geare (2005)	1	Shin and Konrad (2017)	6
Farndale and Kelliher (2013)	1	Snape and Redman (2010)	4

Paper	Round	Paper	Round
Fontinha et al. (2012)	1	Sonnenberg, Koene, and Paauwe (2011)	1
Fu et al. (2017)	8	Storey, Saridakis, Sen-Gupta, Edwards, and Blackburn (2010)	1
Gerhart, Wright, McMahan, et al. (2000)	4	Subramony (2009)	6
Gill, Gardner, Claeys, and Vangronsveld (2018)	Supp	Sumelius, Björkman, Ehrnrooth, Mäkelä, and Smale (2014)	1
Gong et al. (2009)	8	Sun, Aryee, and Law (2007)	7
Groen, Wilderom, and Wouters (2017)	1	Sung and Choi (2014)	1
Guest (1997)	4	Takeuchi et al. (2009)	6
Guest (2011)	3	Takeuchi et al. (2007)	5
Guest et al. (2003)	7	Truss (2001)	1
Guthrie (2001)	7	Vermeeren (2014)	5
Huselid (1995)	2	Wall and Wood (2005)	8
Jackson et al. (2014)	7	Way (2002)	7
Jeong and Choi (2015)	7	Wright and Boswell (2002)	3
Jiang, Hu, Liu, and Lepak (2017)	1	Wright, Dunford, and Snell (2001)	8
Jiang, Lepak, Han, et al. (2012)	6	Wright et al. (2005)	2
Jiang, Lepak, Hu, et al. (2012)	4	Wright and McMahan (1992)	6
Jiang and Messersmith (2018)	5	Wright and Ulrich (2017)	8
Jiang et al. (2013)	5	Youndt et al. (1996)	5
Kehoe and Wright (2013)	3		

Supp = supplementary selection in 2019

An important feature is that the method does not only select papers directly related to the research questions, but it also provides broader literature that has a central influence on the research questions, resulting in a corpus of the demonstrably most central and influential research related to the study. This selection method is an objective way of exhaustively searching the literature for relevant contributions while reducing the risk of selection biases of researchers during literature selection (Tahamtan, Safipour Afshar, & Ahamdzadeh, 2016; Tol, 2013).

Review process

A literature review protocol which included the selection process, the research questions guiding the review, and the analytical framework was prepared. The initial

analytical framework included coding nodes for paper demographics, research settings, research methods, research variables, theoretical frameworks, findings, and future research.

Literature review reliability was established using multiple techniques (Krippendorff, 2013). For any descriptive data, reliable data-extraction techniques were used, both by extracting data from Web of Science and Scopus records, and by extracting data from the coding performed on each paper in NVivo. These data were compiled using a Microsoft Excel database (Boscari, Bortolotti, Netland, & Rich, 2018). Post-hoc, the coding schema was tested against prior studies, including Scandura and Williams (2000) for methodological codes and Jiang and Messersmith (2018) for theoretical framework codes. A high degree of consistency in the codes was found.

A risk in the selection method is that a large proportion of the selected literature is central to the research question due to the citations they include, but are not themselves widely cited and therefore are not truly representative of the underlying construct in the body of research, meaning that they lack external validity. The first notable evidence for external validity is the size of the final dataset. The inclusion of 31,580 pieces of literature suggests that there is wide representation of the literature. More specifically, the selected literature includes papers that have been well cited, suggesting that they have influenced not only the literature that is central to this study, but a wider base of research. Specifically, the selection included 24 papers with over 500 citations, a further 31 papers with over 100 citations, a further 14 with over 30 citations, and a balance of 30 with between zero and 29 citations. Further, upon review of three recent papers which review this body of literature (Jiang, Lepak, Hu, et al., 2012; Jiang & Messersmith, 2018; Wright & Ulrich, 2017), 34 of the 96 papers selected are found in those reviews, suggesting reasonable validation against existing reviews. This analysis suggests there is a strong base of highly cited and influential research at the core of the development of the HR causal process model, supporting the assertion of

external validity.

Coding was performed in the manner described above using NVivo version 12 (QSR International, 2018). As part of the coding process, a number of textual search tools within NVivo were used, including text search and matrix queries, to ensure all applicable data were coded. Synthesising the data to develop insights is a critical SLR step. Insights were initially drawn from descriptive observations of the selection population such as publishing data, citation record, author details, and research methods. Thematic analysis using NVivo was then performed on the data with specific reference to the research questions. The synthesis of data provided evidence to recommend future research pathways for the HR causal process model.

Overview of selected literature

Upon completion of the selection process, an initial review of the selected literature was conducted to evaluate its impact. Following this evaluation, the literature was reviewed to determine the types of research found within the selection, the location of research, the theoretical models used, and research designs adopted. This overview was used to understand the way in which the research context around the HR causal process model has evolved.

Paper impact

Paper impact is an important aspect of a structured literature review, because it ensures the selected literature has influence in the field. Paper impact is measured by the number of citations of the paper in question (Massaro et al., 2016). The centrality approach used in the selection process is an important step to ensure paper impact. While the centrality-based selection will identify papers that have impact, the PageRank measure is an important means of capturing impact, because it is a directional algorithm. As an additional step in measuring paper impact the destination journals of selected papers were reviewed (Table 4). Impact was evaluated using four public ranking sources: the Financial Times FT50 list, the

Chartered Association of Business Schools (ABS) list, the Australian Business Deans' Council (ABDC) list, and the Clarivate Analytics Journal Citation Report (JCR) (Gendron, 2015; Picard, Durocher, & Gendron, 2019; Vidgen, Mortenson, & Powell, 2019). There were

Table 4. Final selection of papers by publication, with journal quality measures

Journal Title	Total Papers	ABS Ranking (2018)	ABDC Ranking (2017)	JCR Impact Factor (2018)
Academy of Management Annals	1	4	A*	11.115
Academy of Management Journal ¹	13	4*	A*	7.417
Academy of Management Review ¹	3	4*	A*	9.408
Annual Review of Organizational Psychology and Organizational Behavior	1	unranked	A*	7.644
British Journal of Industrial Relations	1	4	A*	1.787
British Journal of Management	1	4	A	2.982
Human Relations ¹	2	4	A*	2.622
Human Resource Management ¹	18	4	A*	1.817
Human Resource Management Journal	3	4	A	2.147
Human Resource Management Review	7	3	A	2.368
Industrial & Labor Relations Review	2	3	A*	1.419
Intangible Capital	1	unranked	unranked	unranked
International Journal of Human Resource Management	6	3	A	1.650
Journal of Applied Psychology ¹	5	4*	A*	4.130
Journal of Management ¹	13	4*	A*	7.733
Journal of Management & Organization	1	2	B	0.539
Journal of Management Studies ¹	6	4	A*	3.962
Journal of Organizational Behavior	2	4	A*	3.607
Personnel Psychology	5	4	A*	4.362
Personnel Review	6	2	A	1.427
Research in Personnel and Human Resources Management	2	1	unranked	unranked
Total	99			

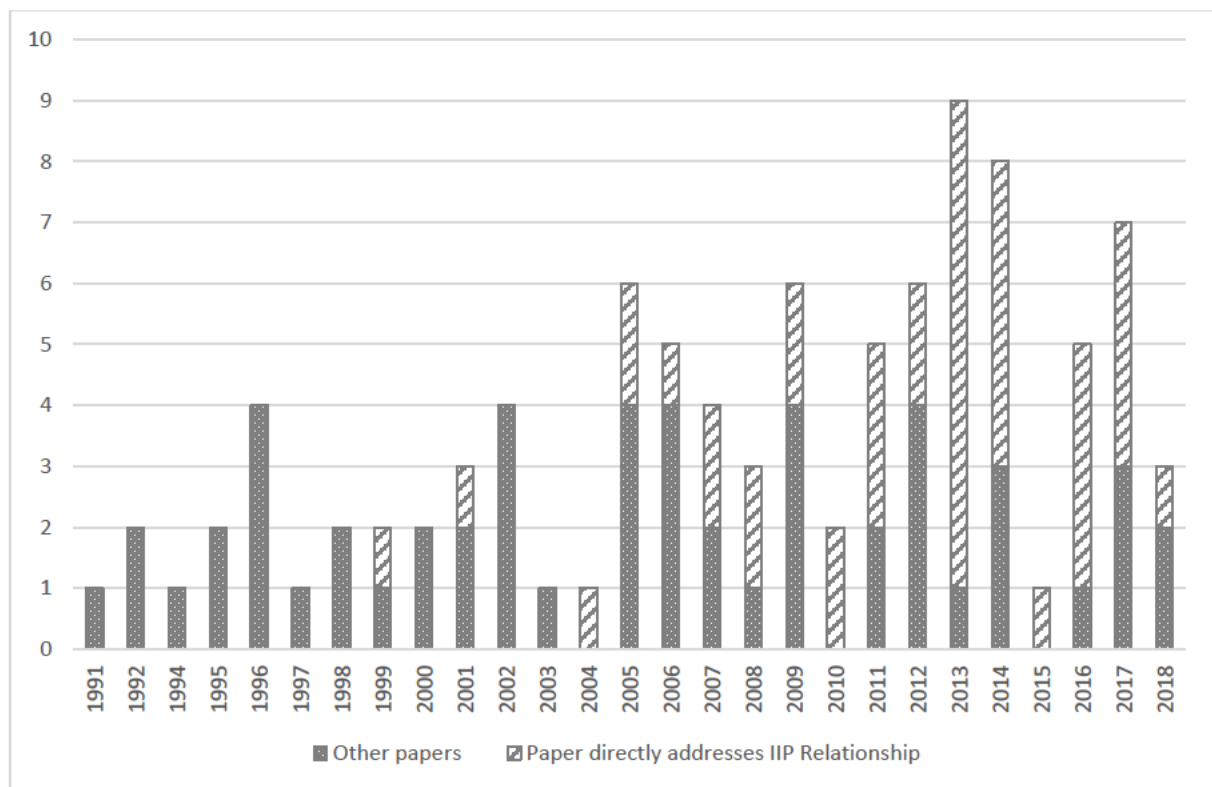
1. Journal appears in the Financial Times FT50

ABS: Chartered Association of Business Schools (2018), ABDC: Australian Business Deans Council (2017), JCR: Journal Citation Reports (Clarivate Analytics, 2018)

21 destination journals for the 99 papers selected. Of these journals, seven sources (42 papers) appear in the FT50, 13 sources (73 papers) were ranked 4* or 4 by the Chartered Association of Business Schools (2018), and 18 sources (95 papers) were ranked A* or A by the (Australian Business Deans Council, 2017). The weighted average journal impact factor was 4.220. Treating the selection as a pool of publications, the h-index (a compound measure of volume and impact of a set of papers) is 60 and the g-index (a measure of total citations relative to total papers) is 22.

Paper demographics

The year of publication for papers in the final selection ranged from 1991 to 2018 (Figure 4). The chronological analysis shows the majority, 70 papers, were published from 2005-2018. This period includes 39 of the 42 papers that directly address the HR causal process model, which suggests that the HR causal process model is a recently identified phenomena. The period from 2013-2018 has been particularly active for research around the HR causal process model, with 23 papers having been published in that period. The publication timeline suggests that within the most central papers on the HR causal process model, several early, foundational papers maintain centrality and influence on the field, while there has been a more recent acceleration of research activity that seeks to directly address the HR causal process model.



Note. Selection process was conducted in April 2018, therefore the papers included from 2018 only include 3 months of publication

Figure 4. Number of selected papers by year of publication

The location of research was identified in 65 empirical papers (

Table 5). Most research in the sample was conducted in the USA (16 papers) and the UK (10 papers). Research directly addressing the HR causal process model has largely been conducted in Europe (22 in total, eight in UK, four in Netherlands and three in Norway).

Table 5. Number of papers by location of research

Location of research	Paper directly addresses HR causal process model	Other papers	Total
Belgium	1		1
Canada	2		2
China	1	2	3
France		1	1
Germany	1	1	2
Ireland		1	1
Japan	1	2	3
Netherlands	4 (2)		4 (2)
New Zealand	1	1	2
Norway	3		3
Pakistan	1		1
Portugal	1		1
South Korea	3	2	5
Spain	1	1	2
UK	8	2	10
USA	(2)	13 (1)	13 (3)
Europe mixed	1	1	2
Multi-continent	3	1	4
Total	36	29	65
Theory, concept and review papers	9	25	34
Total papers	45	54	99

Note. Numbers in parentheses represent papers that do not explicitly state the research location, and is based on the authors' best estimate based on the content of the paper

Theoretical models

The theoretical models used in the HR causal process model literature have mapped closely to the evolution of the HRM field (Table 6). The first period from 1991 until around 2000 was focused on establishing a relationship between HRM and firm performance. The dominant theories were the resource-based view (Barney, 1991) and human capital theory (Lepak & Snell, 1999; Wright, Dunford, et al., 2001). These theories approached the HRM-firm performance question from an economic and strategic perspective, as they sought firstly to establish the existence and degree of relationship between HRM and firm performance. Other dominant theories at the time were the behavioural perspective (Jackson et al., 1989; Schuler & Jackson, 1987; Wright & McMahan, 1992), seeking to explain the relationship through a human-centred, behavioural lens, and the contingency framework (Delery & Doty, 1996), which has been the dominant mode of investigating how HR systems are developed.

Table 6. Number of papers using each of the dominant theoretical models identified

Theory	1991-1998	1999-2003	2004-2008	2009-2013	2014-2019
Resource-based view	7	9	5	5	6
Human capital	7	8	7	12	13
Behavioural perspective	5		2	4	3
Contingency framework	4	4	6	5	3
Agency theory	4	2	2	2	5
Institutional theory	3	2	2	1	6
Psychological contract	3	1	2	5	1
Signalling theory	1		4	9	5
Ability-motivation-opportunity framework	1		1	6	10
Climate			8	11	12
Social exchange			6	10	12
HR system strength			4	6	10
Total papers in period	13	12	19	28	24

Note: Only theories contributing to at least ten papers are included in this table

Having established a base of evidence for the HRM-performance relationship, the period 2000-2004 saw a hiatus in theory development as researchers expressed reservations

about some of the methods used in earlier research (Gerhart, Wright, McMahan, et al., 2000; Huselid & Becker, 2000; Wall & Wood, 2005; see also Wright & Ulrich, 2017 for further discussion), and a call for better theory and evidence to explain the processes occurring within the HRM black box began (Becker & Huselid, 2006; Boselie et al., 2005). This shift in emphasis to explain the HRM black box has seen research increasingly focussed on not just HR practice, but on the people those practices were targeting (Guest, 2011). As HR causal process model theory has evolved existing theories from sociology and organisational psychology, such as organisational climate and signalling theory, have become more influential, and new theories such as HR system strength (Bowen & Ostroff, 2004) have developed. The renewed focus on people and behaviour has been a critical step in the introduction of theory to the central HR causal process model question of how HR practices exert influence from their intention through to performance outcomes. For example, the ability-motivation-opportunity (AMO) framework has become increasingly prevalent, along with social exchange theory and the psychological contract. It is clear these theories are not discussed in isolation, but rather they each inform one another. For example, HR system strength draws heavily on climate and signalling theories, while AMO sits within the behavioural perspective.

The theoretical trajectory found in the HR causal process model literature has moved from explaining how HRM affects performance at a firm level, to explaining how the relationship operates through people within the firm, to explaining how people individually interpret and respond to the signals sent by HR policies and practices, particularly how they are sent by line managers.

Research design

The research methods used in each paper are shown at On review of the statistical analyses, nine included a multilevel statistical analysis (most commonly hierarchical linear

modelling), 11 used structural equation modelling, 11 used other regression techniques including mediated regressions, moderated regressions, probit, and negative binomial regression, and six used analysis of variance tests. Eight studies used tests within more than one of these groups. Following calls for the use of more sophisticated statistical tests in this field (Guest, 2011), this profile suggests that data analysis has been robust and appropriate for the underlying research questions.

While four studies used a longitudinal design, overall the research to date does not provide substantive longitudinal evidence sufficient to draw causal conclusions.

Table 7. There were 64 papers that drew from original data (35 that directly address the HR causal process model, and 29 from the broader literature), as compared to meta-analyses, literature reviews, and conceptual or theory papers. The dominant research method in these 64 papers is quantitative research. Notably, in the research that directly addresses the HR causal process model, 10 of 42 studies adopted qualitative or mixed methods research designs. This suggests that researchers are actively seeking to not only quantify the nature and extent of the relationship through quantitative research, but also to understand how the relationship works.

On review of the statistical analyses, nine included a multilevel statistical analysis (most commonly hierarchical linear modelling), 11 used structural equation modelling, 11 used other regression techniques including mediated regressions, moderated regressions, probit, and negative binomial regression, and six used analysis of variance tests. Eight studies used tests within more than one of these groups. Following calls for the use of more sophisticated statistical tests in this field (Guest, 2011), this profile suggests that data analysis has been robust and appropriate for the underlying research questions.

While four studies used a longitudinal design, overall the research to date does not provide substantive longitudinal evidence sufficient to draw causal conclusions.

Table 7. Number of papers by research method

Research method	Paper directly addresses causal process model	Other papers	Total
Qualitative	5	0	5
Multilevel interview (interviews that intentionally sample multiple levels within an organisation)	1	0	1
Multilevel interview/other	3	0	3
Single level interview/other	1	0	1
Quantitative	25	27	52
Non-survey	2	0	2
General or industry survey	1	2	3
Multilevel survey	14	5	19
Single level survey (multi respondent)	5	10	15
Single level survey (single respondent)	3	10	13
Non-survey/multilevel survey	1	0	1
Mixed methods	5	2	7
Single level interview/single level survey (single respondent)	0	1	1
Single level interview/single level survey (multi respondent)	1	1	2
Multilevel interview/single level survey (single respondent)	1	0	1
Document analysis/multilevel interview/multilevel survey	1	0	1
Multilevel interview/multilevel survey	1	0	1
Diverse mixed methods	1	0	1
Meta-analysis/literature review	4	15	19
Conceptual/theory	5	10	13

The HR causal process model: review and research agenda

The purpose of this study was to review the literature surrounding the HR causal process model, and to set an agenda for future research. As the review took shape, a number of themes emerged in the analysis. Firstly, it appears that the theoretical basis of the HR

causal process model is sound however that it requires further development. Secondly, the process approach to HRM is shown to be an important emergent line of inquiry which warrants growing attention. Central to understanding the HR causal process model is the degree of variability across the chain of relationships, and this is explored in detail in the extant literature., It became evident through this review that further research is required regarding central actors in the model, line managers and employees. While multilevel research has been become one of the most significant theoretical and research design approaches, an expanded research agenda across multiple mediated and moderated relationships is needed to deepen understanding. Finally, a number of alternative explanations to the underlying question of the relationship between HRM and performance have been posited, that should not be disregarded in future research.

Theoretical development

The extent of the challenge for theoreticians and scholars working on research located within this literature field is clear. The HR causal process model as a construct represents a complex social system and seeks to explain a relational model that moves across levels from organisation-wide influences including business and HRM strategy, through to individual interpretations and reactions and finally to organisation-level performance (Takeuchi et al., 2009). Research has drawn from an increasingly broad theoretical base as it seeks to explain the relationship. The challenge posed by Guest (1997) remains: to develop a theory of HRM, a theory of performance, and a theory that links the two. While there has been theoretical development in the intervening time, the recognition and understanding of the multilevel complexity of the HR process model has made the challenge much greater. Boselie et al. (2005) observed that authors are tending to take insights from existing theory and blend them as a broader theory of HRM. In discussing the lack of multilevel theories of HRM, Wright and Ulrich (2017) suggest that much theoretical effort around the multilevel nature of HRM

would better be described as process models than theory building. Without removing the call for fresh theorising, both the development of process models and the blending of existing theory will contribute to the advancement of theoretical understanding of the HR causal process model.

Beyond the need for theory addressing the multilevel nature of HRM, three gaps exist in the present theoretical discussion concerning the HR causal process model. Firstly, there has been theoretical development around employee interpretation of HRM. However, the equivalent theorising in relation to line managers and their interpretation of HRM prior to implementing HR practices is largely absent. Line managers have been viewed within theoretical models principally as delivery agents. This view has resulted in theory around the way implementation of practices occurs, and the relationship between the manager and the employee. However, there is little that addresses the interpretation, reaction and behavioural outcome of line managers, and how this influences implementation of HR practices, nor of line managers as recipients of HR practices themselves. Secondly, while theoretical development around the interpretative mechanisms for employees has received substantial attention, there remains little research that explains the reaction-outcome-firm performance relationship. While a combination of AMO and human capital theory are likely to be a useful starting point, research to date provides empirical evidence for the relationship between employee perceptions and various outcomes but lacks a theoretical basis for the relationship. Finally, given the substantial development of theory at multiple points across the HR causal process model, the lack of a “theory of theories,” that draws together theories as seemingly distant as the resource-based view and signalling theory is increasingly apparent. As the ability to develop research design that seeks to address the entirety of the HR causal process model increases, the need for theoretical linkages will become increasingly apparent.

The process approach to HRM

The process approach to HRM has been identified as an important avenue of enquiry, and central to understanding the HR causal process model. In the selected literature, HR system strength informs 17 papers, while attribution theory informs less than 10 papers, suggesting the influence of the process approach is still growing. To further emphasise the point, based on a Web of Science search at the time of writing, the papers that have informed the principal research pathways of the process approach, Bowen and Ostroff (2004) for HR system strength and Nishii et al. (2008) for HR attributions, have been cited a combined 1,628 times. A search for the terms “strength,” “strong,” “attribution,” and “process approach” indicate 254 citing papers address these pathways directly. However, recent reviews of the research by Ostroff and Bowen (2016) and by Hewett et al. (2018) suggest research focused on the process approach is still developing.

While Ostroff and Bowen (2016) and by Hewett et al. (2018) provide substantive comment on areas for future research, three areas of importance for the HR causal process model are suggested. Firstly, Piening et al. (2014) and Arthur et al. (2016) found evidence that disagreement or ambiguity at the organisational level, where HR practices are determined, results in inconsistent messages and variable implementation. Further research that seeks to explain the reasons for disagreement and ambiguity, together with quantification of the effect of this within-group variance on implementation and perception of HR practices and ultimately employee attitudes and beliefs is warranted. Secondly, the promising initial development of understanding of the nature of HR attributions (for example, Fontinha et al., 2012; Hewett et al., 2019; Sanders & Yang, 2016) needs to continue. At the employee level, the way that various attributions employees give to the reasons for HRM translate into behavioural outcomes requires greater explanation, while at the manager level, there is little research on the HR attributions of managers and the way that this influences their

implementation of HRM. Thirdly, as noted by Ostroff and Bowen (2016) in particular, the way HR system strength is conceptualised and measured requires further development. While there may be appropriate research designs that measure and conceptualise HR system strength at the level of the individual, it would more typically and appropriately be considered a higher-order construct. Indeed, the question of whether it is a business unit or organisational level construct requires further discussion and understanding, together with appropriate measures of the construct at the appropriate level.

Variability across the process

Central to the HR causal process model literature is the notion of variability. As contemplated by Wright and Boswell (2002) and Wright and Nishii (2007), variability across levels within organisations is pervasive. Cross-level variance has been found between management and union officials (Arthur & Boyles, 2007), between HR professionals and line managers (Bondarouk et al., 2009; Khilji & Wang, 2006), between top management and HR professionals (Piening et al., 2014), between top management and employees (Arthur et al., 2016), and between line management and employees (Den Hartog et al., 2013; Liao et al., 2009; Vermeeren, 2014). Understanding variability in the context of the process of HRM will allow a deepening of understanding of the effects of HRM on outcomes. While the existence of variability is not surprising, more important for this study are findings that explain the reasons for variability, the effect of variability on organisational outcomes, and the mechanisms that might reduce variability.

Reasons for the degree of variability. Reflecting the complexity of interactions across the HR causal process model, the extant literature presents many reasons for variability. Line managers and their role in implementation of HR practices are a recurring theme. Quality of HR implementation by line managers was identified by Marescaux et al. (2013). The quality of implementation may be affected by the relationship between HR

specialists and line managers, demonstrated by McDermott et al. (2015) who found that distance resulted in a divergence in priorities between these two key actors, and to reduce the understanding of line managers in relation to HR practices. The challenge of line managers as implementers was highlighted by McConville and Holden (1999), who emphasised that while line managers have responsibility and accountability for HR implementation, they are unable to set HR policies or control spending in relation to HR initiatives. Further, top management beliefs have also been found to be an important precursor to variability, both beliefs in the cause-and-effect nature of HRM and the value they place in high performance work systems (Arthur et al., 2016). A lack of internalisation of HR initiatives by top management is found to have a cascading effect on perception of HR practices by employees (Sumelius et al., 2014). The degree of aligned understanding between top management, HR specialists and line managers is important, because congruency between intended HRM and implemented HRM has been found to be a precondition of congruency between implemented HRM and employee-perceived HRM (Piening et al., 2014). Evidence supports the importance of sensemaking by employees, which through a strong HR system facilitates a strong climate. This in turn encourages positive attribution by employees as to the reason for HR practices, resulting in positive perceptions (Fontinha et al., 2012; Nishii et al., 2008; Sanders & Yang, 2016).

Effect of variability. The findings of the literature reviewed provide important insights regarding the effect of variability of HR practices across and within the HR causal process model. The effect of variability has been identified at a number of departure points, including variability across levels and variability within levels. Schmidt et al. (2018) found that while intentional differentiating of HR practices between employee groups resulted in better firm performance, the differentiation had a negative effect on those who received lower levels of high performance work practices, observed in higher intentions to quit and lower

organisational citizenship behaviours. This evidence suggests that unintentional differentiation at either the work group or at the individual manager level may have similar outcomes. To add to the complexity of this finding, Snape and Redman (2010) observed that while employee-perceived HRM influenced perceived organisational support, there was no evidence for perceived organisational support influencing organisational citizenship behaviour, pointing to the intervening relationships between HRM and employee behaviours being complex. Testing the ability-motivation-opportunity framework against line managers, Bos-Nehles et al. (2013) found that line manager ability had a direct, significant positive relationship with HR implementation effectiveness. Kuvaas et al. (2014) found that line manager perceptions of enabling HR practices were an important predictor of perceived supervisor support, which in turn showed a significant relationship with motivation, commitment, and turnover intention. The variability observed between manager-rated HRM and employee-rated HRM is found to be an important influence on both job satisfaction and perceived unit performance (Den Hartog et al., 2013). Variability in employee-perceived HRM and employee-perceived line manager behaviour has been found to positively associate with employee engagement (Alfes, Truss, et al., 2013). Indeed, engagement has been found to be both an outcome in itself, and a mediating influence between empowering HR practices as experienced by employees, and both commitment and turnover intention (Marescaux et al., 2013).

Reducing the incidence of variability. An important aspect of managing variability in the HR system is to understand the nature of the variability. Bondarouk et al. (2009) contrasted incongruency where it occurs as a result of information deficiencies and as a result of internal political reasons. This evidence points to the importance of understanding the reasons for variability. Interventions to reduce the incidence of variability start at the organisational level, where the HR system is developed, and intentions are set. At the outset,

Piening et al. (2014) observed there needs to be clear agreement on the intention of HR practices between top management and HR leaders. In the Ulrich (1997a) framework, the role of HR specialists are most importantly that of value adding and change maker, emphasising the need for HR specialists themselves to be cognisant of the role that they play in HR implementation. While it seems obvious, the need to make sufficient resources, particularly financial resources, available for the implementation of HR systems allows managers to implement in the manner intended by the organisation (McConville & Holden, 1999; Piening et al., 2014). With a sound platform at the organisational level, HR variability can then be managed through line managers, for whom Purcell and Hutchinson have observed have a “symbiotic relationship” with HR practices (2007, p. 16). The importance of training line managers, with training focused specifically on their HR abilities, improves both their perception of HR practices, and their effectiveness in implementing those practices (Bos-Nehles et al., 2013; Kuvaas et al., 2014; McDermott et al., 2015). This developmental approach to line managers extends to developing their leadership style, with transformational leadership being an important means of improving HR implementation (Vermeeren, 2014). Manager communication, which is a contributing factor to climate and to developing shared understanding, has been observed to directly reduce manager and employee rated HRM variance (Den Hartog et al., 2013). At the employee level, involving employees in the process of developing HR systems has been found to reduce subsequent variability, possibly due to the sense of ownership that this involvement creates (Groen et al., 2017; Khilji & Wang, 2006). Stepping back from the individual levels of HR practice and the actors involved in the process, the management of climate, while a highly complex proposition, is an important means to reduce variability, both through the presence and development of a high trust climate (Farndale & Kelliher, 2013), and a strong climate in the manner described by Bowen and Ostroff (2004; also Ostroff & Bowen, 2016).

Line managers as central actors

Line managers and their role as actors in the HR system have been the subject of extensive research (Brewster et al., 2013; Kilroy & Dundon, 2015; Purcell & Hutchinson, 2007). Research on line managers has particularly focused initially on the devolution of HR responsibility from the HR function to the line, such as work by McConville and Holden (1999), and subsequently on the way line managers implement HRM, including Guest and Bos-Nehles (2013) and Sikora and Ferris (2014). Interest in line managers has continued to evolve, with interest in line manager perceptions of HR practices, leadership styles and behaviours, and line manager HR attributions (Gill et al., 2018; Kuvaas et al., 2014; Nishii & Paluch, 2018; Yang & Arthur, 2019). While the line manager literature is expansive, the role of line managers in the HR causal process model requires further research. The relationship between line managers and HR practices is complex and not well understood, including line manager perceptions of intended HR practices, line manager HR attributions (notwithstanding Yang and Arthur's recent research) and the interaction between line managers as employees themselves and their perception of HR practices, and their subsequent implementation of HR practices. While the leadership style of managers has received some attention, less research has been conducted on the personal beliefs of line managers in relation to leadership, a line of inquiry that may inform antecedent factors for HR implementation. Further, while research has grown around the implementation of HR practices by line managers, little has been done to understand why line managers either choose not to use the HR practices put in place by HR practitioners or fail in their attempt to use those practices. The question of what encourages or impedes line manager choices in implementation is an important one. As understanding of line managers in the HR causal process model continues to expand, the complex pathways through the model will become clearer.

Employees as the focal point of the process

Employees have been a focal point of HRM research generally, and of research around the HR causal process model. Much of this research has taken interest in employee perceptions of HR practices, or in employee outcomes following varying levels and combinations of HR practices. Limited investigation has sought to understand the interaction between HR systems and both the employee-organisation relationship and the employee's psychological contract. While understanding of employee perceptions of HR practices continues to grow, a number of aspects of the employees' role in the HR causal process model require attention. The antecedents of employee perceptions are not well explained within the HRM literature. Many studies have controlled for potential influences such as sex, education, and job tenure. However, HRM research that seeks to explain which antecedents affect what perceptions as the primary research aim is scarce. A more substantive integration of the industrial/organisational psychology literature would help to fill this gap (e.g. Buchanan, 2008; Parker, Dipboye, & Jackson, 1995; Saks, 2006). Further, there is insufficient understanding of the mental thought processes of employees, their cognitive processes and the way that they process information in the formation of their perceptions. Finally, the psychological and sociological influences that take place between employee's perception of HR practices and their response to those practices requires further explanation. It is unlikely that perceptions translate directly into behaviours, but there is little that explains the pathway between perception and response. Beyond the influences that contribute to the formation of perceptions it is likely that relational and contextual factors such as the employee-organisation relationship will be an important mediating influence. Employees and their perception of and reaction to HR practices are at the hinge of the HR causal process model, the point at which the relational chain ends its focus on the HR practice and starts its focus on outcomes. Deepening understanding of what happens at this point will be an

important contribution toward understanding the broader HR causal process model

Multilevel research through intended, implemented and perceived HRM

There is widespread recognition that questions surrounding the HRM-performance link are inherently multilevel in their nature (Ostroff & Bowen, 2000; Peccei & Van De Voorde, 2019). Multilevel research in the HR causal process model will address the cross-level nature of HRM through intended, implemented and perceived levels. Alfes, Truss, et al. (2013) highlighted the need to consider the relational dynamics across levels. The relationship between HR professionals and line managers, between line managers and employees, and between HR professionals and employees may all influence the degree of variability across levels. Consideration of how these relationships are measured is important. Traditional measures such as leader-member exchange and perceived support are a good starting point, however broadening this in recognition of the complexity of relational dynamics is expected to provide new insight. Related to this is whether these levels-based relationships, particularly the line manager-employee relationship, can counterbalance HRM effectiveness, specifically whether a good relationship can counteract poor HR practices. As these cross-level relational dynamics are further explored, the need to consider mediation pathways and moderating influences will become increasingly pronounced (Jiang et al., 2013; Kuvaas, 2008). Human relationships are not simple, and it is unlikely that measuring direct effects will be adequate in explaining cross level relationships. Finally, to incorporate multilevel designs, researchers will need clarity on the level being tested, the nature of what is being tested, and the theoretical implications of those choices (Nishii et al., 2008).

Alternate explanations

Without detracting from the theoretical basis and empirical evidence for the causal influence of the HR system on organisational outcomes, a number of alternate explanations have been suggested for the relationship. The question of which direction the causal

relationship occurs has been addressed but has not been answered, while consideration of good management as either an independent influence on organisational outcomes or a confounding influence on the relationship must also be considered.

Reverse causality. The risk of reverse causality between HRM and performance is well recognised (Becker & Gerhart, 1996; Boselie et al., 2005; Wright et al., 2005; Wright & Ulrich, 2017). From a theoretical perspective, the HR causal process model goes some way to reducing the risk of reverse causality: for example, there is no reasonable explanation for employee-perceived HRM to influence manager-implemented HRM. However, risks of reverse causality remain. The argument for reverse causality is that firms that are financially successful divert financial resources toward their employees, including the development of sophisticated HR systems. Therefore, the performance outcome causes the effective HR system. The HR causal process model does not adequately address this potential relationship. A theoretical relationship might be that performance leads to an effective intended HR system, which leads to the implemented HR system and ultimately employee perceptions of that HR system. Such a process could create a cyclical relationship, a “virtuous circle” where the resultant positive employee perceptions lead to the outcomes suggested in the HR causal process model.

Good management. Guest (2011) posed a somewhat contrarian question when he asked, “what if any positive impact of HRM on performance is simply picking up good management?” The question is challenging because at its extreme the answer may be that HRM does not impact on performance. While the evidence presented in the HRM-performance literature means such a conclusion is unlikely, there is currently a lack of attention given to the influence of external factors, “good management,” in the contribution of HRM to performance outcomes. The interaction between HR systems and management is touched on by Purcell and Hutchinson (2007) who discuss the way poor HR systems can be

rescued by good management in the same way that good HR systems can be negated by poor management. The first challenge in refining this line of inquiry is to define what is meant by good management. At the organisational level, good management comprises firm strategy, together with the management of major functions of the firm such as production, finance and marketing. At the line manager level, Townsend and Russell (2013) identified manager functions including routine people management, business management, working with IT, managing a budget, customer contact, working alongside staff, staff development, and internal communications. While some of these functions sit well within the HR realm, many do not. To understand the boundaries of HRM's influence on performance outcomes, particularly financial and operational outcomes, the incorporation of non-HR variables within research is needed, both as control variables, and ideally as independent variables that sit alongside the HR system.

Conclusion

Over the course of this review a rigorous process to identify the literature most central to the HR causal process model was conducted, the identified literature was reviewed to synthesise the current state of research in relation to the HR causal process model, and to a research agenda was presented for advancing understanding of the HR causal process model. The HR causal process model provides a framework through which the key arms of the process approach, HR system strength and HR attributions, can be tested, and identifies the key actors that are involved in the HR process. A range of research gaps across the HR causal process model have been identified in this review, which will aid future research to broaden and deepen understanding of the relationship between HRM and organisational outcomes.

This study has limitations. While the literature selection process was designed to be objective and rigorous, there is a risk that additional papers central to the research question have not been identified. While centrality has been measured through a rigorous process, the

study has used the number of citations of a paper as a proxy for its influence during the selection process. For influence to be properly evaluated, the way in which a citation is used within a paper needs to be considered throughout the selection process. For example, the research presented in Fontinha et al. (2012) relied heavily on HR attribution research and the work of Nishii et al. (2008) while discussing the HRM-performance link presented in Huselid (1995) only briefly, however in the selection process these would be treated as two equal relationships. Additionally, research presented in book chapters and other review chapters are not as effectively identified through this process, which may result in such research not being captured by the review process. This limitation could be overcome with more advanced automated processes, though the benefit may not justify the resource for such a selection process. Further, the selection process has only included peer-reviewed journal papers, and so studies that are central to the research questions presented in books, book chapters, or other forms of publication are not included.

The HR causal process model is a complex but promising avenue of inquiry in HR and organisational research. The HRM black box is indeed a challenge which warrants ongoing research. Further understanding of the HR causal process model will go some way to bringing light in to the workings of the HRM black box.

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Conclusion to Study One

Study 1 demonstrated that while there is a strong research backdrop to the HR causal process model, understanding how and why HR effects are transmitted through an organisation and the way this informs understanding of the HRM-performance link contains gaps and requires further research. This study has provided a research agenda to substantively advance understanding of the HR causal process model to better explain the nature of the HRM-performance link. The remainder of this thesis draws on a number of the future research suggestions contained in this study. Studies 2 and 3 address the need for research that spans a broad section of the intended-implemented-perceived HRM model. Studies 2, 3 and 4 seek a deeper understanding of the underlying mechanisms in the relationship, drawing particularly on the process approach to HRM and the employee-organisation relationship.

Chapter 3

Understanding divergence across the HR causal process model

Introduction to Study Two

The second study of this thesis presents the first field phase of the research project. The aim of this qualitative study was to identify the way variability occurred across the implementation and perception of HR practices, in order to provide greater understanding of the way that HR practices transmit from intended, through implemented and then to employee-perceived practices. Variability can occur as intended practices are implemented, as implemented practices are perceived, and as intended practices are perceived. Through understanding the way variability occurs, the study aims to identify what contributes to that variability, and by extension what exacerbates differences that detract from the full intended effect of HR practices as they are implemented. By exploring the question of variability within a single firm, across multiple business units and locations, I was able to draw insight on the underlying drivers of variability, together with understanding the level of variability that comes between business units and locations. The study provided valuable insight into the way variability presents across intended, implemented and perceived HR practices, including divergence across business units within a firm. Four managerial drivers that contribute to variability in the implementation and perception of HR practices were identified. As the initial stage of this mixed methods research project, Study 2 provides both valuable understanding of the HR causal process model and an important empirical basis from which to commence the quantitative studies in Chapters 4 and 5.

This study was accepted by and presented at the European Academy of Management Annual Meeting on 21st June 2018 in Reykjavik, Iceland. Feedback received from reviewers and at the conference presentation has been incorporated into the current version of this paper.

This paper has been prepared according to the publication guidelines of the *Asia Pacific Journal of Management*.

**Lost in translation? Investigating the relationship between intended,
implemented and perceived human resources practices and its effect on
perceptions of organisational performance**

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This paper was accepted by and presented at the European Academy of Management Annual Meeting on 21st June 2018 in Reykjavik, Iceland. Feedback from peer review and from colleagues during proceedings has been incorporated in the study.

Author contribution:

Mr Matthew Sykes was responsible for the design of this study, collection of data, analysis and write-up of this paper. Dr Andrew Heys conducted additional analysis of data. Dr Andrew Heys and Associate Professor Denise Jepsen provided research supervision through all stages of the research.

Abstract

Previous research has shown a consistent positive relationship between human resource management (HRM) and organisational performance. More recent research has investigated the degree of consistency between intended, implemented and perceived HR practices. This paper investigates this framework and adds the dimensions of business unit and location variance. Adopting a case study design, the findings show how HR practices are implemented differently at the business unit level and identifies four themes that help to explain inconsistent implementation of HR practices by line managers. These findings make it clear that a deep understanding of the fabric of organisations, across employment levels, business units, and locations, is necessary to properly explain the relationship between HRM and firm performance and that simple descriptions of organisations that exclude business unit variation and purport to explain for organisational consistency of HR implementation are no longer sufficient, particularly in the professional services firm environment.

Keywords: HRM-performance link, multilevel, organisational performance, professional service firms

Introduction

The search for a definitive positive, unidirectional or causal relationship between human resource management (HRM) to organisational performance has been described as the “Holy Grail” of strategic HRM (Boselie et al., 2005). Emerging from an extensive body of empirical research providing evidence for a positive relationship, promising theorising and evidence suggests that the strength of the HR system is an important factor in the HRM-performance link (Bowen & Ostroff, 2004; Gilbert et al., 2015). Theoretical and empirical research has further suggested that the degree of consistency and alignment of HR practices across those practices intended by the organisation’s leadership, implemented by line managers, and perceived by employees aids understanding of the HR system’s strength and resultant performance effects (Nishii & Wright, 2008; Vermeeren, 2014). Alongside this research, recognition of the need for understanding of HR practices and their effect on performance within establishments rather than across an entire organisation has been suggested (Ahmad & Allen, 2015; Osterman, 1994). While investigation of the relationships across levels within an organisation crossed with establishments within an organisation show promise, they are not yet well-advanced, and there has been little if any integration of multilevel research across intended, implemented and perceived HR practices, and research at the establishment level. A notable exception is Kehoe and Wright (2013), who used a multilevel design studying 10 job categories across 56 business units.

The question of how organisational performance is affected by HR interventions is an important one. Paauwe (2009) recognises three categories of performance outcomes for HRM: financial outcomes, organisational outcomes, and HR-related or employee outcomes. The distal relationship between HR practices as intended by the firm and the outcomes desired or experienced by the firm creates a challenge for researchers and practitioners, because intervening mechanisms require understanding before HR interventions can be

reliably made to influence outcomes (Guest, 1997; Guest et al., 2003; Paauwe, 2009). The transmission of HR practices through their intention by firm leaders, implementation by line managers, and perception by employees is one aspect of these intervening mechanisms. At the level of employee perception, those practices then have the opportunity to affect employee responses, leading to employee outcomes and organisational outcomes, and ultimately financial outcomes (Korff et al., 2017; Paauwe, 2009; Purcell & Hutchinson, 2007).

This paper makes a number of important contributions to the literature on HR strength as a critical variable in the link between HR systems and organisational performance. Using a multilevel single case study research protocol, interview data was collected from 33 participants across two locations of a professional service firm in Australia. The study identifies that significant divergence in implemented HR practices occurs across business units, and this divergence can arise from differing beliefs that are held by key actors of those business units. Further the paper identifies four key themes or drivers of inconsistency in the implementation of HR practices, misalignment, manager prioritisation, managerial style, and HR competency. These findings contribute to understanding what factors influence the effectiveness of HR practice implementation (Guest & Conway, 2011; Vermeeren, 2014) and also affirm the importance of uncovering differences in HR practices at the level of the establishment (Ahmad & Allen, 2015). These findings together advance understanding of the way that HR practices transmit through the firm by revealing four drivers of inconsistency in implementation of HR practices, and therefore contribute to the ongoing research focused on explaining the link between HRM and performance.

Literature Review

Understanding of the HRM-performance link

Since the 1980s research interest in the relationship between HRM and organisational

performance has been growing, almost without exception at an increasing rate (Jiang, Lepak, Hu, et al., 2012; Tzabbar, Tzafrir, & Baruch, 2017). Much of this research has focused on exploring the relationship between high performance work systems (HPWS) and organisational performance, using correlation statistics. This line of inquiry has its genesis in Huselid's (1995) influential study into the relationship between what was termed high performance work practices (HPWP). Huselid's study pointed to evidence that organisations that had adopted a more intensive and consistent application of ten specific HPWPs consistent with the HPWS had a significant impact on turnover, productivity, and long-term financial performance. Following this seminal study, a body of empirical evidence emerged in rapid succession (Delaney & Huselid, 1996; Youndt et al., 1996). In line with Huselid's work, research quickly found support for the need for HR practices to be adopted holistically in what were originally termed HR bundles. Gradually consensus emerged that HR operates most effectively when deployed as a system rather than piecemeal as individual HR practices (Delery & Doty, 1996; Macduffie, 1995; Youndt & Snell, 2004). Research extended to investigate intermediating relationships, particularly HR-related performance outcomes that may support broader performance conclusions such as turnover and job satisfaction (Chang, 1999; Guthrie, 2001; Kinnie, Hutchinson, Purcell, Rayton, & Swart, 2005). More recently, meta-analyses (Combs et al., 2006; Crook et al., 2011; Subramony, 2009) have aggregated the somewhat disparate sets of HR practices and performance outcomes that have been studied. This body of research has pointed to a consistent overarching conclusion, that more and better HR systems or practices have a measurable, positive relationship with more and better organisational performance (Combs et al., 2006; Guest, 2011). However, despite a growing focus on the *how* and *why* of the relationship, there is still some way to go in order to conclusively explain the nature, reason, and perhaps most importantly the direction of the relationship between HR and performance (Nishii et al., 2008).

Dissent and Critique of the HRM-performance link. Despite the broad consensus among researchers in strategic HRM that more and better HR systems have a positive effect on organisational performance, there are sustained dissenting findings and critique of this research field. Two areas of criticism are germane to the study reported in this paper. Firstly, extensive criticism has been directed at the general tendency of researchers to draw conclusions based on large-scale cross sectional and single-respondent samples (Arthur & Boyles, 2007; Gerhart, Wright, McMahan, et al., 2000; Purcell, 1999; Wall & Wood, 2005). The concern with single-respondent responses is the potential rater bias that is created, particularly where the rater is both the source of information on HR practices and the source of self-reported performance in relation to those practices (Hoffman, Lance, Bynum, & Gentry, 2010), resulting in a lack of triangulation of findings. Large-scale single-respondent studies are said to carry risk around self-selection bias because responses are more likely from that part of the sample that is more active in using HPWS, that is achieving strong performance, or both, resulting in a disproportionately high measure of HPWS usage and performance outcomes (Ferguson & Reio Jr, 2010; Olsen, 2008). While there has been growth in multilevel studies addressing the HRM-performance link in recent years, this line of enquiry is yet to provide adequate understanding of the causal nature of the relationship, if indeed causality exists (Sykes, Heys, & Jepsen, 2019a).

Secondly, there is sustained observation (Purcell & Hutchinson, 2007; Wright et al., 2005; Wright & Nishii, 2013) that while consistent evidence is presented for a positive relationship between HR practices and organisational performance, that little is known of how the two relate, nor is there any clear evidence supporting a causal relationship. For example, Guest et al. (2003) adopted a research design intended to provide partial evidence for a causal relationship by using longitudinal performance data (and cross-sectional independent variables), but found none, despite the same study providing further evidence for

the existence of a relationship. While theorising on the causal relationship has developed (Bowen & Ostroff, 2004; Purcell & Hutchinson, 2007), a central challenge that remains is a methodological one. That is, developing research designs that satisfy the criteria for establishing causality (a succinct outline of these criteria is found in Wright and Haggerty (2005), detailing Cook and Campbell's (1979) much more substantive work). Despite the majority of the literature to date being theoretical, there is nascent empirical research investigating the causal relationship between HRM and organisational performance. Katou (2012) found a causal relationship but suggested the relationship was reverse causal, while Eden, Stone-Romero, and Rothstein (2015) combined experimental research to establish a three-stage mediated causal relationship between manager expectations and subordinate performance. Further to Katou's findings, Shin and Konrad (2017) have provided evidence for a multi-directional causal relationship, moving what has been a largely theoretical or methodological concern into one in which the dominant theorising of the causal relationship is not supported by empirical evidence.

In light of these criticisms of research around the HRM-performance link, there is need for further understanding on the way in which HR practices transmit through the organisation from intended, to implemented, and ultimately employee-perceived levels. A deeper understanding of this transmission process, and the reasons for inconsistency in transmission through these levels, will aid in identifying potential mediating and moderating mechanisms, which will in turn provide further opportunity to determine whether there are causal linkages in the process.

Intended, implemented and perceived HRM. As a means of addressing some of the above research concerns, Nishii & Wright (2008; also Wright & Nishii, 2013) proposed a model that differentiates between intended, implemented and perceived levels of HR practices. According to the model, senior management and HR executives will design an

intended system of HR practices, those HR practices will then be interpreted and implemented by line management, and finally employees will perceive the intent of those HR practices in a certain way and then react to those practices accordingly. The idiosyncratic nature of line manager implementation is a potentially significant mediating influence on the HR practices that employees experience (Kehoe & Han, 2019). Individual employee perceptions are important because those individual perceptions aggregate to become shared perceptions, which have been demonstrated to relate to performance outcomes (Sanders, Dorenbosch, & de Reuver, 2008; Schneider, Salvaggio, & Subirats, 2002). Central to Nishii & Wright's proposition is that variability across these three levels must be understood and measured if a proper understanding of the influence of HR practices on performance is to be gained. Where variability is minimised, employees will develop shared meaning and understanding (Bowen & Ostroff, 2004), which then allows coordinated activity and will lead to superior performance. Herein the relationship between intended, implemented and perceived HR practices is referred to as the HR causal process model.

The HR causal process model has been empirically tested in recent years, with a growing understanding of the relationship. There has been clear evidence of the divergence between intended and implemented HR practices (Conway & Monks, 2010; Khilji & Wang, 2006; Vermeeren, 2014) and in distinct roles for HR managers and line managers (Gilbert, De Winne, & Sels, 2011). The significance of employee perceptions has received increasing attention. For example employee perceptions of supervisor support were positively related to financial and operational performance outcomes (Dysvik & Kuvaas, 2012), and employee perceptions of the usefulness and effectiveness of the HR system was found to effect patient satisfaction (Baluch, Salge, & Piening, 2013). Line manager perceptions of management development programs were found to be an important predictor of perceived organisational performance (Mabey & Gooderham, 2005). Adding to the complexity of employee

perceptions, Farndale and Kelliher (2013) provided evidence that employee trust in senior management both creates higher commitment and mediates the perception of fair treatment by line managers. And importantly, Arthur et al. (2016) found evidence that line manager belief in and value of HPWS programs influenced the degree and quality of implementation of those programs.

In line with this central theme of the importance of aligning intended, implemented and perceived HR practices, these studies have observed that the level of consistency and alignment across the organisation plays an important role in performance outcomes. Piening et al. (2014) found evidence that employee expectations of HRM mediate the positive implementation-perception relationship. Nishii et al. (2008) presented evidence supporting the positive relationship of employee attributions regarding the purpose of HR practices and organisational citizenship behaviours, in particular helping and altruistic behaviours (directly) and customer satisfaction (indirectly). Baluch (2017) found variation in the interpretation and application of HR practices between line managers and employees, suggesting either inconsistency or misalignment.

The importance of consistency and alignment. As introduced above, the constructs of consistency and alignment are key to investigating the HR causal process model.

Consistency is a key element of Bowen & Ostroff's (2004) strong HR system. They describe consistency as "generally (referring) to establishing an effect over time and modalities whereby the effect occurs each time the entity is present, regardless of the form of the interactions" (p210). In the context of a levels-based perspective, consistency is defined as the degree of commonality in interpreting HR practices by senior leaders, line managers, and employees. Central to the concept of consistency is commonality of understanding.

Alignment has been described by Marchington et al. (2011), as the links between strategy and HRM, and the development of those links. Alignment is conceptually similar to, but different

from the concept of consensus in the strong HR system (Bowen & Ostroff, 2004). Where consensus espouses agreement between the views of individuals on the event-effect relationship of HR, alignment as described by Marchington and his colleagues emphasise the notion of external fit, in which HRM and organisational objectives are aligned. With reference to this but in the context of a levels-based perspective, alignment is defined as the linkage and sameness of the intent of the person applying the practice regarding the overarching organisational objectives of the HR system. Where consistency points to understanding, alignment points to belief, whether the senior manager, line manager, and employee share a common belief in the purpose of the HR practice and of the HR system as a whole in achieving organisational objectives.

HR system strength. The strength of the HR system (Bowen & Ostroff, 2004) has been suggested as enhancing organisational performance. A strong HR system, one that has distinctiveness, consistency and consensus, will signal to employees how to behave and respond collectively, and as a result of uniformity in responses, allow HR practices to be effective in influencing organisational performance (Ostroff & Bowen, 2016). The concept of strong HR systems has been drawn on heavily in the research investigating intended-implemented-perceived HR practices described above. Disconnection at the intended-implemented level or at the implemented-perceived level points to weakness in the HR system.

Establishment-level divergence. An important though under-researched line of inquiry has focused on divergence in HR practices at the establishment level. The establishment is defined as “a business address and is distinct from a company” (Osterman, 1994, p. 174). Some research has used establishments, as opposed to organisations, as the unit of analysis, notably Osterman (1994), Cappelli and Neumark (2001) and Takeuchi et al. (2007). However, research that investigates HR practices at multiple establishments within

the same organisation is scarce. This scarcity is a significant oversight, because understanding establishment level differences, as opposed to showing a relationship between HPWS and performance at the establishment level instead of the organisational level, would add much needed within- and between-organisation insight (Liu, Gong, Zhou, & Huang, 2017; Nishii et al., 2008). Related to the geographic establishment, exploration of HR practices within business units has also been conducted (Gardner et al., 2001), but without a substantial body of work to date. A notable exception has been Kehoe and Wright (2013), who found evidence for job group level differences in employee perceptions of HR practices, importantly combining both multiple levels of analysis and the organisational characteristics of job category and business unit. Understanding HR practices at the level of both the geographic establishment and the business unit is expected to add richness to understanding the relationship between HR practices and organisational performance.

The centrality of the line manager to consistency of HR practice on the HR causal process model and the prevalence of inconsistency of HR practice is supported by previous studies (Baluch, 2017; Fu et al., 2018; Piening et al., 2014). However, reasons for inconsistencies have not been conclusive. Further, research that brings together both the HR causal process model and an understanding of difference in establishment, either geographic establishment as is generally adopted in prior research or business unit establishment does not, to our knowledge, exist. Thus, the following research questions were proposed:

RQ1: What are the drivers of inconsistency in implementation of HR practices by line managers?

RQ2: Is there divergence in the implementation and perception of HR practices across business unit establishments?

RQ3: Is there divergence in the implementation and perception of HR practices across geographic establishments?

Design implications. Given the burgeoning evidence for divergence in HR practices across the HR causal process model and across business units, together with research designs that have shown successful inquiry at the geographical establishment level, a robust levels-based design will take these three types of level into consideration. Figure 1 illustrates the analytical groups to be considered if each of these three levels are to be properly understood.

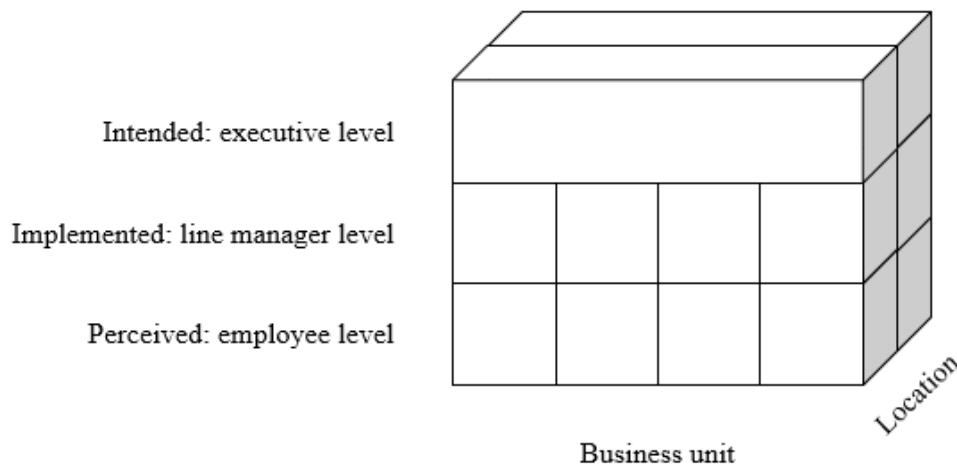


Figure 1: Analytical levels in a three-axis levels-based design

Method

Research setting

The professional service firm (PSF) offers an ideal environment to investigate the strength of the HR system (Bowen & Ostroff, 2004). HR implementation in professional services firms faces myriad challenges in living up to the principles of the strategic HR ideal where partners, who are both owners and senior managers within the firm, delegate responsibility for operationalising HR practices in the firm. At the same time partners have a strong tendency to hold onto their autonomy, and this autonomy often manifests in the distinctive ways that they run their area of the firm (Faulconbridge & Muzio, 2007). Features of PSFs (Von Nordenflycht, 2010) such as cat herding – the challenge of directing highly skilled knowledge workers in a coordinated fashion – and opaqueness – work output being difficult for non-experts to evaluate – make the development of HR systems and the implementation of those

systems challenging. Because of the high concentration of knowledge workers in these types of firms, PSFs are seen as an appealing context for management research into organisational effectiveness and performance (Teo et al., 2008).

A single case study method (Yin, 2009) was adopted for this study, with research being located in an Australian accounting firm. The firm is part of an international network. The research was conducted at two of its capital city locations. The firm is structured as four distinct practice areas, based on the types of services offered. The four practice areas are Advisory, Audit, Private Clients, and Tax. These practice areas are analogous to business units in the broader literature. The firm employs a small number of HR specialists who work with the executive leadership of the firm in advancing HR practice. These specialists operate across practice areas and work closely with partners and managers within each practice area in a partnering role. PSFs are acknowledged as an important context for research examining the application and effects of human resource practices (Fu et al., 2017). PSFs rely heavily on the knowledge, skills and abilities of the professionals they employ for firm output and performance (Von Nordenflycht, 2010). Because knowledge is both an input and an output of PSFs (Morris & Empson, 1998), and knowledge within PSFs is dominantly tacit knowledge held by its employees (Maister, 1993), the relationship between human capital and overall firm performance is high (Alvesson, 1995). Indeed, Morris and Empson (1998, p. 610) define the PSF as “an organisation that trades mainly on the knowledge of its human capital, i.e., its employees and the producer-owners, to develop and deliver intangible solutions to client problems.” Frequently, the services provided by PSFs are customised and highly knowledge-intensive.

PSFs provide a rich research context in part because of the ownership structure of the firm, with partners acting as owners, revenue generators, and managers (Sherer, 1995). Partners have historically had a high degree of autonomy, though in some organisational

forms this autonomy is reducing, creating potential for conflicting institutional logics within firms (Segal-Horn & Dean, 2007).

Professionals who enter a PSF are typically highly career-oriented, having completed significant formal academic and industry study to complement their career development. Thus, the employee base can generally be assumed to *want* to be working within a PSF, and be seeking career progression through to either being a partner within a PSF, or otherwise progressing to a senior corporate role outside a PSF. Institutional research focused on PSFs has identified one of the two dominant institutional archetypes, termed the professional partnership or P²-archetype, adopting an apprenticeship model to professional development and taking an “up or out” approach to professional progression (Greenwood et al., 1990; Jennings, Jennings, & Greenwood, 2009).

Finally, the nature of PSF networks, particularly in law and accounting, has the potential to provide rich data for the purposes of within-organisation and between-organisation analysis. While each network is unique in their structure, there is typically a combination of independent and integrated financial/ownership relationships, and at least at the national level, some level of alignment of training and best-practice sharing of HR practices as a component of a unified and integrated service delivery model to clients. PSFs as exemplars of an organisational model that “can facilitate both decentralisation and integration” have been discussed by Boussebaa (2009, p. 830), while the iterative offering of and demand for globally integrated services has been explored by Muzio and Faulconbridge (2013) and by Smets, Morris, von Nordenflycht, and Brock (2017). While there is an expectation from both clients and from network members to present a unified and integrated appearance, the expectation of autonomy from partners (Faulconbridge & Muzio, 2007) creates an antithetical organisational dynamic.

Sample

In line with the theoretical model, 33 interviews were conducted at three levels in the firm, six at executive leadership and HR level, 13 at line management level, and 14 at employee or frontline level. Interviewees were from each practice area, broadly representative of the relative headcount of each practice area. Table 1 provides details of interviewees, including seniority, analytical level, location and practice area. Given the firm is a professional partnership, an important methodological decision was whether partners in the firm, who are typically also owners of the firm, were deemed to be executive leaders or line managers. Except for those partners in executive roles, the firm's partners are considered line managers for the purposes of the research. This decision is on the basis that the case study firm, as is common to many PSFs, appoints an executive committee, made up of a small group of partners, to perform executive decision making and other executive functions on behalf of the partner group as a whole (Faulconbridge & Muzio, 2007). Partners are identified as "Executive Partner" where they form part of the executive committee, or "Partner" where they are not part of the executive committee. Partners who are in executive roles were interviewed in their capacity as executive partners, and while their practice area has been identified in Table 1, the executive-level interviews took a whole-of-firm perspective.

Table 1. Interview participants by level, location, and practice area

Interview	Seniority	Level	Office	Practice Area
1	Manager	Executive	Sydney	People & Culture
2	Senior Manager	Line manager	Sydney	Audit
3	Senior	Employee	Sydney	Private Clients
4	Executive Partner	Executive	Sydney	Tax
5	Partner	Line manager	Sydney	Audit
6	Senior Manager	Line manager	Sydney	Advisory
7	Senior	Employee	Sydney	Audit
8	Manager	Employee	Sydney	Audit
9	Partner	Line manager	Sydney	Advisory
10	Senior Manager	Line manager	Sydney	Audit
11	Junior	Employee	Sydney	Advisory
12	Senior Manager	Line manager	Sydney	Private Clients
13	Manager	Employee	Sydney	Tax
14	Junior	Employee	Sydney	Audit
15	Executive Partner	Executive	Sydney	Audit
16	Senior	Employee	Sydney	Advisory
17	Senior Manager	Line manager	Sydney	Private Clients
18	Principal	Line manager	Sydney	Tax
19	Senior	Employee	Sydney	Tax
20	Executive Partner	Executive	Sydney	Private Clients
21	Senior Manager	Line manager	Melbourne	Advisory
22	Senior Manager	Line manager	Melbourne	Audit
23	Manager	Executive	Melbourne	People & Culture
24	Senior Manager	Line manager	Melbourne	Tax
25	Senior Manager	Line manager	Melbourne	Private Clients
26	Junior	Employee	Melbourne	Tax
27	Executive Partner	Executive	Melbourne	Tax
28	Junior	Employee	Melbourne	Private Clients
29	Senior	Employee	Melbourne	Advisory
30	Partner	Line manager	Melbourne	Audit
31	Senior	Employee	Melbourne	Tax
32	Senior	Employee	Melbourne	Private Clients
33	Senior	Employee	Melbourne	Audit

Data Collection and Analysis

The interviews were semi-structured, and used stem questions from which participants were probed to establish a narrative (Qu & Dumay, 2011). Narrative responses

allowed participants to speak broadly about their perspectives on the implementation and perception of HR practices, given the emergent nature of the theoretical framework (Link & Müller, 2015). The interviews examined measures of and influences on firm and team performance, and the level of consistency and alignment of people practices across the firm, from the intended to the implemented and then to the perceived. The focus of the study was on the transmission of HR practices across the levels of intention, implementation and perception rather than on the content of those practices. Therefore, rather than focusing on a pre-determined set or system of practices, the interview protocol, particularly through the extensive use of open-ended questions and probes, provided interviewees with the opportunity to self-select either individual HR practices or “bundles” of HR practices that they considered important in shaping organisational performance.

Alongside the interview data, copies of the firm’s HR policies were collected and reviewed, and a document analysis was performed. The initial document review gave the interviewers insight into the intended HR practices of the firm, aiding the establishment of credibility with participants. The document analysis helped to validated interview data.

Interviews were digitally recorded and transcribed. Content analysis using Nvivo 12 (QSR International, 2018) was conducted to identify themes (Doriau, Reger, & Pfarrer, 2007; Krippendorff, 2004). Through use of Nvivo, researchers are able to code and recode data, search for words, word stems and combinations of words, identify patterns in coding, and manage data to facilitate analysis (Bazeley & Jackson, 2013). The initial coding scheme was developed from the extant literature around five categories: consistency and alignment, firm management, HR practices, HR management, and performance. Initial codes were applied. When a new concept was identified in an interview a new code was created. Where the new concept presented in more than three interviews, interviews were recoded to ensure any emergent themes were exhausted (Rodell & Lynch, 2016). The data was revisited to make

abductive inferences from the data (Krippendorff, 2004). Abductive inferences were based on content that was coded to contributions for high congruence and contributions of low congruence. The abduction for low congruence identified themes within the content, and allowed drivers of low congruence, or inconsistency, to emerge.

Results

This section presents the results of the analysis, which showed patterns of both consistency and inconsistency across the firm. Firstly, evidence of consistency that was found at all levels and across each practice area and both locations is presented. Following this, the research questions are addressed. Despite some evidence for consistency being found, inconsistency was also identified in both individual line managers, along with more substantive divergence with one practice area. No evidence was found for inconsistency specifically resulting from different geographic locations.

Degree of consistency across the firm

The data showed strong evidence for consistency expressed in a number of ways. Consistency was found at each of three levels of analysis, and across practice areas and locations. Demonstrating a strong perception of consistency, a number of more junior employees saw a high level of consistency between what was intended and what was implemented, for example:

“I think on the whole, I am pretty confident that what they say is what is actually done... I think from that perspective there is a genuine commitment to sticking by what they say.” (#28, Junior)

There was observed consistency in some of the more codified, regimented HR practices such as recruitment and the formal performance review process:

“The recruitment process whether it’s through graduates and through experienced hires is extremely rigorous.” (#27, Executive Partner)

“We have conversations and we rate people as a team, as a management team so we all are on the same page, feedback is collected beforehand... I don’t see any way that there would be a conversation where someone goes rogue.” (#10, Senior Manager)

A number of interviews suggested that consistency is not necessarily interpreted within the firm as a rigid following of documented HR policies and procedures, but rather consistency is understood as following the underlying intent of the HR practice. This perspective was seen both in relation to the individual manager’s personal style, and where the manager actively adapts their style to the employee:

“So the same consistent message, delivery might be different.” (#17, Senior Manager)

“It’s not treating everybody the same. You have to tailor your approach. It’s that old cliché, you know, you don’t manage the team, you manage the man.” (#22, Senior Manager)

The adaptive and individualistic approach identified was reinforced by an executive-level perspective:

“You can’t just have processes and policies and apply them and say, ‘this is how we’re going to do stuff.’ We still need a little bit more around this is how we do stuff around here, we still need some more of those policies in place, but they need to be flexible enough so that we can get the best out of people.” (#15, Executive Partner)

A clear driver of consistency was the “tone from the top”:

“You have to set the tone from the top and you have to call out practices that aren’t in line with our guidelines, with our mission.” (#20, Executive Partner)

“I definitely feel that if there’s that tone set at the top I feel like it has a trickle down effect onto everybody.” (#8, Manager)

RQ1: Drivers for inconsistency in line managers

While evidence for consistency was observed in the data, inconsistency was also

widely present. Four broad themes were identified that pointed to inconsistency of HR practice implementation by line managers. These were: misalignment, prioritisation, style, and capability. The analysis of data that identified these four themes is now discussed in detail.

Misalignment was observed where the manager did not believe that either the specific HR practice, or HRM as a discipline for firm management, was sufficiently beneficial for achieving firm objectives to warrant implementation in the manner intended. A repeated theme focused on partners holding the view that they did not benefit from progressive HR practices earlier in their careers, and so they did not believe that their employees should need them either. For example:

“I think genuinely, some people just get it and just do it and understand the impact that it has... A lot of pushback, what you get is, ‘well, I never had that’.” (#23, HR Manager)

“I think it's really dependent on what the manager, you know, has traditionally, or the partner has traditionally experienced as their level of feedback, because they have that experience then they think it is a good amount for that. And they will apply that. But everyone can probably do with more feedback.” (#29, Senior)

As an example of a specific HR practice in which misalignment was observed, a number of interviews pointed to inconsistency in the remuneration process. The process appears to be clearly documented and codified, yet the implementation of the practice by the partner group tends to be opaque, creating mistrust in both non-partner line managers and employees. To illustrate, the firm uses a commercial salary benchmarking service, however there is mistrust by employees of both the benchmarking and the process. For example:

“[The salary review process is] not very transparent to junior staff, which is a gripe that I had when I was coming up. I still don't get that access, I don't think you do until

you get to partner level but yes, there are bands for each of the positions that are based on industry studies. The issue is that there are other industry studies that come out that are different, so there's that gap again, so all the industry studies that staff get are from recruiters which are slightly higher compared to what is actually getting paid in firms, which is what this study is supposed to look at, but you don't get any insight around, well I'm here so what's the band for that?" (#21, Senior Manager)

The recurring theme for inconsistency as a result of prioritisation was that client work comes before people management. Prioritisation decisions tend to be based on what is measured and reported. Internal reporting for the firm revolves around financial performance, and revenue performance by each partner:

"We've got [financial results] spreadsheets going out monthly with dollars on it and individuals' names attached to it. That's going to be a metric that is seen to be superior to the rest. So, that drives behaviours." (#23, HR Manager)

One interview recalled a partner's view on priorities being, "firm, service line, person," highlighting that people management should never take precedence over the firm's wellbeing. The prioritisation of client work and billable hours was observed at all levels, illustrated by statements such as,

"We're just too busy caught up in client work." (#17, Senior Manager)

"100%. The job gets done." (#6, Principal)

"I know there are a few people in the firm where they don't get to go to training because it takes away their billable hours and stuff and I think that's stupid." (#11, Junior)

Our review of the firm's promotional material for recruitment suggests that people are a high priority within the firm. While this was seen through the interviews, it was clear that financial results were a very real priority within the firm, which would supersede HR

management if needed. The results therefore are suggestive of a conflict in the stated priorities of the firm and the real priorities that influence the implementation of HR practices. A number of interviewees noted that inconsistent prioritisation, particularly where it is in conflict with espoused values, degrades employee trust, which has an indirect effect on employee engagement.

A breadth of individual management styles was raised by interviewees. While the data does not point to any particular style resulting in stronger performance, or even being preferred, it was clear that weaknesses in style did create inconsistency. Management style being a driver of HR implementation was highlighted by a Senior:

“I think they do try their best to adapt but it’s a bit hard, I guess, once you’ve got your own way, I guess, ingrained into you, it’s pretty hard to change.” (#33, Senior)

The primary inconsistencies observed as a result of management style were giving regular feedback to employees and providing recognition. Employees suggested that there was a lack of recognition from managers, while some managers observed that they knew they should recognise employees, even in simple, informal ways, and yet they were not good at regularly doing this:

“Sometimes there can be some managers that are just... and it’s a fair few where they don’t give that recognition. They just, sort of... they expect it to be hard work to be done and, yes, if you do put in hard effort and get the job finished and it’s, sort of... it was the expectation anyway.” (#14, Junior)

“A lot of the feedback we get from the staff is, ‘I just wish people would thank us more,’ and we all agree with that, we all say, yes, we should thank you more, we should, but we don’t.” (#15, Executive Partner)

While capability did appear as a theme for inconsistency in the data, it was not as strong as the other three themes. Indeed, participants drew attention to the extensive

managerial training provided within the firm, suggesting the firm is active in building managerial capability. A perceived lack of capability was presented as line managers not being HR specialists:

“My observation is that we talk about leaders driving HR practices, but Audit partners and Tax partners aren’t HR partners. And some are good, some are better than others.” (#2, Senior Manager)

“You know, most of the guys like me have come up through professional service firms, looking after clients, and it may not be something we naturally do.” (#5, Partner)

RQ2: Divergence across business unit establishments

It was clear from the data that divergence within practice areas was a substantive challenge for the firm: *“That’s part of the challenge that we have to try and get some further consistency there. There can probably be inconsistency within areas as well, some areas are run as individual silos, you know, and that’s... That can be an issue.” (#5, Partner)*

The observable nature of practice areas and individual partners having a level of autonomy was also commented on:

“The accounting firm’s interesting, because they’re like a whole bunch of small businesses in a big business.” (#18, Senior Manager)

While there was variation in all four practice areas, data pointed to Tax having a more significant divergence than the other three. It is clear that Tax has a strong and distinct culture, focused on performance, conformity with the norms of that practice area, and fit of individuals in the practice area.

“Their [Tax’s] culture, well, I think it’s just that you either perform... You either come in at this and do what I’m expected to do, or you know, you don’t really fit in with us, so everyone just gets dragged along, which is good. There’s some very high performing people in there, and that’s just the way that... They manage that way,

they're very dogmatic.” (#5, Partner)

The distinct culture of Tax, a counter-culture to the rest of the firm, is tolerated because they consistently perform very well financially.

“There’s a fear, that, you know, those people [in Tax] doing very well, they’re contributing to us financially, so therefore, let them be a little bit.” (#5, Partner)

“The absolute beacon of the sort of time cost-model, and charging as much as you can in terms of this firm... He's been a monster for years, just smashes it on the fee front. And he has full commitment to that, and he expects full commitment from all of his team.” (#6, Senior Manager)

Drawing from interviews within Tax, they have a strong affinity with Tax’s cultural uniqueness within the firm:

“We haven't changed our practices since they started doing the whole engagement drive. They did one once, and they found that our engagement sucks compared to the rest of the industry. But, you know, we had loads of turnover, and good results... Everyone thrives in different environments.” (#18, Senior Manager)

On the matter of poor engagement survey results, junior members of Tax were surprised:

“And I know that from last year compared to this year Tax actually went down in engagement survey. I spoke to a couple of my fellow cadets and we said we don’t really understand how it went down.” (#26, Junior)

Pointing to the scepticism of one of the Tax partners regarding HRM, one of the Senior Managers in Tax observed:

“He produces exceptional financial results, year on year. Every year. He has no faith in engagement theories or HR practices.” (#18, Senior Manager)

RQ3: Divergence across physical establishments

No evidence was found that suggested a discernible divergence in implementation or perception of HR practices across the two locations studied. The level of consistency in implementation and perception across HR practices was compared. For example, the data suggested that the formal performance management process was implemented consistently across both locations as illustrated by comments from each location:

“My manager at the moment who manages the team of five that we have, she definitely takes the same amount of time in that PDR meeting for everybody which is good.” (#26, Junior, Location 2)

“I probably catch up with my staff every two months for half an hour, an hour and see how they’re progressing. We then do a mid-year and a full year PDR process.” (#2, Senior Manager, Location 1)

Participants in each location described both the intended and implemented processes for recruitment and training in substantially the same manner. In contrast, of the 33 interviews conducted, the authors found no HR practice in which implementation was consistently different between the two locations.

Discussion

That a positive relationship exists between HPWS and organisational performance is widely supported in the literature. However, evidence-based explanations of the causal relationship between HPWS and organisational performance are only just developing despite well-developed theory on the nature of causality in the relationship. The HR causal process model has promising multilevel empirical evidence supporting its explanation of the relationship of HR practice consistency and organisational performance, however research is only nascent. Additionally, multilevel research examining variance across establishments is, to our knowledge, non-existent. This study sought to identify the areas of consistency and

inconsistency in HR practice through the lens of intended, implemented and perceived HRM, and to identify drivers of inconsistency in implementation. While implementation is only one step in the continuum of the HR process, it is one that has not been extensively researched.

Addressing RQ1, four drivers of inconsistency in the implementation of HR practices by line managers were identified, misalignment, prioritisation, managerial style, and capability. Addressing RQ2, divergence was found in the implementation and perception of HR practices across business unit establishments. Addressing RQ3, no divergence was found in the implementation or perception of HR practices across geographic establishments.

This study makes a number of important contributions to the literature on the HRM-performance link. The study contributes multilevel, cross-establishment evidence toward explaining the mechanisms that lead to inconsistency in the implementation and perception of HR practices. Importantly, the study presents clear evidence that divergence occurs not just through individual line managers, but within entire business units. While research adopting a levels-based approach is developing, there is less research that seeks to understand difference within business units. These findings suggest that both theorising and empirical testing of within-organisation levels (Greenwood, Hinings, & Whetten, 2014) is sorely needed. Such research, while maintaining a multilevel methodology, can go some way to explaining within- and between-organisational difference across the HR causal process model, contributing substantively to the way in which divergence relates to performance. Furthermore, the study challenges the geographic nature of the establishment as discussed by Osterman (1994). No evidence was found to support divergence between the two geographic locations studied, despite the expectation of such divergence.

Moreover, the study provides new evidence explaining some of the reasons for individual line manager inconsistency in implementation of HR practices. Four drivers of inconsistency were identified: misalignment of the individual line manager with the

organisational approach to HRM, the challenge of competing priorities, differences in managerial style, and a self-perception by the line manager that they lacked capability in their implementation of HR practices. The findings around misalignment support Arthur et al. (2016). The misalignment came from beliefs of the line manager, much of which is linked to their personal experience. Misalignment did appear to come from the line manager's underlying beliefs in the efficacy of HR practices, and was adjacent to concepts such as motivation as seen through the ability-motivation-opportunity (AMO) framework. Creating alignment within an organisation is therefore a significant challenge, because it is not something that can be simply trained into line managers, but rather is likely to require longer-term management through hiring and promotion decisions. Indeed, this research suggests that multiple avenues have been used in attempts to reduce misalignment, including training, the use of external experts to educate and convince line managers, and one-to-one leader discussions in relation to areas of misalignment. The positive relationship of misalignment and inconsistency is confirmed. These findings in relation to managerial or leadership style support Vermeeren (2014), who noted variance in implementation as a result of leaders adopting either a more transformational style or a more transactional style. These results, which point to weakness particularly in more informal HR practices such as giving feedback as a result of managerial style, suggest that those line managers have adopted a transactional style to their management. The finding that line managers sense a lack of personal capability in HR practices as a cause of inconsistency aligns with Gilbert et al. (2015), who found that line manager perception of ability is related to their effectiveness in implementation. It may be that manager self-assessment of a lack of capability is due to a disproportionate amount of HR responsibility being devolved to them. This is consistent with Brewster, Brookes, and Gollan (2015) who found that firms with less than 200 employees had a greater incidence of assigning HRM responsibilities to line managers. It is notable that this inconsistency was

found in the data, given that the firm has such a strong focus on managerial training.

And finally, this study has provided evidence that contrasts with the expectation of a link between HRM and financial performance. The practice area that interviewees suggested performs best financially is the one that appears to be most sceptical of HRM. While this evidence, should be treated cautiously as it is qualitative data whereas financial performance measures rely on quantitative measurement, it should not be disregarded, and may suggest either reverse or multi-directional causality in the relationship. The evidence of this study suggests that strong sub-cultures can develop that have both strong financial performance, and a suspicion or scepticism of HPWS.

This study has implications for managerial practice. Managers can learn from this study that where the stated priorities of the firm differ from the firm's actual priorities as enacted by the leadership of the firm or as perceived by line managers, both inconsistency in implementation of HR practices and mistrust by employees can arise. Managers seeking to apply this research in practice would review the priorities that senior leadership apply in their day-to-day management of the firm to ensure stated-and-actual priorities are aligned. Additionally, managers should be aware of not only the drivers of individual line manager inconsistency in the implementation of HR practices, but also of the potential for business units in their entirety to intentionally diverge from the intended HR practices of the firm. The management response to each type of inconsistency, both inconsistency in individual line managers and inconsistency in business units, will differ. Managers should adapt their response accordingly.

This study has a number of limitations, and the findings should be understood in the context of these limitations. Firstly, the research was located within a professional services firm. There is potential that these findings are specific to the firm studied, or to professional services firms generally. Further, the research was exposed to selection bias. While the

authors provided guidelines to the firm's representatives to ensure a proportionate balance of interview participants, firm representatives had scope to select which employees participated. Therefore, that selection may have been subject to biases of each representative. Because the research design was a case study, the results cannot be reliably generalised without validation across a broader population. Finally, while interviews examined influences on performance, the actual performance outcomes of individuals, business units, and the firm was not explored in detail, and therefore any findings on performance are subjective and relative to each participant's knowledge and understanding of performance.

We propose a number of avenues for future research. A broader-based, quantitative study across multiple organisations is an important next step in this research pathway, to provide evidence in support of the findings of business unit and individual line manager divergence. Research that quantitatively examines the HR causal process model and organisational and business unit performance is an important missing piece in this line of research. Further, research that seeks to better explain the divergence in performance more broadly, for example the behaviour of practice areas in their respective markets, would enrich understanding of divergence between business units. A research design across multiple organisations and multiple business units within those organisations will provide greater understanding of within- and between-organisation differences in the HR causal process model.

Conclusions

Developing a clear understanding of the HRM-performance link remains one of the most important lines of inquiry in HRM. This study adds much needed clarity to the reasons for divergence in intended, implemented and perceived HR practices, and by doing so contributes to a deepening understanding in the relationship between HRM and organisational performance. The study supports earlier research that there is divergence in

implementation by individual line managers, but adds fresh evidence that divergence also occurs at the business unit level.

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Conclusion to Study Two

Study 2 confirmed that variability of HR practices exists across the levels of intended HRM, implemented HRM and perceived HRM. Moreover, variability was observed across business units within the same firm, suggesting that nuances in implementation are at least at the level of the business unit, if not at the level of the individual manager. This finding is important for research insofar as research designs need to consider not just the level of analysis (intended by HR professionals, implemented by line managers, perceived by employees) but also the locus of observation, whether implementation is measured on a firm-wide basis, a business unit basis, or in relation to an individual manager with his or her direct staff. Study 3 will draw from this finding, and measure implemented HRM at the business unit level. Study 2 also provided evidence for four managerial drivers that were central to divergence occurring, at the level of implementation and perception. These drivers, manager alignment, manager prioritisation of people management, manager style and manager capability, were found to be important differentiation factors for both managers in their personal perception of how they implement HRM, and by extension also for employees in how they subsequently perceived HRM. While these drivers were identified as sources of divergence, the subsequent studies presented in this thesis adopt a positive view of them, and test them as drivers of consistency, deemed to be managerial effectiveness.

Chapter 4

The HR causal process model and its moderating influences

Introduction to Study Three

The results of Study 1 highlighted the need to understand the interaction of levels within the HR causal process model, and to reflect the process approach to HRM, specifically HR system strength and HR attributions, in research that seeks to understand the HR causal process model. The results of Study 2 drew attention to variability across the levels of intention, implementation and perception, and that variability in implementation is observable at the business unit level. Further, four drivers of inconsistency in implementation were identified, interpreted in a positive light as managerial effectiveness. Study 3 draws from the results of each of the previous studies and is an important next step because it provides quantitative evidence for relationships across a large portion of the HR causal process model. The HR system is tested for the relationship between HR as intended by the firm, implemented by line managers, and perceived by employees, and the effect of this relationship on both employee outcomes and perceived performance. The study seeks to understand moderating influences on this relationship, through moderation of HR system strength while controlling for HR attributions, and moderation of managerial effectiveness while controlling for LMX. The study draws on survey data from 407 respondents across eight accounting firms.

This paper has been prepared according to the publication guidelines of *Human Resource Management*.

**Toeing the line: the moderating influence of managerial effectiveness and
HR system strength on HR and performance outcomes in the intended-
implemented-perceived HRM process**

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This paper has been prepared for submission to Human Resource Management

Author contribution:

Mr Matthew Sykes was responsible for the design of this study, collection of data, analysis and write-up of this paper. Dr Andrew Heys and Associate Professor Denise Jepsen provided research supervision through all stages of the research.

Abstract

While the existence of a relationship between HRM and firm performance is well established, the complex and distal nature of the relationship means that, despite significant ongoing research, a comprehensive explanation of the relationship, and in particular any causal mechanisms within the relationship, remains elusive. This study seeks to provide further understanding of this relationship through the lens of intended, implemented and perceived HR practices, and by considering both managerial effectiveness and HR system strength as important moderating mechanisms of the relationship. Drawing on survey data from 407 respondents in eight Australian accounting firms, the study adopts a moderated serial mediation to examine the relationships across three levels of HRM and both employee and performance outcomes. The study's findings fail to conclusively support the sequential relationship between intended, implemented and perceived HRM, and the selected outcomes. However, findings point to the importance of managerial effectiveness for employee-perceived HRM, and support the need for continued research around HR system strength and HR attributions. The study's implications, limitations, and future research directions are discussed.

Keywords: HR system strength, HRM-performance black box, implemented HRM, intended HRM, managerial effectiveness, perceived HRM, process-based HRM

Introduction

Generating positive effects on firm performance is described as the *raison d'être* of strategic human resource management (HRM) (Becker & Huselid, 1998; Snell & Youndt, 1995). Developing a deeper understanding of the nature of the relationship has been the subject of much investigation by HRM researchers. Following a number of landmark studies by Huselid (1995), Macduffie (1995), and Arthur (1994), an intense period of research focused on empirically establishing the existence of such a relationship ensued. While substantial evidence for the relationship between HRM and performance was found, the research design and statistical methods used, together with the lack of strong theoretical foundation, became the subject of sustained critique (Gerhart, Wright, McMahan, et al., 2000; Guest, 2001; Wall & Wood, 2005). Ferris and his colleagues cogently captured the nature of the challenge and the so-called HRM-performance black box, stating that “if we do HRM well, this will *somehow* make organisations perform more effectively” (Ferris et al., 1998, p. 236, italics theirs). It is the “somehow” that draws the attention of contemporary research in HRM, and that demands greater understanding and a richer explanation. Recognising these critiques, research in HRM turned to theoretically supported explanations of how and why the HRM-performance relationship exists (Bowen & Ostroff, 2004; Nishii et al., 2008), and increasingly to more sophisticated approaches to HRM research, including multilevel research designs and targeted statistical techniques (Guest & Conway, 2011; Wright & Nishii, 2007). While studies adopting a multilevel design, and in which moderating and mediating mechanisms play a role have been introduced since 2008 (Jiang & Messersmith, 2018), the complexity of the relationships that exist in the HRM-performance link mean that understanding remains incomplete (Boon et al., 2018; Renkema et al., 2017).

Multilevel research design in HRM is frequently conceptualised as HRM as intended by the firm, HRM as implemented by line managers, and HRM as perceived by employees

(Nishii & Wright, 2008; Purcell & Hutchinson, 2007). Research focused at the firm, manager and employee level has in part been necessitated by the growth of what has been termed the process approach to understanding HRM (Sanders et al., 2014). The process approach suggests that an HR system's effectiveness comes from the way in which actors, particularly employees, ascribe meaning to the HR system, develop shared meaning with others, and understand desired and appropriate responses to that meaning (Bowen & Ostroff, 2004; Li et al., 2011; Sanders & Yang, 2016). Two principal lines of inquiry have evolved following the emergence of the process approach (Ostroff & Bowen, 2016). Firstly, the investigation of HR system strength, the *how* of the HR system or how the HR system functions and is delivered as a system to influence performance. Secondly, investigation of HR attributions, the *why* of the HR system or why employees believe that HR practices are implemented in the way that they are. While there has been considerable growth in research surrounding both HR system strength and HR attributions, there is recognition that many questions remain (Hewett et al., 2018; Ostroff & Bowen, 2016). These questions include how do HR attributions contribute to outcomes and the overall HRM-performance link (Van De Voorde & Beijer, 2015; Yang & Arthur, 2019), what are the antecedents and mediation pathways of HR attributions, and what role do external attributions play, as opposed to the more consistently studied internal attributions (Hewett et al., 2018).

Investigation of intended, implemented and perceived HR practices has led researchers to focus on the role of the line manager in the contemplated causal chain between intended HR practices and the ascribed meaning and subsequent actions of employees. Attention has been drawn to the interaction between HR managers who design HR interventions and line managers who then implement those interventions, together with a recognition that a strong HR-line relationship will improve the implementation of HR practices (Bondarouk et al., 2009; Gilbert et al., 2011). Line managers are frequently seen as

agents of the firm within the HR process, with their role being to implement HR practices (Azmi & Mushtaq, 2014; Beer, 1997; Sikora & Ferris, 2014; Ulrich, 1997b). An important but under-researched aspect of the process approach is the effectiveness of managers, incorporating leadership style and the ability, motivation and opportunity of managers (Bos-Nehles et al., 2013; Vermeeren, 2014). The need to develop a better understanding of leadership and managerial effectiveness as a critical variable has also been the focus of recent research (Leroy, Segers, van Dierendonck, & Den Hartog, 2018; Sykes, Heys, & Jepsen, 2018).

Adopting a cross-level moderated parallel mediation design, this study aims to establish whether a relationship exists between intended, implemented and perceived HR practices and organisational outcomes, as illustrated in Figure 2, and whether this relationship is moderated by the effectiveness of managers in their role as managers and by HR system strength. Presenting evidence from a survey ($n = 407$) of eight mid-tier Australian accounting firms, a moderated serial mediation analysis was used to test the relationship between each level of the HR system and outcomes, moderated by both managerial effectiveness and HR system strength. Findings suggest that this relationship is more complex than previous research has suggested, with a likelihood of multiple mediating and moderating influences across the HR causal process model, together with the potential for separate independent influences on employee-perceived HRM and the resultant outcomes.

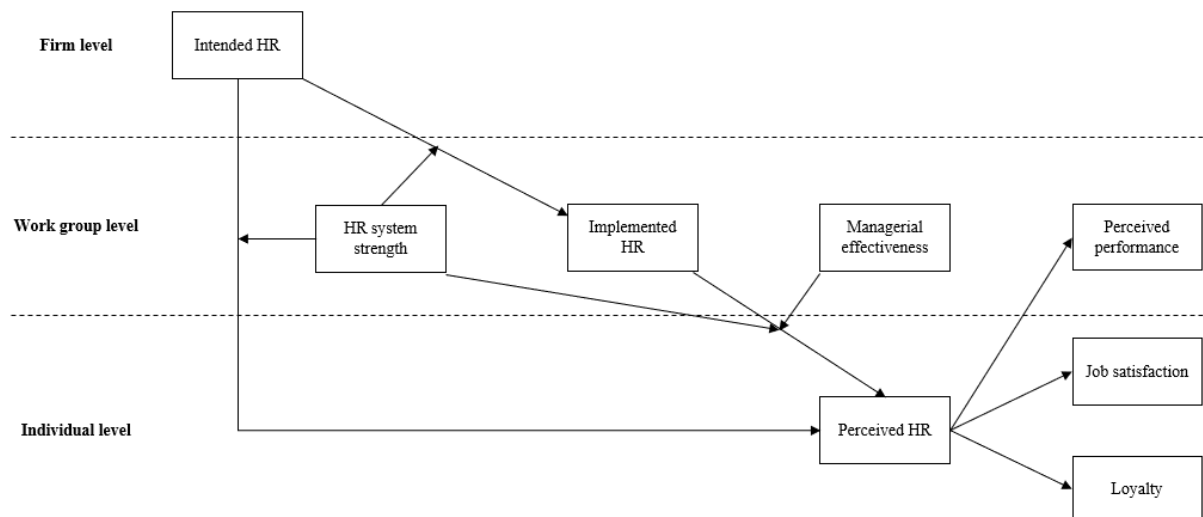


Figure 1. Research model

Literature Review

The existence of a relationship between HRM and organisational performance is now well-established (Combs et al., 2006; Crook et al., 2011). The evidence is particularly strong for a relationship between cohesive HR systems and HR outcomes such as job satisfaction and intention to quit (Ang, Bartram, McNeil, Leggat, & Stanton, 2013; Kundu & Gahlawat, 2016), operational outcomes such as productivity and customer service (Vermeeren, Steijn, et al., 2014; Youndt et al., 1996), and financial outcomes such as profitability and market value (Batt, 2002; Huselid, 1995). While evidence demonstrating the existence of an HRM-performance relationship is extensive, the proximity of HR practices intended by the firm to outcome measures, together with the potential for confounding influences in the relationship, has meant that drawing conclusions on how to influence performance outcomes through HRM is challenging. This challenge has given rise to the notion of a black box that continues to evade comprehensive explanation (Guest, 2011; Jiang et al., 2013).

An important and growing line of inquiry recognises that to understand the relationship between HR practices and performance outcomes, research must draw from multiple perspectives on HR practices. Recognising that HR practices do not simply exist within the organisation, but rather they are created, enacted, and received, gives rise to a

perspectives-based approach to designing research (Jiang & Messersmith, 2018). The important influence of managers has received increasing attention in their role as implementers of HRM. However managerial effectiveness, the role of managers apart from being agents of the HRM function, lacks understanding in the context of the HRM-performance relationship (Brewster et al., 2013). The process-based approach to HRM offers a promising theoretical basis for how and why HR influences performance outcomes (Hauff et al., 2017; Peters, Poutsma, Van der Heijden, Bakker, & Bruijn, 2014).

Intended, implemented and perceived HRM

HRM has typically been conceptualised at the firm level, such as the universalistic, contingency and configurational modes of HRM (Delery & Doty, 1996) and through HR architecture typologies (Lepak & Snell, 1999, 2002). These conceptualisations provide a frame of reference to understand HR systems through the lens of the value and uniqueness of human capital within the firm. While important in advancing understanding of HRM at the firm level, they do not comprehensively address the question of how HR systems ultimately influence employee behaviour as a means of achieving organisational outcomes, which is arguably the central aim of HR systems (Khilji & Wang, 2006; Paauwe, 2009). To address the question of how employee behaviours are influenced, HR systems have been conceived across three stages of practice: intended practices, implemented practices, and perceived practices (Nishii & Wright, 2008). Intended practices are HR practices defined by the HR leadership of the firm through espoused principles, policies and programs and are conceptualised at the firm level (Arthur & Boyles, 2007). Implemented practices are the specific HR practices enacted by the line managers within the firm, which incorporates line manager interpretation, acceptance, and eventual delivery of practices to employees and are typically conceptualised at the work group level (Guest & Bos-Nehles, 2013). Perceived practices are HR practices that employees receive, interpret, and attribute meaning to and are

typically conceptualised at the individual employee level (Alfes, Shantz, et al., 2013; Bowen & Ostroff, 2004).

The relationship between intended, implemented and perceived HR practices, termed the *HR causal process model*, has been the subject of focused research (Sykes et al., 2019a). The HR causal process model contains three direct HR practice relationships, the intended-implemented relationship, the implemented-perceived relationship, and the intended-perceived relationship. Substantial variability has been found across the intended-implemented relationship, and the implementation of the practice, rather than the intention, most closely associates with organisational outcomes (Khilji & Wang, 2006; Woodrow & Guest, 2014). Implemented practices, while being associated with outcomes, have been found to be mediated by HR practices as perceived by employees (Vermeeren, 2014). The direct relationship between intended and perceived HRM rests in the communication of HR practices by top management and the HR function to employees (Arthur et al., 2016; Schliep et al., 2015). Through the psychological contract, this relationship sets expectations of employees as to how they should experience HR practices (Sonnenberg et al., 2011). Beyond these three direct relationships, support has been found for increasing levels of complexity both in the nature of direct relationships and through mediating or moderating influences such as trust in senior management, employee expectations of HRM, and line manager perceptions of HR effectiveness (Chen, Hsu, & Yip, 2011; Farndale & Kelliher, 2013; Piening et al., 2014).

Based on the evidence of variability across the HR causal process model, the first hypothesis is:

H1: That implemented HRM and perceived HRM will mediate the relationship in a sequential order between intended HRM and the outcomes of:

(a) Work group-level aggregated perceived performance,

- (b) Employee-level individual job satisfaction, and
- (c) Employee-level individual loyalty

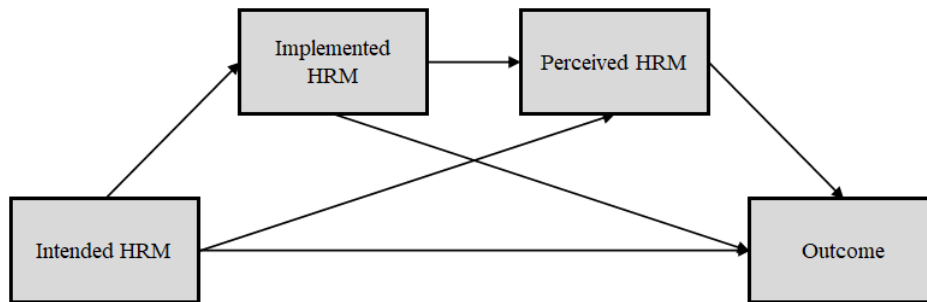


Figure 2. Hypothesis 1, intended HRM through implemented and perceived HRM

Managerial effectiveness

The centrality of line managers as implementers of HRM has been identified both conceptually and empirically. As the key actor in the delivery of HR practices to their ultimate employee recipients, the line manager has been found to be an important determinant of perceptions of HR practices by employees (Purcell & Hutchinson, 2007). While the importance of line managers is well-established, line managers are typically seen as agents of the firm for the purpose of implementing the various elements the HR system (eg. Azmi & Mushtaq, 2014; Piening et al., 2014; Sikora & Ferris, 2014), or as an alternate or a contrasting voice to that of the HR department as a delivery agent of the HR system (eg. Perry & Kulik, 2008; Renwick, 2003). This characterisation of line managers means they are at risk of being seen as simply a cog in the HRM apparatus. More pointedly, this perspective limits the scope of the role that line managers might play in influencing employee perceptions and in the firm achieving desirable outcomes, independent of their implementation of HR practices.

The influence of the characteristics and behaviours of line managers has been observed. Kilroy and Dundon (2015) tested three line manager types, the employee coach, the organisational leader and the policy enactor, and found that while the employee coach had the

strongest association with commitment and subsequent organisational behaviour, the organisational leader was the most frequently observed type. In two studies, Vermeeren and her colleagues found a stimulating leadership style by line managers influenced the amount of HR practices used, while a transformational leadership style was associated with use of more commitment-oriented HR practices (Vermeeren, 2014; Vermeeren, Kuipers, & Steijn, 2014). It is the line manager's behaviour, operating in combination with HR practice implementation or HR practice perception, that influences employee commitment and employee engagement (Alfes, Truss, et al., 2013; Gilbert et al., 2011). Employees respond to this interaction between line manager behaviour and HR practices, described by Purcell & Hutchison as "a form of symbiotic relationship between [front line managers] and HR practices" (2007, p. 3).

Expanding on how line manager behaviour influences firm outcomes, a number of paths have been identified. For instance, adopting the ability-motivation-opportunity (AMO) construct as a framework, Bos-Nehles et al. (2013) found that manager ability had a positive and significant influence on performance, and that this impact was moderated by opportunity. Trullen, Stirpe, Bonache, and Valverde (2016), also employing the AMO perspective, found that where the HR department put in place targeted initiatives to improve the AMO of line managers, the effectiveness of their implementation of HR practices also improves. The importance of HR departments in training and motivating line managers in their role as managers has been observed more broadly (Gilbert et al., 2011). Sykes et al. (2018) identified four managerial drivers which influence HR implementation: manager alignment with HRM as intended by the firm, manager prioritisation of people management, manager style, and manager capability.

Based on this prior research, there is an expectation that the characteristics, style and behaviour of managers, termed here managerial effectiveness, plays an important role in the

employee experience of HRM and ultimately, in organisational outcomes. For the purposes of this study, we define managerial effectiveness as the effectiveness of managers in managing their employees, and operationalise it around the four drivers identified by Sykes et al. (2018). Where the managers in a work group have greater alignment with HRM as intended by the firm, prioritise people management, exhibit transformational leadership styles and have capability in their people management, there is expectation that the variability between HRM as implemented by managers and HRM as perceived by employees will be lower. Managerial effectiveness is therefore expected to operate in as a moderating influence. As recommended by Bos-Nehles et al. (2013) when they explored the effectiveness of line managers' implementation of HRM, the effect of leader-member exchange was controlled, due to its potential to influence employee perceptions of HRM. The relationships anticipated are illustrated in Figure 3. This gives rise to the second hypothesis:

H2: That managerial effectiveness will moderate the influence of implemented HRM in the sequentially mediated relationship between intended, implemented and perceived HRM and the outcomes of:

- (d) Work group-level aggregated perceived performance,
- (e) Employee-level individual job satisfaction, and
- (f) Employee-level individual loyalty.

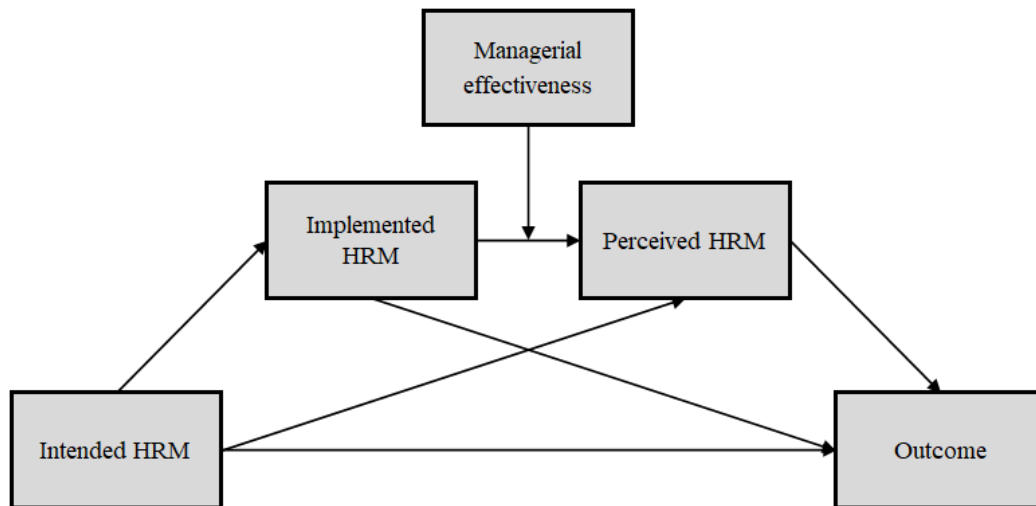


Figure 3. Hypothesis 2, intended HRM through implemented and perceived HRM, with moderation by managerial effectiveness

HRM process research

Research seeking to understand and explain the relationship between HRM and firm performance was initially dominated by understanding the content of the HR system (Bowen & Ostroff, 2004). Exploration of modes of HRM, specifically the universalistic, contingency, and configurational approaches have aided understanding of the way in which HR practices combine to form a cohesive system of practices – an HR system – with the intention of delivering certain outcomes (Delery & Doty, 1996). While the content of the HR system has been found to be an important determinant of organisational outcomes, such research has not sought to explain how or why the relationship between HRM and performance operates, nor to explain the transmission of effect from those intended HR practices to employee or organisational outcomes (Guest, 2011).

In response to the limitations of HRM content-based research – what practices define a superior and instrumental HR system – there is now a greater focus on what has been described as the process approach to HRM (Sanders et al., 2014). The process approach seeks to understand and explain the process through which employees understand and interpret the HR system (Bowen & Ostroff, 2004). Key to understanding the HRM process is

the psychological and sociological interactions internal to and between the actors within the firm. Principal actors are executive leaders and HR practitioners that set strategy and HR policy and practices, line managers who are responsible for implementing HRM and managing individuals and teams, and employees, who are the intended recipients of HR and management practices (Nishii et al., 2008; Sanders et al., 2014). The content approach is concerned with the *what* of HRM or what practices form part of the HR system. In contrast, the process approach is concerned with the *how* of HRM or how those practices transmit through the firm, and the *why* of HRM, the way in which employees explain to themselves why certain practices are implemented in the way that they are, and for what purpose they are intended.

The process approach has evolved along two related pathways. The first pathway is HR system strength. Strength in the HR system is determined by “signals [sent] to employees that allow them to understand the desired and appropriate responses and form a collective sense of what is expected” (Bowen & Ostroff, 2004, p. 204). A strong HR system is expected to positively influence HR implementation and organisational outcomes (Cafferkey et al., 2018; Gilbert et al., 2015). Fundamental to the conceptualisation of strength is that it spans the HR system in its entirety (Delmotte et al., 2012; Ostroff & Bowen, 2000). Therefore, HR system strength is expected to moderate the relationships between each level of the HR system, intended, implemented and perceived HRM. The second pathway is HR attributions. Drawing on the original work of Kelley investigating causal attribution theory (1967, 1973), employee behaviours and attitudes have been found to be influenced by the attributions employees make as to why HR practices are put in place (Nishii et al., 2008). HR attributions are important in the HR causal process model, because a misattribution can result in unintended interpretation of signals, and poor perceptions of HR practices. For example, if performance appraisals were intended to provide specific developmental feedback to

employees, but an employee attributed the appraisal process to an opportunity for their manager to criticise them and force them to work harder, then the potential for the appraisal process to have a positive impact is nullified. HR system strength, as a measure of climate (Li et al., 2011), is expected to interact with HR practices at the intended, implemented, and perceived level, while HR attributions are expected to be an important covariate to control for. The relationships anticipated are illustrated in Figure 4. It is against this avenue of research that the third hypothesis is framed as follows:

H3: That HR system strength will moderate the influence of intended HRM, implemented HRM, and perceived HRM in the sequentially mediated relationship between intended, implemented and perceived HRM and the outcomes of:

- (g) Work group-level aggregated perceived performance,
- (h) Employee-level individual job satisfaction, and
- (i) Employee-level individual loyalty.

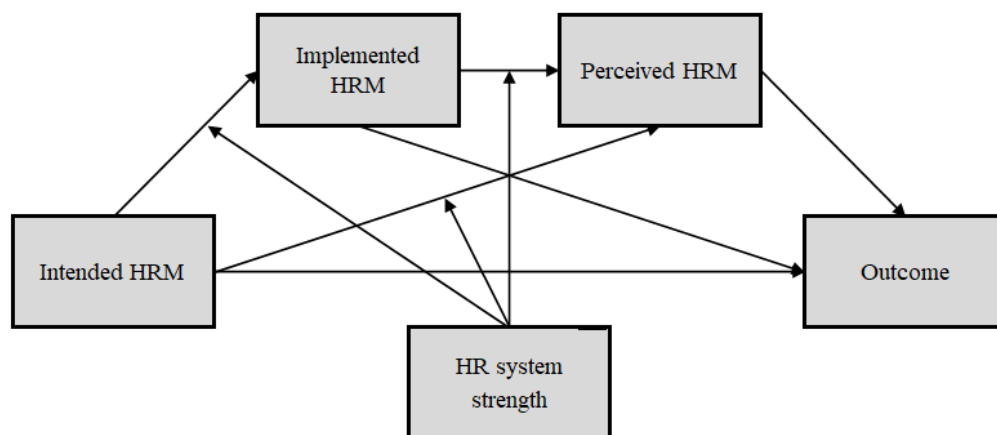


Figure 4. Hypothesis 3, intended HRM through implemented and perceived HRM, with moderation by HR system strength

Outcomes

An important consideration for any HRM research is which outcomes are of interest. As argued by both Paauwe (2009) and Purcell and Hutchinson (2007), the most proximal, closely-associated outcomes to HR practices are employee responses. This study uses two

employee responses, job satisfaction and loyalty. Job satisfaction as measured in this study is an internalised, passive measure in order to understand how the employee thinks or feels. In contrast loyalty is seen as an externalised, active measure, reflecting allegiance to the organisation in order to understand how an employee behaves (Bettencourt, Gwinner, & Meuter, 2001). These two outcomes represent a progression of employee response from internalised perception to externalised behaviour. Extending further from the individual, perceived performance measures the individual's perception of performance in a holistic manner, investigating performance in relation to clients, employees and financial outcomes.

Method

Research setting and sample

The research setting of this study is the Australian accounting industry. Consistent with many other developed economies around the world, the accounting industry in Australia is dominated by the “Big 4” professional service firms (Deloitte, EY, KPMG, PwC), who make up around 70% of the top 100 accounting firms in Australia by revenue (Tadros, 2018). The accounting industry is then made up of a number of smaller firms, frequently associated with global networks (eg. BDO, Grant Thornton, Moore Stephens), however these firms are typically only a tenth the size of the Big 4. Firms of this size are described as representing the “mid-tier” of the industry. Typically, mid-tier firms have from five to 50 partners. While both the Big 4 and the global networks that make up the mid-tier are independent across countries, nationally the forms of association between firms in the mid-tier vary. Some firms have created economically linked national firms, while others maintain independent firms in each city where they are based, and the network acts as an overarching brand name for the purposes of marketing, national coverage, and the sharing of ideas and intellectual property (Sykes & Heys, 2013). Outside the Big 4 and mid-tier, there are thousands of smaller accounting firms in Australia, ranging from single-partner firms to firms with a small number

of partners. Accounting firms in Australia, led by the Big 4, are increasingly introducing services outside their traditional accounting focus of tax and auditing toward more advisory services such as management consulting, mergers & acquisitions and legal services, and at a revenue level this has proven to be a successful strategy (Tadros, 2018). In this study the 20 largest firms in Australia were invited to participate in the research. One or more offices of eight firms agreed to participate in the research. All participating firms are in the mid-tier.

Multilevel approach

Employees across different levels, business units and offices at each participating firm were invited to participate. Employees were classified by type of respondent, executive HR leaders, line managers, and employees. Executive HR leaders included dedicated HR personnel together with the executive committee, who create or decide on HR policies and practices. Line managers included all other partners, and non-partner managers through to the level of managers that conduct formal performance reviews. Employees were all other personnel, predominantly more junior employees working in their firm's practice areas such as audit, business services and tax. A single survey instrument was used, with alteration of the stem and item language for the three types of respondent. For example, executives responded to "Our firm provides staff with a real opportunity to improve their skills through training", managers responded to "I actively provide staff with a real opportunity to improve their skills through training," and employees responded to "I am given a real opportunity to improve my skills through training." Surveys were distributed electronically by firm representatives. Due to the cross-level nature of the study, measures used data from different levels. The HR system scales, managerial effectiveness and perceived performance used data from all participants. LMX, HR attributions, job satisfaction and loyalty used data from the employee level only.

The approach taken to the HR system measures at each level means that the executive

level responses are the perceptions of what is intended by the firm, albeit perceptions of a small group who together directly determine the HR policies and practices of the firm. This will provide a richer and more accurate reflection of actual intention than a single respondent, because it reflects the collective thinking of those who directly determine those policies and practices. The manager level responses are managers' perceptions of what they personally implement. Within accounting firms, employees often have multiple managers, both a senior non-partner manager together with a partner, and in some practice areas, multiple managers in which the manager will depend on the specific project or assignment (Sykes et al., 2018). Therefore, implemented HR practices reflect the self-perception of managers as to what they personally implement.

Measures

Unless otherwise stated, all items used a five-point Likert scale, with 1 = *strongly disagree* to 5 = *strongly agree*.

HR system. The HR system measure is made up of four HR practices, training and development, remuneration and reward, employee participation, and performance management. These HR practices were selected based on a review of five exemplar studies (Arthur et al., 2016; Nishii et al., 2008; Piening et al., 2013; Van De Voorde & Beijer, 2015; Vermeeren, 2014), in which these practices were the most frequently used. These practices are a balanced representation of frequently measured practices which are central to many HR systems and represent the core aspects of a coherent HR system.

Training and development. This measure was used to understand the intensity of training and development. A five-item scale was composed of four out of the eight items in the training and development scale in Vermeeren (2014), and a single item from Yousaf, Sanders, and Yustantio (2016) which was not adequately addressed in the Vermeeren scale. Excluded items from the Vermeeren scale were either oriented toward career progression

(three items) or were not suitable for a professional service firm environment (one item).

Sample items include “I have the opportunity to take part in training, courses and workshops” and, from the Yousaf et al. scale, “I am given a real opportunity to improve my skills through training.” The original scale in Yousaf et al was a 6-point Likert-type scale, however a 5-point scale was used for this single item to match the Vermeeren scale. The Cronbach’s alpha was .91.

Remuneration and reward. This measure was used to understand remuneration satisfaction and levels of performance-based reward. A six-item scale composed of the three item rewards scale from Vermeeren (2014) and three out of four items from the remuneration scale in Yousaf et al. (2016). One item from the Yousaf scale was adapted, replacing the likelihood of a pay raise with the likelihood of promotion, because pay raises were adequately covered by items in the Vermeeren scale, while promotion was not included. The item excluded from the Yousaf scale addressed performance appraisal ratings, a construct addressed separately within the survey instrument. Sample items include “My performance plays a role in determining my salary” and “There is a strong link between how well my team performs and the likelihood of receiving a pay raise.” The Cronbach’s alpha was .90.

Employee participation. This was used to evaluate the degree to which employees were involved in decision making and participated in the firm’s management. The four-item participation scale from Vermeeren (2014) was used. Sample items include “I have the opportunity to be involved in decision-making within this firm” and “I am well informed about the views and policies of the firm.” Cronbach’s alpha was .86.

Performance management. This measure was used to understand the way that performance is managed, both formally through appraisals and informally through feedback and recognition processes. The six-item performance management scale of Kuvaas (2006), based on Meyer and Smith (2000) was used. Minor terminology changes for face validity

were made (replace “agrees” with “aligns” and replace “criticising” with “finding fault”). Sample items include “The feedback I receive on how I do my job is highly relevant” and “The feedback I receive agrees with what I have actually achieved.” Cronbach’s alpha was .88.

Managerial effectiveness. The managerial effectiveness measure is made up of four scales. These scales are based on the four drivers of implementation divergence discussed in Sykes et al. (2018), interpreted positively as drivers of effectiveness.

Alignment. This scale was used to understand the degree to which managers were aligned with the HR policies of the firm. Alignment was measured using an original, three-item scale. As described in Sykes et al. (2018), alignment is based on the manager’s active acceptance or rejection of intended HRM. Sample items include “I believe that my manager has a clear understanding of the main HR policies of the firm” and “In general, I feel that my manager implements HR policies in the way they are intended.” Cronbach’s alpha was .89.

Prioritisation. Prioritisation was used to evaluate the way that managers prioritise their employees and people management over other priorities that they have. A composite six-item scale was used comprising the complete three-item role overload scale from Bacharach, Bamberger, and Conley (1990) and three items from the 13-item role overload scale in Reilly (1982). Sample items include “My manager seems rushed in doing their job” and “My manager frequently cancels meetings with me because they are too busy.” The Bacharach et al. scale was a four-point Likert scale, ranging from 1 = *strongly disagree* to 4 = *strongly agree*. Cronbach’s alpha was .78.

Style. This measure was used to determine whether managers exhibited a transformational style. The MLQ nine-item short form scale (Bass & Avolio, 2004) was used, with the first five items, which evaluate transformational leadership, used for the measure. Sample items include “My manager seems to go beyond self-interest for the good of the

group” and “My manager generally talks optimistically about the future.” The five-point Likert scale ranged from 1 = *not at all* to 5 = *frequently, if not always*. Cronbach’s alpha was .87.

Managerial capability. This was used to assess whether managers were capable as people managers. The three-item scale was drawn from the 20-item occupational self-efficacy scale contained in Schyns and von Collani (2002). Three of the original items were adapted in the scale to specifically focus on managers in their role as people managers, for example replacing “demands in my job” with “demands in my role as a people manager,” and replacing “As far as my job is concerned” with “As far as managing staff is concerned”. Sample items include “My manager seems to meet most of the demands on them as a people manager” and “As far as managing staff is concerned, my manager seems to be a rather self-reliant person.” The six-point Likert scale ranged from 1 = *not at all true* to 6 = *completely true*. Cronbach’s alpha was .81.

Leader-member exchange. The LMX-7 scale developed by Graen and Uhl-Bien (1995) was used to measure leader-member exchange. Terminology was adjusted to align with the broader survey instrument (e.g. substituting “manager” for “leader,” so that respondents reported on their immediate manager rather than the leadership of the firm or their practice area). Sample items include “How well does your manager understand your job problems and needs?” and “I have enough confidence in my manager that I would defend and justify their decision if they were not present to do so.” The five-point Likert scale included low-end responses of *not at all*, *no*, and *strongly disagree* to high-end responses of *very often*, *a great deal*, and *extremely effective*. Cronbach’s alpha was .92.

HR attributions. A four-item scale for each of the four HR practices discussed above was used, adapting the approach taken by Nishii et al. (2008). The original scales asked respondents to respond to the five HR attributions of enhancing service quality, keeping costs

down, promoting employee wellbeing, getting the most work out of employees, and to comply with union requirements. The original attributions were adapted to be used within a professional services environment, and asked respondents whether each HR practice was provided in the way that it does (a) to help financial performance, (b) to help employee wellbeing and development, (c) to help client outcomes, and (d) because other firms have similar practices. An example scale and item is, “My firm provides remuneration, recognition and other benefits in the way that it does... In order to help employee wellbeing and development.” The five-point Likert scale ranged from 1 = *not at all* to 5 = *to a great extent*. Cronbach’s alpha for the financial performance attribution was .84, for the employee wellbeing attribution was .87, for the client outcomes attribution was .79, and for other firm similarity was .86.

Outcome measures

Perceived performance. An original three-item scale was developed for this study. The scale asked for responses in relation to clients, staff, and financial performance. Original items included “My Practice Area has very satisfied clients,” “Staff in my Practice Area are happy to be here,” and “My Practice Area consistently achieves its financial targets.” Cronbach’s alpha was .72.

Job satisfaction. The six-item job satisfaction scale from Tsui, Egan, and O'Reilly (1992) was used. Sample items include “How satisfied are you with the pay you receive for your job?” and “Considering everything, how satisfied are you with your current job situation?” The Likert scale ranged from 1 = *very dissatisfied* to 5 = *very satisfied*. Cronbach’s alpha was .86.

Loyalty. The four-item commitment to parent company scale used in Gregersen and Black (1992) was used. The adaptation replaced “parent company” with “firm.” Sample items include “I talk up my firm to my friends as a great place to work” and “What my firm stands

for is important to me.” Cronbach’s alpha was .91.

Data preparation and analysis

This study incorporated three variables that referenced multiple scales. The HR system variable included the training and development, remuneration and reward, involvement and participation, and performance management scales. The managerial effectiveness variable included the alignment, prioritisation, style, and capability scales. A principal components factor analysis (PCFA) with varimax rotation was performed for HR system and managerial effectiveness to determine how to join the scales as a single measure. HR system strength was derived using a dispersion composition model (Dello Russo et al., 2018). These processes are now described.

The PCFA for the HR system is shown at Table 1, drawing on data from all respondents. All items except for one loaded on their expected primary factor with a coefficient of at least .65. Five items had a cross loading between .35 and .45 (Ford, Maccallum, & Tait, 1986; Hair, Anderson, Tatham, & Black, 1995; Kiffin-Petersen & Cordery, 2003). With the exception of one item, the differential between all factors was at least .25. The one item that presented a lower factor loading, of .59, and had a cross loading of .42 (with a differential of .17) was in the involvement and participation scale, with the secondary factor for the analysis being remuneration and reward. The employee version of the item was “I am well informed about the views and policies of the firm.” This was the only item that addressed the communication of the firm to the employee. Therefore, notwithstanding the PCFA results, the item was retained in the involvement and participation scale. No other potential confounding measures exist within the HR system construct, and the scales were joined by summing the means of each scale to form a single measure. The Cronbach’s alpha for the single measure at the intended level was .92, at the implemented level was .91, and at the perceived level was .95. This approach is consistent with Vermeeren

(2014). The reasoning for joining practices draws from Delery (1998) and Wright and Boswell (2002), who argue that an HR system is more than the sum of its parts.

Table 1. Principal components factor analysis for HR system

Items	1	2	3	4
Training and development				
TRA1		.80		
TRA2		.79		
TRA3		.77		
TRA4		.75		
TRA5		.79		
Remuneration and reward				
REM1	.78			
REM2	.68			
REM3	.69	.33		
REM4	.75		.37	
REM5	.69			
REM6	.79			
Participation and involvement				
PAR1				.81
PAR2				.80
PAR3				.83
PAR4			.42	.59
Performance management				
PER1			.75	
PER2		.32	.66	
PER3	.42		.71	
PER4			.67	
PER5			.70	

Only values > .30 are displayed

The PCFA for managerial effectiveness is shown at Table 2, drawing on data from all respondents. One item loaded at .63, while another, PRI3, loaded onto a factor at -.58. The item that loaded negatively was removed from the analysis, and the PCFA was rerun. All items except one loaded onto their primary factor with a coefficient of at least .65, with the one exception loading at .62. Three items had a cross loading of between .35 and .45 (Ford et al., 1986; Kiffin-Petersen & Cordery, 2003). The differential between all factors was at least .25. Therefore, after the removal of the single item, no other confounding measures appear to exist within the managerial effectiveness construct. The underlying scales included different scoring ranges therefore, to ensure an equal weighting of each scale, the average of each scale was summed to form a single measure. The Cronbach's alpha for the single measure was .84. While managerial effectiveness is a relatively new measure, a similar theoretical basis is taken as we took with the HR system, in which the synergies found between the components of managerial effectiveness create a construct that is separate from the individual measures within the construct.

Accounting firms are typically organised around work groups known as “practices” or “practice areas” such as audit and tax. These work groups were used for data aggregation at level 2, while the firm was used for data aggregation at level 3. For the HR system measure, the level 3 aggregate was the mean score of all HR executive responses for each firm, while the level 2 aggregate was the mean score of all manager responses for each practice area within each firm. For the managerial effectiveness measure, which was aggregated at the work group level, the aggregate was the mean score of all responses for each practice area within each firm. For the perceived performance measure, which was aggregated at the work group level, the aggregate was the mean score of all responses for each practice area within each firm.

Table 2. Principal components factor analysis for managerial effectiveness measure

Items	Initial analysis				Final analysis			
	1	2	3	4	1	2	3	4
Alignment								
ALI1			.90				.89	
ALI2			.87				.87	
ALI3	.36		.82		.37		.82	
Prioritisation								
PRI1		.81				.82		
PRI2		.82				.82		
PRI3	-.58							
PRI4		.81				.81		
PRI5		.79				.79		
PRI6		.63				.62		
Style								
STY1	.78				.78			
STY2	.76				.78			
STY3	.65				.73			
STY4	.71				.79			
STY5	.73			.32	.75			
Capability								
CAP1	.40			.76	.43			.75
CAP2	.41			.76	.44			.74
CAP3				.83				.83

Only values > .30 are displayed

HR system strength was derived using the dispersion compositional model (Chan, 1998), consistent with Dello Russo et al. (2018). The standard deviation of the HR system measure within each practice area was used to operationalise HR system strength. In light of larger standard deviations representing greater variability in the population, standard deviations were multiplied by -1 to create a meaningful measure (González-Romá & Hernández, 2014)

Results

A total of 424 responses were received, of which 17 responses had substantial missing data, leaving 407 usable responses. The gender of the respondents was 147 (36.1%) male and 163 (40.1%) female, while 97 (23.8%) did not provide a response in relation to gender. The

majority of respondents, 222 (54.5%), were either professionally qualified (eg. Chartered Accountant) or held masters-level qualifications, while 68 (16.7%) respondents held a bachelor or diploma level degree, and 117 (28.8%) respondents were either not qualified or elected not to respond to the question. There were 56 responses at the executive level, 117 responses at the manager level, and 234 responses at the employee level. While some firms had only a single practice area with responses, most firms had between 2 and 5 practice areas with responses.

Descriptive statistics and correlations are provided in Table 3. Leader-member exchange had a moderate significant relationship with managerial effectiveness. HR attributions had a weak relationship with HR system strength, though the relationship of two attributions, financial performance and other firm similarity, were significant. Three of four HR attributions (financial performance, employee wellbeing and client outcomes) had a strong, significant relationship with one another. Intended HRM had a weak significant relationship with implemented HRM, while implemented HRM had a weak and non-significant relationship with perceived HRM. Perceived HRM had a strong, significant relationship with each of the employee outcomes, while a weak but significant relationship was found with work group level perceived performance.

The hypotheses were tested using serial mediated regressions and serial moderated mediated regressions, in the manner described by Hayes (2017). Hypothesis 1 was tested using Model 6 of the PROCESS macro, with 5,000 bootstrap samples and a 95% confidence interval, hypothesis 2 was tested using Model 91 of the PROCESS macro, with 5,000 bootstrap samples and a 95% confidence interval, and hypothesis 3 was tested using Model 92 of the PROCESS macro, with 5,000 bootstrap samples and a 95% confidence interval. Each test was run with controls for sex, age and education, and the results did not differ from those presented.

Table 3. Correlations, reliabilities and descriptive statistics

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Leader-member exchange ^a	3.75	.82	(.92)												
2. Attribution - financial performance ^a	3.49	.85	.48***	(.84)											
3. Attribution - employee wellbeing ^a	3.46	.90	.57***	.74***	(.87)										
4. Attribution - client outcomes ^a	3.52	.79	.44***	.81***	.74***	(.79)									
5. Attribution - other firm similarity ^a	3.18	.87	.24**	.57***	.53***	.53***	(.86)								
6. Intended HRM ^b	3.18	.26	.09	.07	.03	.04	-.20**	(.92)							
7. Implemented HRM ^c	2.99	.27	-.01	-.02	-.03	-.02	-.10	.14	(.91)						
8. Perceived HRM ^a	2.81	.60	.72***	.66***	.82***	.68***	.42***	.07	-.03	(.95)					
9. Managerial effectiveness ^d	3.67	.20	.29***	.28***	.25**	.19*	.14	.54***	.12	.26***	(.84)				
10. HR system strength ^d	-2.35	.54	.25**	.17*	.15	.13	.17*	-.08	-.05	.21*	.10	n/a			
11. Job satisfaction ^a	3.65	.77	.72***	.46***	.58***	.48***	.31***	.15	-.02	.70***	.23**	.10	(.86)		
12. Loyalty ^a	3.76	.91	.46***	.38***	.59***	.49***	.23**	.14	.01	.57***	.20*	-.01	.69***	(.91)	
13. Perceived performance ^d	3.74	.28	.16*	.08	.10	.00	.10	.19*	.34***	.15	.42***	.21*	.10	.05	(.72)

* $p < .05$, ** $p < .01$, *** $p < .001$ Cronbach's alpha in parentheses on the diagonal. n/a = composite or synthetic measure, no Cronbach's alpha

^a Individual-level measure using employee data, ^b Aggregated firm-level measure using executive data, ^c Aggregated practice area-level measure using line manager data, ^d Aggregated practice area-level measure using data from all participants

Hypothesis 1 proposed a serial mediated relationship between intended HRM, implemented HRM, perceived HRM and outcomes. **Error! Not a valid bookmark self-reference.** presents the results of the analysis. A significant relationship was found between intended HRM and implemented HRM ($B = .18, p < .05$). Neither intended HRM nor implemented HRM had a significant relationship with perceived HRM. Perceived HRM had a significant relationship with job satisfaction ($B = 1.07, p < .001$), loyalty ($B = .50, p < .001$) and perceived performance ($B = .05, p < .05$). Implemented HRM had a significant relationship with perceived performance ($B = .23, p < .001$). The serial mediation from intended HRM to implemented HRM, then to perceived performance was found to be significant (.04, 95% confidence .00, .08). No other serial mediations were significant.

Table 4. Hypothesis 1 serial mediation

	Implemented HRM <i>B</i>	Perceived HRM <i>B</i>	Job satisfaction <i>B</i>	Loyalty <i>B</i>	Perceived performance <i>B</i>	
Intended HRM	.18*	.19	.37	.25	.02	
Implemented HRM		-.09	-.04	.01	.23***	
Perceived HRM			1.07***	.69***	.05*	
<i>R</i> ²	.03*	.01	.50***	.34***	.16***	
<i>F</i>	4.50	.56	54.00	27.17	10.10	
Mediation path analysis	Job satisfaction		Loyalty		Perceived performance	
	<i>B</i> (<i>SE</i>)	95% CI	<i>B</i> (<i>SE</i>)	95% CI	<i>B</i> (<i>SE</i>)	95% CI
Total effect	.54 (.28)	-.01, 1.08	.37 (.22)	-.06, .81	.07 (.05)	-.04, .18
Direct effect of intended HRM with outcomes	.37 (.20)	-.03, .76	.25 (.18)	-.11, .62	.02 (.05)	-.08, .12
Indirect effects:						
Intended HRM- implemented HRM- outcome	-.01 (.03)	-.09, .06	.00 (.03)	-.06, .07	.04 (.02)	.00, .08
Intended HRM-perceived HRM-outcome	.20 (.20)	-.17, .62	.13 (.13)	-.11, .40	.01 (.01)	-.01, .03
Intended HRM- Implemented HRM- perceived HRM-outcome	-.02 (.04)	-.10, .05	-.01 (.02)	-.07, .03	-.00 (.00)	-.01, .00

* $p < .05$, ** $p < .01$, *** $p < .001$, CI = Confidence Interval, *SE* = standard error

Hypothesis 2 proposed a serial mediated relationship between intended HRM, implemented HRM, perceived HRM and outcomes, moderated by managerial effectiveness and with LMX as a covariate. Table 5 presents the results of the analysis. A significant relationship was found between intended HRM and implemented HRM ($B = .18, p < .05$). Intended HRM did not have a significant relationship with perceived HRM. A significant relationship was found between implemented HRM and perceived HRM ($B = 5.56, p < .05$).

Table 5. Hypothesis 2 serial mediation moderated by managerial effectiveness

	Implemented HRM <i>B</i>	Perceived HRM <i>B</i>	Job satisfaction <i>B</i>	Loyalty <i>B</i>	Perceived performance <i>B</i>
Control: LMX	-.01	.36***	.36***	.06	.01
Intended HRM	.18*	-.07	.31	.24	.08
Implemented HRM		5.56*	-.05	.01	.21***
Perceived HRM			.58***	.61***	.03
Managerial effectiveness		6.07**			
Implemented HRM x managerial effectiveness		-.38*			
R^2	.03	.54***	.60***	.34***	.18***
F	2.28	37.25	59.17	20.68	8.66

	Job satisfaction		Loyalty		Perceived performance	
	<i>B (SE)</i>	95% CI	<i>B (SE)</i>	95% CI	<i>B (SE)</i>	95% CI
Direct effect of intended HRM on outcomes	.31 (.18)	-.05, .67	.24 (.18)	-.12, .61	.08 (.05)	-.02, .17
Indirect effects:						
Intended HRM- implemented HRM- outcome	-.01 (.03)	-.08, .04	.00 (.03)	-.07, .07	.04 (.02)	.00, .07
Intended HRM-perceived HRM-outcome	-.04 (.09)	-.20, .15	-.04 (.09)	-.22, .15	-.00 (.01)	-.02, .01
Moderated indirect effect of intended HRM through implemented HRM then perceived HRM						
Managerial effectiveness						
Low	.02 (.02)	-.01, .08	.02 (.02)	-.01, .08	.00 (.00)	-.00, .01
Medium	-.00 (.01)	-.03, .02	-.00 (.01)	-.04, .02	-.00 (.00)	-.00, .00
High	-.02 (.02)	-.08, .01	-.03 (.02)	-.08, .01	-.00 (.00)	-.01, .00

* $p < .05$, ** $p < .01$, *** $p < .001$, CI = Confidence Interval, SE = standard error

Managerial effectiveness ($B = 6.07, p < .01$) and LMX ($B = .36, p < .001$) had a significant relationship with perceived HRM. The interaction between implemented HRM and managerial effectiveness was found to have a significant, negative effect on perceived HRM ($B = -.38, p < .05$). Perceived HRM was found to have a significant relationship with job satisfaction ($B = .58, p < .001$) and loyalty ($B = .61, p < .001$). Implemented HRM was found to have a significant relationship with perceived performance ($B = .21, p < .001$). The serial mediation from intended HRM to implemented HRM, then to perceived performance was found to be significant (.04, 95% confidence .00, .07). No other serial mediations, nor the moderated serial mediation, were significant. A graph of the interaction effect of implemented HRM and managerial effectiveness, shown at Figure 5, reveals that where low levels of implemented HRM and high levels of managerial effectiveness are present, perceived HRM is at its highest, while at high levels of implemented HRM, managerial effectiveness has negligible differentiation on perceived HRM. The graph was generated in the manner described by Hayes (2017), with moderator values at the 16th, 50th and 84th percentiles.

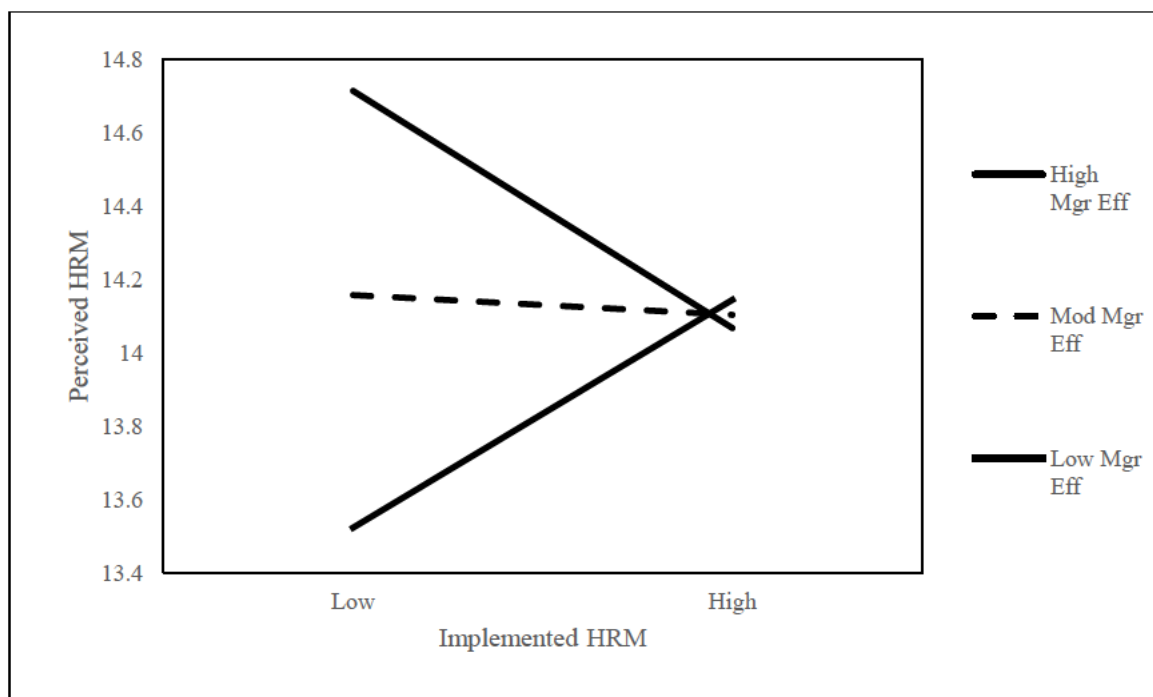


Figure 5. Implemented HRM and managerial effectiveness interaction

Hypothesis 3 proposed a serial mediated relationship between intended HRM, implemented HRM, perceived HRM and outcomes, moderated by HR system strength and controlled for HR attributions. Table 6 and Table 7 present the results of the analyses. Intended HRM was not found to have a significant relationship with implemented HRM. HR system strength was found to have a non-significant relationship with implemented HRM ($B = 5.72, NS$). Neither intended HRM or implemented HRM was found to have a significant relationship with perceived HRM. HR system strength was found to have a non-significant relationship with perceived HRM ($B = 4.16, NS$). HR attributions to employee wellbeing ($B = .52, p < .001$) and client outcomes ($B = .17, p < .05$) had a significant relationship with perceived HRM. Job satisfaction was found to have a significant relationship with implemented HRM ($B = 2.78, p < .05$), perceived HRM ($B = 2.13, p < .001$) and HR system strength ($B = -23.48, p < .05$), along with the interaction of implemented HRM and HR system strength ($B = 1.13, p < .05$), and the interaction of perceived HRM and HR system strength ($B = .38, p < .05$). Loyalty was found to have a significant relationship with HR attributions to financial performance ($B = -.29, p < .05$) and employee wellbeing ($B = .54, p < .001$). Perceived performance was found to have a significant relationship with HR attribution to client outcomes ($B = -.13, p < .001$), intended HRM ($B = .65, p < .01$), implemented HRM ($B = .84, p < .01$) and HR system strength ($B = -8.32, p < .01$), along with the interaction of intended HRM and HR system strength ($B = .26, p < .05$). The moderated serial mediation from intended HRM to perceived performance was significant when HR system strength was high (.15, 95% confidence .01, .28). The moderated serial mediation from intended HRM through implemented to perceived performance was significant when HR system strength was moderate (.06, 95% confidence .01, .13). The moderated serial mediation from intended HRM through perceived HRM to job satisfaction and to perceived performance was significant (job

satisfaction .24, 95% confidence .00, .55; perceived performance .02, 95% confidence .00, .05). No other moderated serial mediations were significant.

Table 6. Hypothesis 3 serial mediation moderated by HR system strength

	Implemented HRM <i>B</i>	Perceived HRM <i>B</i>	Job satisfaction <i>B</i>	Loyalty <i>B</i>	Perceived performance <i>B</i>
Attribution – financial performance	-.04	.03	-.02	-.29*	.00
Attribution - employee wellbeing	.03	.52***	.05	.54***	.01
Attribution – client outcomes	.05	.17*	-.09	.21	-.13***
Attribution – other firm similarity	-.05	-.02	.09	-.07	.04
Intended HRM	-.56	.34	.23	.01	.65**
Implemented HRM		-.79	2.78*	1.67	.84**
Perceived HRM			2.13***	.77	.19
HR system strength	5.72	4.16	-23.48*	-12.74	-8.32**
Intended HRM x HR system strength	-.34	.06	.01	-.06	.26*
Implemented HRM x HR system strength		-.31	1.13*	.68	.24
Perceived HRM x HR system strength			.38*	.18	.05
<i>R</i> ²	.09	.69***	.56***	.43***	.35***
<i>F</i>	1.94	33.09	14.96	8.83	6.47

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 7. Hypothesis 3 HR system strength moderated mediation results

	Job satisfaction		Loyalty		Perceived performance	
	<i>B (SE)</i>	95% CI	<i>B (SE)</i>	95% CI	<i>B (SE)</i>	95% CI
Moderated direct effect of intended HRM						
Low HR system strength	.19 (.33)	-.46, .84	.17 (.30)	-.43, .77	-.08 (.08)	-.24, .08
Medium HR system strength	.20 (.24)	-.27, .67	.14 (.22)	-.29, .57	.04 (.06)	-.07, .16
High HR system strength	.20 (.28)	-.35, .76	.12 (.26)	-.39, .63	.15 (.07)	.01, .28
Moderated indirect effect of intended HRM through implemented HRM						
Low HR system strength	-.16 (.17)	-.57, .13	-.10 (.11)	-.35, .11	.06 (.07)	-.16, .15
Medium HR system strength	.03 (.05)	-.07, .13	.02 (.05)	-.08, .12	.06 (.03)	.01, .13
High HR system strength	.06 (.07)	-.07, .21	.03 (.05)	-.06, .16	.04 (.05)	-.04, .16
Moderated indirect effect of intended HRM through perceived HRM						
Low HR system strength	.17 (.19)	-.16, .61	.04 (.07)	-.04, .22	.01 (.01)	-.01, .04
Medium HR system strength	.24 (.14)	.00, .55	.07 (.05)	-.01, .19	.02 (.01)	.00, .05
High HR system strength	.31 (.18)	-.01, .70	.09 (.07)	-.02, .27	.02 (.02)	-.01, .08
Moderated indirect effect of intended HRM through implemented HRM then perceived HRM						
Low HR system strength	.03 (.08)	-.18, .17	.01 (.03)	-.06, .06	.00 (.01)	-.01, .01
Medium HR system strength	-.02 (.03)	-.10, .03	-.01 (.01)	-.03, .01	.00 (.00)	-.01, .00
High HR system strength	-.03 (.04)	-.13, .04	-.01 (.01)	-.04, .01	.00 (.00)	-.01, .00

CI = Confidence Interval, *SE* = standard error

The results of each hypothesis are now summarised. Hypothesis 1 suggested that a serial mediation would be found across intended, implemented and perceived HRM, then to each of the outcome measures. While significant relationships were found between intended and implemented HRM, between implemented HRM and perceived performance, and between perceived HRM and all outcome measures, only one serial mediated pathway was found to be significant, intended HRM, to implemented HRM, to perceived performance. We therefore conclude that hypothesis 1 has very limited support. Hypothesis 2 suggested that a serial mediation would be found across intended, implemented and perceived HRM, then to each of the outcome measures, with managerial effectiveness moderating the implemented-perceived HRM relationship. The only mediation pathway found to be significant was

intended HRM, to perceived HRM, to perceived performance, and none of the moderation results were found to be significant. We therefore conclude that hypothesis 2 has very limited support. Hypothesis 3 suggested that a serial mediation would be found across intended, implemented and perceived HRM, then to each of the outcome measures, with HR system strength moderating the intended-implemented HRM, implemented-perceived HRM and intended-perceived HRM relationships. Significant relationships were found where high HR system strength moderated the effect of intended HRM on perceived performance, and where medium HR system strength moderated the effect of intended HRM through implemented HRM on both job satisfaction and perceived performance. We therefore conclude that hypothesis 3 has limited support.

Discussion

This study has sought to address the way in which intended HR practices influence both employee and practice area performance outcomes through the implementation and perception of those practices and the moderating roles of managerial effectiveness and HR system strength. Adopting a moderated serial mediation approach, the study aimed to identify and explain sequential or serial pathways in the HRM-performance relationship. These results provide new evidence that emphasises both the complexity of the pathways through which HRM can influence performance, and the need to integrate constructs outside the traditional content-based HRM to properly understand this relationship.

The study makes a number of important findings that contribute to theory. While previous research suggests an expectation of a clear, sequential relationship between intended HRM, implemented HRM, perceived HRM, and outcomes, this study did not find such a relationship, demonstrated by results largely failing to support Hypothesis 1. While it is clear there is a strong relationship particularly between perceived HRM and employee outcomes of job satisfaction and loyalty, the results suggest a break down in the serial pathway between

both intended and implemented HRM, and perceived HRM. This result suggests that employee perceptions of HRM do not hold a direct relationship with executive-level intentions nor manager-level implementation. Rather, if a relationship does exist, it is likely to be indirect, potentially with a combination of moderating and mediating influences. Such influences are likely to include psychological or sociological mediators, such as the employee-organisation relationship and the psychological contract (Kuvaas, 2008; Scheel, Rigotti, & Mohr, 2013), or moderators such as firm strategy (Han, Liao, Taylor, & Kim, 2018; Hitt et al., 2001). Alternatively, the results may point to a high level of disagreement amongst managers. A high level of within-level disagreement at either the intended or implemented levels would make sense of non-significant results.

The expectation of managerial effectiveness moderating the serial relationship between intended HRM, implemented HRM, perceived HRM and the outcome measures was not found, demonstrated by results largely failing to support Hypothesis 2. However, within the relationships tested for Hypothesis 2 the moderated relationship between implemented HRM and perceived HRM is notable. The highest levels of perceived HRM were observed when managerial effectiveness was high and implemented HRM was low. There are a number of potential explanations for this observation. First, it may be that good management is able to neutralise a poor HRM system, as suggested by Purcell and Hutchinson (2007). This explanation is reinforced by the interaction between low levels of managerial effectiveness and implemented HRM, whereby there are better perceived HRM results as implemented HRM increases, suggesting that good HRM can counteract poor management. More confronting however is that where there are high levels of implemented HRM and high levels of managerial effectiveness, the perceived HRM outcomes are lower than where implemented HRM is low. This result suggests a conflict between these two forces. It may be that employees who are “managed well” place less value in HR practices, and so despite effective

implementation, the perception of the impact or relevance of those practices is lower.

Alternatively, it may mean that “good” managers feel compelled to devote time and attention into implementing HRM rather than into their role of managing employees, detracting from the employee experience. These findings provide further weight to the emerging conflict of the role of line managers, as multidimensional actors rather than simple agents of the HR function, as highlighted recently by Kehoe and Han (2019). These findings call into question whether good management and good HRM can optimise outcomes together, or whether firms should aim to have one or the other.

HR system strength, widely discussed in the literature as being central to the process of HR practices transmitting through levels, was found to have limited support in this study, demonstrated by the results of Hypothesis 3. High levels of HR system strength moderated the effect of intended HRM on perceived performance, while medium levels of HR system strength moderated the effect of intended HRM through perceived HRM on both job satisfaction and perceived performance. While this evidence does not give grounds for a strong assertion of the role of HR system strength, it does support previous evidence for the importance of HR system strength in the transmission of HR practices to outcomes. Through the relationships tested as part of Hypothesis 3, this study provides new insights into the role of HR attributions. The strong and significant correlation between attributions of financial performance, employee wellbeing, and client outcomes warrants attention. It may be that multiple, concurrent attributions of equal strength can be made by employees. However, employees may be confused by messages from firm leaders, and cannot distinguish the reason for certain HR practices. Further, the regression results in which HR attributions are controlled for found effects across the relationship between intended, implemented and perceived HRM and outcome measures that were generally stronger than either controlling for LMX or without controls. The larger effect size when HR attributions are controlled for

provides support for the expectation that HR attributions play an important role in the relationship between HRM and outcomes.

In summary, while the results were surprising insofar as they did not provide conclusive support for either the HR causal process model nor the expected moderating influences on it, the results do open up new questions for research. It may be that an alternative model specification can explain how these relationships operate (Vandenberg & Grelle, 2009). Of particular note for researchers is the lack of a significant relationship between the earlier stages of the HR causal process model, intended and implemented HRM, and employee-perceived HRM. Future research focused on this point of the relationship to explain the way that preceding steps influence employee perceptions will be important for advancing understanding. Moreover, the role managerial effectiveness plays in employee perceptions and in employee outcomes requires further research to understand the way “good” management and “good” HRM work together and independently to achieve outcomes.

These findings have implications for practitioners. Most notably, the findings around managerial effectiveness and implemented HRM should inform practitioners as to the focus of their efforts. While the results support the need for investment in HR systems, there is evidence to suggest that strong managerial training programs, in which managers are developed in their role as people managers, will benefit the organisation. Further, practitioners need to consider the messages they are sending employees regarding the purpose of HR practices. There is some suggestion in these findings that employees put equal weight on multiple attributions. Where practitioners are specific in their intentions, it is more likely that employees will make correct attributions, enhancing the effectiveness of practices.

This study is not without its limitations. The research was conducted in medium-sized accounting firms in Australia, and thus the generalisability of these findings is limited until further research supports these initial results. One of the central constructs of the study,

managerial effectiveness, is not widely explored in the literature to date, and therefore the conceptualisation of this construct and scales developed require validation by further research before it can be relied upon. Another of the constructs, HR system strength, was measured using a dispersion compositional model, and so results related to HR system strength should be evaluated with a direct scale before the results relating to this construct can be relied upon. Further, while the analytical design of the study, adopting a serial moderated mediation approach, sought to go some way to inferring the causal direction of relationships, the study is cross-sectional, and therefore cannot reliably claim causality without longitudinal data. Finally, the intercorrelations observed amongst three of the attribution measures suggests that while there may be similar, independent responses, it may be that respondents may not have distinguished between these attributions, thereby suggesting that the results of hypothesis 3 should be treated with caution.

Conclusion

This study has provided important evidence to further understanding of the HRM-performance link. The results point to new pathways for research, particularly around the relationship between intended and implemented HRM, and perceived HRM, together with the role of line manager effectiveness and strength in the HR system. While the nature of these relationships requires further development and understanding, this study provides a means for deepening knowledge of the HRM-performance link.

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Conclusion to Study Three

Given the evidence from prior research the findings of Study 3 were unexpected. The sequential relationship between HRM as intended by the firm, implemented by line managers, and perceived by employees was not clearly observed. While there was expectation that there may be indirect or interactive influences on this pathway, interaction with managerial effectiveness was not observed, and interaction with HR system strength was only partially observed. Although surprising, the results provide an important contribution to understanding, and guidance for future research. The lack of a direct observable relationship, and a largely absent moderated relationship between both intended and implemented HRM and perceived HRM, points to the need for further investigation of the indirect relationship between each level, either through mediation or through interaction with moderators. The strength of the relationship between perceived HRM and both managerial effectiveness and LMX are suggestive of a role for these phenomena in employee perceptions, perhaps independent of the intended-implemented-perceived causal chain. The findings in relation to HR system strength and HR attributions both suggest that these are phenomena that play a role in the HR causal process model, though the nature of the role is not clear. The strong relationship observed between perceived HRM and the employee outcomes of job satisfaction and loyalty provide a basis for further exploring this relationship, which is the objective of Study 4.

Chapter 5

The transmission of employee-perceived HRM into employee outcomes

Introduction to Study Four

This chapter presents the final study of the research project and of this thesis. Where Study 3 investigated the entire length of the causal process model, Study 4 focuses specifically at one of the critical points of the process, the point at which employee-perceived HR practices transmit into employee outcomes. The perceived HRM-employee outcomes point of the causal process model is seen as the “hinge point” in the overarching relationship, because it is the point at which HR practices intersect with outcomes. However, the relationship is not as simple as practices-to-outcomes. Seeking to understand the relationship through the employee-organisation relationship, this study concerns itself with the mediated relationship between perceived HR practices and employee outcomes. If the HRM-performance link is to be fully understood, it is interactions at this critical point in the causal chain that may unlock understanding at a much deeper level. This study draws on the employee subset of data collected in Study 3.

This study was accepted and presented at the Academy of Management Annual Meeting on 12th August 2019 in Boston, United States of America. Feedback received from reviewers and at the conference presentation has been incorporated into the current version of this paper.

This paper has been prepared according to the publication guidelines of *Human Resource Management Journal*.

**Through the looking glass: an exploration of the virtuous circle of
relationships, perceptions, behaviours and outcomes and their interaction
with human resource enablers**

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This study was accepted and presented at the Academy of Management Annual Meeting on 12th August 2019 in Boston, United States of America. Feedback from peer review and from colleagues during proceedings has been incorporated in the study.

Author contribution:

Mr Matthew Sykes was responsible for the design of this study, collection of data, analysis and write-up of this paper. Dr Andrew Heys and Associate Professor Denise Jepsen provided research supervision through all stages of the research.

Abstract

The link between HR practices as perceived by employees and employee attitudinal outcomes draws increasing attention from researchers as this relationship plays a central, key role in explaining the relationship between HRM and organisational performance. It is through this relationship that the delivery of HR practices translates into employee attitudes. However, the mediation of the relationship is not well understood. Drawing from a survey of employees of eight Australian accounting firms ($n = 237$) and adopting a parallel and serial multiple mediation approach, this study provides new evidence for the way the perceived HRM-employee outcome relationship is mediated. Findings point toward an expectation of a mediated relationship that includes both bi-directional, reciprocal mediator interactions, and sequential mediator interactions, which mediate the perceived HRM-employee outcome relationship.

Keywords: employee outcomes, mediated relationship, perceived HRM

Introduction

A substantial body of research has established compelling evidence for the relationship between human resource management (HRM) practices and organisational performance (Combs et al., 2006; Huselid, 1995; Subramony, 2009). Although there have been sustained calls for research to explain the nature and causal direction of this relationship (Godard, 2004; Wall & Wood, 2005), to date there is no definitive description for the way HR practices translate into organisational outcomes (Brewster et al., 2013). Research seeking to explain the HRM-performance link has centred on a number of promising lines of inquiry, such as the centrality of line managers in the implementation of HRM (Chen et al., 2011; Sikora & Ferris, 2014), organisational ambidexterity and HR flexibility (Chang, 2015; Ketkar & Sett, 2009), and the divergence in transnational HRM (Brookes, Brewster, & Wood, 2017; Cooke, Wood, Wang, & Veen, 2019). Research focused on the way in which HR systems and practices transmit through the intention, implementation and employee perception to outcomes and the mechanisms that enable that, such as HR system strength and HR attributions, termed the HR causal process model, is bringing new understanding to the mechanics of the relationship between HRM and performance (Sykes et al., 2019a; Sykes, Heys, & Jepsen, 2019b). A central theory to the HR causal process model is the strength in the HR system (Bowen & Ostroff, 2004). HR system strength posits that HR practices send signals to employees, which are interpreted as part of an overall HR system, which will in turn create either a strong or a weak workplace climate, reinforcing the signalling and interpretation process (Ostroff & Bowen, 2016). The levels-based approach of intended, implemented and perceived HRM (Wright & Nishii, 2013) is an increasingly researched framework that integrates with HR system strength. The levels-based approach contained in the HR causal process model suggests that the causal chain flows from HRM as intended by the organisation, to HRM as implemented by line managers, to HRM as perceived by

employees (Piening et al., 2014; Purcell & Hutchinson, 2007). It is at this point of perceived HRM that effects on performance occur, namely at the individual level, then at the work unit level, and that such individual improvements in performance ultimately cause aggregated improvements in performance at the organisational level (Gilbert et al., 2015).

From an outcomes and performance perspective, the causal flow is also a destination of inquiry. Paauwe (2009) suggests three categories of performance outcomes for HRM: financial outcomes (such as revenue and profit), organisational outcomes (such as productivity, product and service quality), and HR-related outcomes (such as employee satisfaction and turnover intentions). The direct association of financial outcomes with HRM at any level is problematic due to the time lag between HR interventions and their financial effects, the many additional variables that influence financial performance, and the intermediated steps between HR interventions and financial performance (Guest, 1997; Guest et al., 2003; Paauwe, 2009). Therefore, outcomes that are more closely associated with HR interventions by their direct association with the workforce have the potential to demonstrate a less indirect association (Guest, 1997; Jiang, Lepak, Hu, et al., 2012; Korff et al., 2017). In recent research HR or employee-related outcomes have been more closely associated with HR interventions, and are described as the necessary first step in the sequence of impact of HR interventions (Dyer & Reeves, 1995; Kehoe & Wright, 2013; Marescaux et al., 2013). Beyond the critical role that employee outcomes have in the causal chain, there is an argument that employee outcomes are a worthy end in themselves (Edgar & Geare, 2005), which warrants their measurement and sustained research.

The need for further examination of the indirect relationship between the perception of HRM by employees and their subsequent reaction and response to that perception has been identified by Sykes et al. (2019a). The relationship between perceived HRM and employee outcomes is expected to be intermediated, rather than direct. Grounded in the psychological

contract (Rousseau, 2001; Wright & Nishii, 2013) and social exchange theories (Coyle-Shapiro & Shore, 2007; Kuvaas, 2008), employee perception of HR practices will go through an interpretation process before generating a reaction (Wright & Nishii, 2013). This interpretation process is influenced by the employee-organisation relationship (EOR) (Kuvaas, 2008). EOR is used as “an overarching term to describe the relationship between the employee and the organisation” (Shore et al., 2004, p. 292). Fundamental to the EOR are the three aspects of social exchange, relationship, reciprocity and exchange (Coyle-Shapiro & Shore, 2007; Eldor & Vigoda-Gadot, 2017). The EOR includes concepts such as perceived organisational support, leader-member exchange, commitment, and justice (Kuvaas, 2008; Shore et al., 2004). The quality of reciprocity felt by employees (Wu et al., 2006), will either result in a positive or negative reaction to perceived messages sent by an organisation through its HR system. EORs therefore are an important mediating influence on the translation of perceived HRM to employee outcomes. Figure depicts the overarching mediated relationship that is being investigated.

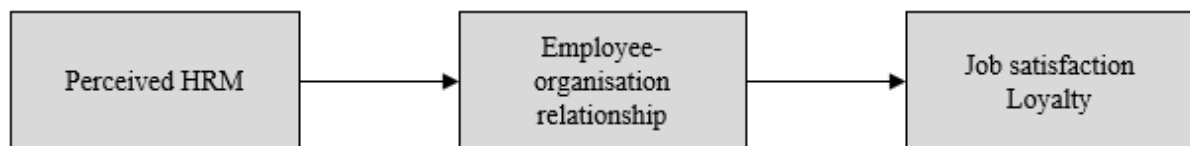


Figure 1. Mediation of the perceived HRM-outcome relationship by the EOR

With a focus on the professional service firm (PSF) sector, the present study adopts a single level parallel and sequential mediation design to examine the relationship between perceived HRM, the end-point of the transmission of HR practices into the firm, and employee outcomes, the starting point of the performance causal chain. As the hinge-point for the translation of HRM into performance, this relationship is critical in the overall HRM-performance link, but to this point investigation of the relationship has been scarce. HR

practices as perceived by employees and employee outcomes are expected to be mediated by EORs. Within the EOR-mediated relationship there is expected to be complexity, with some mediators acting in an independent or parallel manner, while others may exhibit a sequential, cause-and-effect manner. By exploring the operation of the mediated relationship between perceived HRM and employee outcomes, this study provides both new understanding of the granular mediating mechanisms at play between perceived HRM and employee outcomes, and highlights the level of complexity in this relationship, suggesting the need for further research.

Literature Review

Influential papers in the field of HRM have drawn a distinction between individual HR practices and HR systems or “bundles” of HR practices (Becker & Huselid, 1998; Delery, 1998; Posthuma et al., 2013). While there are many individual practices that can make up an HR system, a point identified by Combs et al. (2006), who found 22 individual practices in a meta-analysis, there are certain practices that appear in research about HR systems with significant regularity. Drawing on five exemplar studies that have included a focus on perceived HRM (Arthur et al., 2016; Nishii et al., 2008; Piening et al., 2013; Van De Voorde & Beijer, 2015; Vermeeren, 2014), four HR practice categories appear repeatedly in these studies, namely training and development, remuneration, involvement and participation, and performance management. While these practices in themselves do not make a complete HR system, they appear to be common inclusions, and are a representative core of many HR systems.

Because the EOR describes the entire employee-organisational relationship, it can include many different influences, and each employee will place a greater or lesser emphasis on each influence (Kuvaas, 2008). Further, these influences are not necessarily mutually exclusive, but rather can act in combination with one another either in parallel or in sequence.

For the purposes of this study, six influences have been investigated, managerial effectiveness, HR system strength, leader-member exchange (LMX), perceived organisational support (POS), organisational commitment, and perceived professional growth. These six mediating influences are described in further detail below.

This study is interested in understanding the proximal effects of employee-perceived HRM on employee outcomes (Kehoe & Wright, 2013). Therefore, two outcome measures that represent direct reactions or responses to the interpretation of perceived HRM have been investigated. These outcome measures are job satisfaction and loyalty. Job satisfaction is a personal measure that is an outcome of the EOR, while loyalty (Bettencourt et al., 2001) is a more active measure of employee response. In the research setting of PSFs, loyalty is a particular form of citizenship behaviour, due to the importance of client referrals.

Employee-Organisation Relationship

Following is a description of the six constructs selected to represent the EOR. These constructs are discreet but do have combinations of relationship with one another. Managerial effectiveness and LMX represent different aspects of the relationship between manager and employee, on the one hand the employee's perception of the manager's effectiveness in managing them, and on the other the employee's perception of support environment that the manager creates. LMX and POS are recognised as explaining two types of support, one from the manager and the other from the organisation.

Three of these constructs, LMX, POS and commitment, are widely used in research that addresses the EOR (Buch, 2015; Eisenberger, Rockstuhl, Shoss, Wen, & Dulebohn, 2019; Kuvaas, 2008). Managerial effectiveness as perceived by an individual employee is seen as an operationalisation of the way in which an employee's manager goes about managing them, forming part of the exchange relationship. HR system strength is not conceptualised as an exchange relationship, however when measured at the individual

employee level, is expected to play a mediating role alongside exchange measures (Cafferkey et al., 2018; Dello Russo et al., 2018). Perceived professional growth is contextually relevant to the EOR in professional services environments, in which employees place a priority on their development, and that development comes through both formal training and structured mentoring and coaching by managers.

Managerial effectiveness. The importance of line managers as implementers of HRM in the overall HRM-performance link and the relationship between effective implementation and performance outcomes has been widely demonstrated (for example, Alfes, Truss, et al., 2013; Bos-Nehles et al., 2013; Brewster et al., 2013; Gilbert et al., 2015). The importance of the line manager in the HRM process has been described as a “symbiotic relationship” (Purcell & Hutchinson, 2007, p. 3), in which the leadership behaviours of managers and their implementation of HR practices operate in a mutually reinforcing manner to influence employee behaviours. Sykes et al. (2018) identified four managerial drivers that influence the consistency of implementation of HR practices, and thus influence the perception (perceived intent) of HR practices by employees. The four drivers identified were manager alignment with HRM as intended by the firm, manager prioritisation of people management responsibilities, manager style, and manager capability. Together, these drivers contribute to the effectiveness of managers in their implementation of HRM. Managerial effectiveness is expected to have a mediating influence because the quality of HR practices experienced by employees will influence the employee’s perception of their manager’s effectiveness, particularly in relation to manager alignment, manager style, and manager capability.

HR system strength. The concept of strength in the HR system, based around Mischel’s strong situation construct (1973), was initially described by Bowen and Ostroff (2004). HR system strength operationalises the concept of the strong situation as a shared climate characterised by distinctiveness, consistency and consensus. The HR system strength

construct theorises that when the HR system is strong the system sends signals to employees, from which they will take psychological meaning and that this phenomenon will in turn have a positive effect on their work situation (Bowen & Ostroff, 2004; Sanders & Yang, 2016). HR system strength, as a climate construct, sits across the entire HRM-performance continuum, and therefore strength in the HR system may act as a mediator within the perceived HRM-employee outcome relationship. The perception of HR practices by individual employees is expected to influence their view of the strength of the HR system, particularly consistency and distinctiveness.

LMX. While managerial effectiveness emphasises the process and mechanics of the manager-employee relationship, LMX (Graen & Uhl-Bien, 1995) emphasises the nature and quality of the dyadic relationship between managers and employees (Den Hartog et al., 2013). Effectively developed relationships are seen as beneficial for the individual, and have been shown to lead to positive outcomes from a performance perspective (Purcell & Hutchinson, 2007; Uhl-Bien, Graen, & Scandura, 2000). The nature of the relationship between manager and employee is an important context for the way in which employees respond to their perception of the HR system.

POS. POS has been identified as a mediator between HR practices and commitment, job satisfaction, employee turnover and general service performance (Allen, Shore, & Griffeth, 2016; Liao et al., 2009). A large-scale meta-analysis identified human resource practices as a key antecedent to POS, and employee behavioural outcomes as a key outcome of POS (Kurtessis et al., 2017). High levels of POS create reciprocating feelings and actions in employees (Rhoades & Eisenberger, 2002). Therefore, when POS is high, there is an expectation that employees will transmit positive views of HR practices into attitudes and behaviours.

Commitment. Organisational commitment has been used widely in organisational

research, both as a mediating variable (Chang & Chen, 2011; Gong et al., 2009; Kuvaas, 2008) and as a dependent variable (Farndale & Kelliher, 2013; Gilbert et al., 2011). Commitment is seen as an enabler for reciprocity in relationships (Korff et al., 2017). Commitment has been suggested as a psychological state that presents an effective characterisation of the employee-organisation relationship (Kokt & Palmer, 2019). The way HR practices (as perceived by employees) translates into attitudes and behaviours is expected to be influenced by the degree of commitment felt by employees.

Perceived professional growth. Extensive research establishes the importance of human capital in the HRM-performance relationship (Crook et al., 2011). Human capital is often conceptualised at the organisational level (Lawler, 2009; Lepak & Snell, 1999). In the HRM literature, firm-level human capital has been seen to emerge from individual human capital, understood as individual employees' knowledge, skills and abilities (Boon et al., 2018). In a PSF context, professional growth of the employee, the way they develop technically, professionally, experientially, and managerially, encapsulates the notion of individual human capital and has been described as increasing the individual's market value (Malhotra, Morris, & Smets, 2010; Smets et al., 2017). Professional growth as part of career development is an important characteristic of workers in PSFs (Hall & Yip, 2016). This characteristic suggests that employees would value HR practices such as training and development along with managerial coaching and mentoring and would respond favourably when they perceive high levels of such practices in their job satisfaction and other consequent behaviours and attitudes. While employee perceptions of training and development as part of the HR system will be measured, the perceived professional growth mediator is focused on the outcome of that practice, and its effect on the employee's relationship with the organisation.

Inherent in the way human resource practices transmit into performance is the

complexity of the relationship (Jiang et al., 2013; Truss, 2001). In the context of the EOR, this complexity also exists. The EOR represents an individually-perceived relationship, that relationship being with both a series of individuals and with the organisation itself (Coyle-Shapiro & Shore, 2007), complete with all the psychological and sociological features that form part of such relationships. Complexity in the EOR relationship is noted in the literature (Misangyi et al., 2017). In a study in which the majority of variables were arguably EOR influences, Alfes, Shantz, et al. (2013) investigated POS and LMX as moderators between OCBs and turnover intentions and engagement. LMX has also been found as an antecedent of psychological empowerment before employee outcomes (Hill, Kang, & Seo, 2014), and to influence POS, which in turn influences commitment (Purcell & Hutchinson, 2007). Tierney (1999) found a strong positive relationship between LMX and team climate perceptions (a related concept to HR system strength). With HR practices as an antecedent variable, Kooij and Boon (2018) found that perceived HR practices did not have a direct effect on commitment, but rather was mediated by person-organisation fit. These examples suggest that the interaction of influences within the EOR is complex and is not well understood. Is each EOR component's mediation of perceived HRM and employee outcomes independent? Are interactions between EOR influences reciprocal and bidirectional, or is there a causal and sequential nature to them? We are not aware of any evidence that directly answers these questions. Due to the lack of any apparent evidence supporting any level of interdependency or directionality between components of the EOR, this study takes an exploratory approach to identifying potential pathways from perceived HR practices to employee outcomes through the EOR.

There is expectation that the EOR will mediate the relationship between perceived HRM and the employee outcome variables. However, there is scant evidence for the detailed operation of this mediation. As an example, Eisenberger et al. (2019) note that their research

treated POS, LMX and commitment as components of the EOR but did not examine the relationships between them. For this reason, two hypotheses are proposed. The first hypothesis suggests that the six EOR mediators will act in parallel. The parallel mediation relationship is illustrated in Figure 2.

H1: That each of the EOR influences mediate in parallel the relationship between the employee-perceived HR system and:

- (a) job satisfaction and
- (b) loyalty.

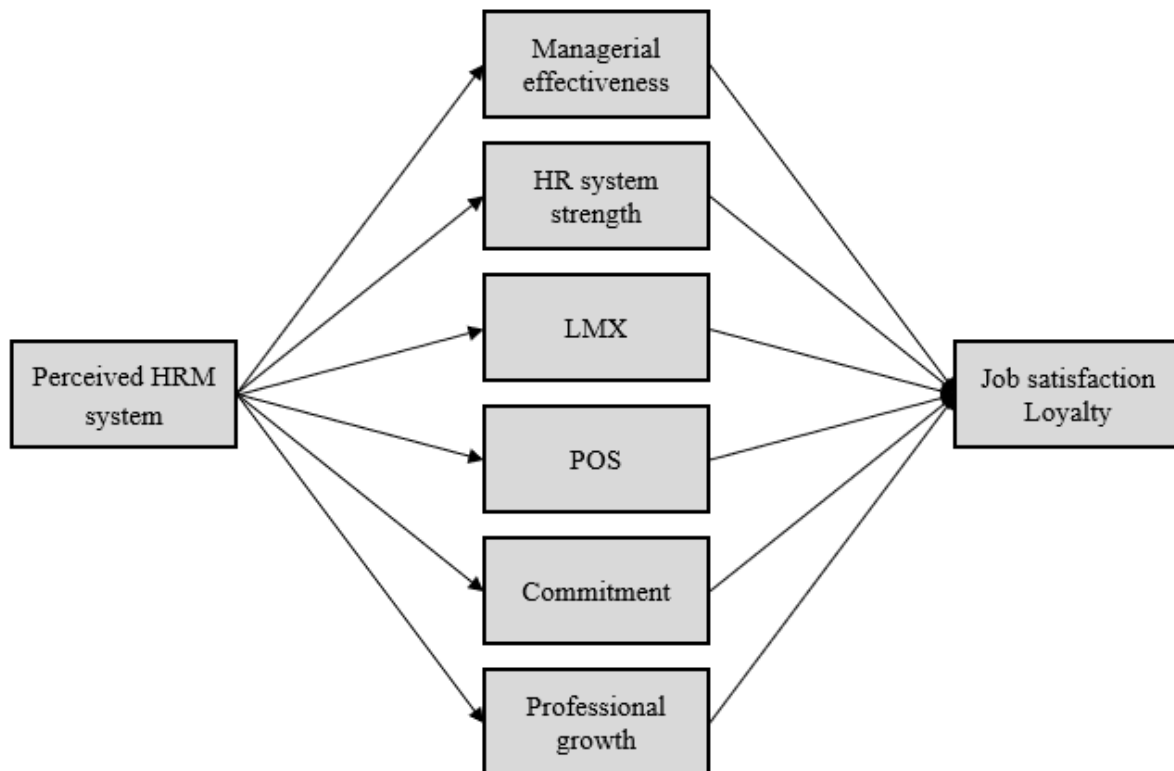


Figure 2. Theoretical parallel mediation model

The second hypothesis suggests that the six EOR mediators will act in a sequential manner. Due to the lack of evidence investigating any potential order of mediators, the hypothesis has an exploratory nature to it. The serial mediation relationship is illustrated in Figure 3.

H2: That serial mediation relationships exist amongst the EOR influences, mediating the relationship between the employee-perceived HR system and

(a) job satisfaction, and

(b) loyalty.

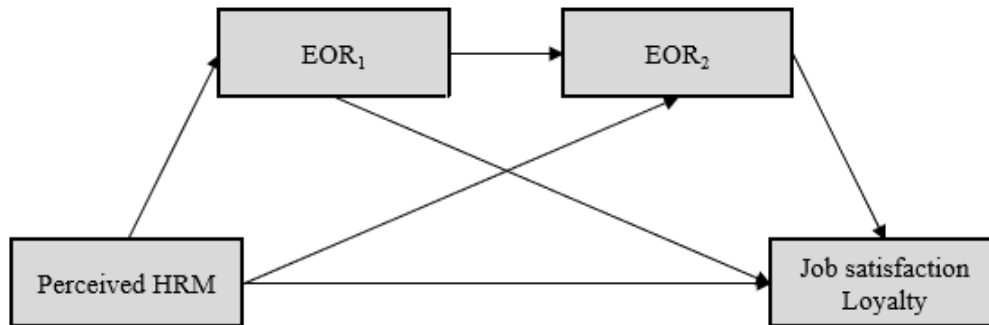


Figure 3. Theoretical serial mediation model

Method

Research Setting and Sample

This study was conducted in the Australian accounting sector. PSFs have been described as a rich destination for research, due to the strong nexus between fee earning knowledge workers and revenue-generating outputs in PSFs, the opportunity for developing sustainable competitive advantage through human capital, and the rapid growth of the broader sector in increasingly knowledge-based economies (Jensen et al., 2010; Swart & Kinnie, 2010). The Australian accounting sector is dominated by the “Big 4” professional services firms (PwC, Deloitte, EY, KPMG), then has a diverse and substantial middle tier of firms who are generally associated with global accounting networks, and then a large contingent of smaller single location firms. In this study the 20 largest firms in Australia were invited to participate in the research. One or more offices of eight firms agreed to participate in the research.

A survey including measures described below was distributed to participating firms.

The survey was distributed electronically through firm representatives to all employees.

Verbal and written instruction was provided.

Measures

Unless otherwise stated, all items used a five-point Likert scale, with 1 = *strongly disagree* to 5 = *strongly agree*.

Employee-perceived HR system. Four scales are used for the employee-perceived HR system measure. Based on the earlier discussion regarding practices within an HR system, the scales selected relate to training and development, remuneration and reward, employee participation and performance management as representative of and central to many HR systems.

Training and development. This measure was used to understand the intensity of training and development. A five-item scale was used comprising four out of the eight items in the training and development scale in Vermeeren (2014), and a single item from Yousaf et al. (2016) which was not adequately addressed in the Vermeeren scale. Excluded items from the Vermeeren scale were either oriented toward career progression (three items) or were not suitable for a PSF environment (one item). Sample items include “I am given a real opportunity to improve my skills through training” and “My development opportunities are tailored to the needs of the firm.” The original scale in Yousaf et al was a 6-point Likert-type scale, however a 5-point scale is used for this single item to match the Vermeeren scale. Cronbach’s alpha was .91.

Remuneration and reward. This measure was used to understand remuneration satisfaction and levels of performance-based reward. A composite six-item scale was used composed of the rewards scale from Vermeeren (2014) and three out of four items from the remuneration scale in Yousaf et al. (2016). One item from the Yousaf scale was adapted, replacing the likelihood of a pay raise with the likelihood of promotion, because pay raises

were adequately covered by items in the Vermeeren scale, while promotion was not included. The item excluded from the Yousaf scale addressed performance appraisal ratings, a construct addressed separately within the survey instrument. Sample items include “My performance plays a role in determining my salary” and “There is a strong link between how well my team performs and the likelihood of receiving a pay raise.” Cronbach’s alpha was .90.

Employee participation. This measure was used to understand the way that performance is managed, both formally through appraisals and informally through feedback and recognition processes. This was used to evaluate the degree to which employees were involved in decision making and participated in the firm’s management. The four-item participation scale from Vermeeren (2014) was used. Sample items include “I have the opportunity to be involved in decision-making within this firm” and “I am well informed about the views and policies of the firm.” Cronbach’s alpha was .84.

Performance management. The six-item performance management scale was taken from Kuvaas (2006) in its entirety, which was based on previous work by Meyer and Smith (2000). Minor terminology changes for face validity were made (replace “agrees” with “aligns” and replace “criticising” with “finding fault”). Sample items include “The feedback I receive on how I do my job is highly relevant” and “The feedback I receive agrees with what I have actually achieved.” Cronbach’s alpha was .91.

Managerial effectiveness. Four scales are used for the managerial effectiveness measure. These scales are based on the four drivers of implementation divergence discussed in Sykes et al. (2018), interpreted positively as drivers of effectiveness.

Alignment. This scale was used to understand the degree to which managers were aligned with the HR policies of the firm. Alignment was measured using an original, three-item scale. As described in Sykes et al. (2018), alignment is based on the manager’s active

acceptance or rejection of intended HRM. Sample items include “I believe that I have a clear understanding of the main HR policies of the firm” and “In general, I feel that my manager implements HR policies in the way they are intended.” Cronbach’s alpha was .90.

Prioritisation. Prioritisation was used to evaluate the way that managers prioritise their employees and people management over other priorities that they have. A composite six-item scale was used comprising the complete three-item role overload scale from Bacharach et al. (1990) and three items from the 13-item role overload scale in Reilly (1982). Sample items include “My manager seems rushed in doing their job” and “My manager frequently cancels meetings with me because they are too busy.” The Bacharach et al. scale was a four-point Likert scale, ranging from 1 = *strongly disagree* to 4 = *strongly agree*. Cronbach’s alpha was .76.

Style. This measure was used to determine whether managers exhibited a transformational style. The MLQ nine-item short form scale (Bass & Avolio, 2004) was used, with the first five items, which evaluate transformational leadership, used for the measure. Sample items include “My manager seems to go beyond self-interest for the good of the group” and “My manager generally talks optimistically about the future.” The five-point Likert scale ranged from 1 = *not at all* to 5 = *frequently, if not always*. Cronbach’s alpha was .90.

Managerial capability. This was used to assess whether managers were capable as people managers. The three-item scale was drawn from the 20-item occupational self-efficacy scale contained in Schyns and von Collani (2002). Three of the original items in the scale were adapted to specifically focus on managers in their role as people managers, for example replacing “demands in my job” with “demands in my role as a people manager,” and replacing “As far as my job is concerned” with “As far as managing staff is concerned”. Sample items include “My manager seems to meet most of the demands on them as a people

manager” and “As far as managing staff is concerned, my manager seems to be a rather self-reliant person.” The six-point Likert scale ranged from 1 = *not at all true* to 6 = *completely true*. Cronbach’s alpha was .81.

HR system strength. The three-item scale developed originally as a manipulation check by Sanders and Yang (2016) was adopted. This scale asks a single question for each of the three components of HR system strength, distinctiveness, consistency and consensus. Sample items include “The different HR practices in this firm are aligned to each other” and “My colleagues and I perceive the firm's HR practices in the same way.” HR system strength used a four-point Likert Scale, with 1 = *totally disagree* to 4 = *totally agree*. Cronbach’s alpha was .79.

Leader-member exchange. The widely used LMX-7 scale developed by Graen and Uhl-Bien (1995) was used to measure leader-member exchange. Terminology was adjusted to align with the broader survey instrument (e.g. substituting “manager” for “leader”, so that respondents reported on their immediate manager rather than the leadership of the firm or their practice area). Sample items include “How well does your manager understand your job problems and needs?” and “I have enough confidence in my manager that I would defend and justify their decision if they were not present to do so.” The five-point Likert scale included low-end responses of *not at all*, *no*, and *strongly disagree* to high-end responses of *very often*, *a great deal*, and *extremely effective*. Cronbach’s alpha was .92.

Perceived organisational support. The POS short form eight-item instrument developed by Eisenberger, Cummings, Armeli, and Lynch (1997) was adopted. Sample items include “My firm strongly considers my goals and values” and “My firm is willing to help me if I need a special favour.” The seven-point Likert scale ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Cronbach’s alpha was .90.

Commitment. The nine-item short-form Organisational Commitment Questionnaire

(originally Mowday et al (1984), short form used in Huselid and Day (1991) and elsewhere) was used to measure organisational commitment. Sample items include “I would accept almost any type of job assignment in order to keep working for this firm” and “I really care about the fate of this firm.” The seven-point Likert scale ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Cronbach’s alpha was .96.

Perceived professional growth. Perceived professional growth was measured using the four-item growth satisfaction scale in Hackman and Oldham (1974). With a stem of “Please indicate your level of satisfaction with the following,” sample items include “The amount of personal growth and development I get in doing my job” and “The amount of challenge in my job.” The seven-point Likert scale ranged from 1 = *extremely dissatisfied* to 7 = *extremely satisfied*. Cronbach’s alpha was .92.

Job satisfaction. The six-item job satisfaction scale from Tsui et al. (1992) was used. Sample items include “How satisfied are you with the pay you receive for your job?” and “Considering everything, how satisfied are you with your current job situation?” The Likert scale ranged from 1 = *very dissatisfied* to 5 = *very satisfied*. Cronbach’s alpha was .86.

Loyalty. The four-item commitment to parent company scale used in Gregersen and Black (1992) was used. The adaptation replaced “parent company” with “firm.” Sample items include “I talk up my firm to my friends as a great place to work” and “What my firm stands for is important to me.” Cronbach’s alpha was .91.

Research design, data preparation and analysis

Two of the variables used in the study, perceived HRM and managerial effectiveness, included multiple scales. A principal components factor analysis with varimax rotation was conducted for each measure to determine how to join the scales into a single measure. The perceived HRM factor analysis presented four clear factors reflecting the underlying scales. Each item had a loading on its primary factor of at least .65, one item had a cross loading of

.41, and six items had a cross loading of between .35 and .40 (Hair et al., 1995; Kiffin-Petersen & Cordery, 2003; Kuvaas, 2008). All items had a differential between factors of at least .25. Therefore, there were no confounding measures within the HR system construct, and scales were joined by summing the means of each scale to form a single measure. The factor loadings for the solution are presented at Table 1. Cronbach's alpha for the single measure was .95.

Table 1. Principal components factor analysis for perceived HRM

Items	1	2	3	4
Training and development				
TRA1		.80		
TRA2		.78		
TRA3		.77	.37	
TRA4		.72	.39	
TRA5		.79		
Remuneration and reward				
REM1	.80			
REM2	.65			
REM3	.66	.41		
REM4	.78			
REM5	.72			
REM6	.81			
Participation and involvement				
PAR1				.82
PAR2				.84
PAR3				.85
PAR4			.40	.67
Performance management				
PER1		.37	.74	
PER2		.37	.71	
PER3			.72	
PER4			.70	
PER5	.36		.74	

Only values > .30 are displayed

Table 2. Principal components factor analysis for managerial effectiveness

Items	Initial analysis		Final analysis
	1	2	1
Alignment			
ALI1	.77	.41	.87
ALI2	.84	.38	.93
ALI3	.86		.93
Prioritisation			
PRI1		.86	
PRI2	.35	.83	
PRI3		.55	
PRI4		.83	
PRI5	.48	.68	
PRI6	.59	.64	
Style			
STY1	.90		.92
STY2	.89		.95
STY3	.87		.93
STY4	.87		.91
STY5	.90		.94
Capability			
CAP1	.86		.92
CAP2	.86	.36	.93
CAP3	.72	.42	.83

Only values > .30 are displayed

The initial factor analysis for the managerial effectiveness measure presented a two-factor solution. Three of the four scales (manager alignment, transformational leadership, and manager capability) used in the managerial effectiveness measure tended to load onto the first factor, while the fourth scale (manager prioritisation) tended to load onto the second factor. Of the scales that loaded onto the first factor, four items had a cross-factor loading between .35 and .45, however for each item, the cross-factor differential was at least .30, suggesting that each of these items was strongly associated with the first factor. When the items from the manager prioritisation measure were removed and the factor analysis re-run, a single factor emerged. Therefore, items within the manager alignment, transformational leadership, and

manager capability scales were added together to form a single measure. The factor loadings for the initial and final factor solutions are presented at Table 2. Cronbach's alpha for the single measure was .91.

Inherent in this research design is the risk of common method bias. Ex-ante, precautions were taken against common method bias, including reverse-coding items, using constructs that have previously been used in combination, using scale items with a range of objects of perception, assuring respondents of their anonymity, and drawing constructs from prior qualitative research that formed part of the broader research project (Conway & Lance, 2010; Dysvik & Kuvaas, 2012; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However due to the high correlations found in the data, ex-post, a Harman's single factor test in the manner described by Fu et al. (2017) was applied using a principal axis factoring analysis (Fuller, Simmering, Atinc, Atinc, & Babin, 2016; Podsakoff & Organ, 1986). This test indicated nine factors with eigenvalues greater than 1, accounting for 81.7% of total variance. While the first factor accounted for 55.3% of variance, the ex-ante measures, combined with the ex-post test and further factor analyses on constructs, sufficiently reduce the risk of common method bias.

Research designs to test complex interactions

Due to the complexity of the interactions between the EOR influences, and the opaqueness of any cause-and-effect relationship between those influences, from an analytical perspective simple mediation models are insufficient to properly understand the relationship. Hayes (2017) outlines two approaches that allow for greater understanding of complex mediation relationships. In a relationship involving multiple mediators, it is important to establish first whether each mediator is significant in the multiple-mediation relationship, and then whether the mediators operate independently or whether there is a potential causal element to the relationship. Two mediation models are proposed to test this.

The first model is a parallel mediation in which all mediators are included and given equal weight in the mediation process. The test for mediation follows the three-step mediation criteria outlined by Baron and Kenny (1986): (a) there must be significance in the variations of the independent and mediating variables (b) there must be significance in the variations of the mediating and dependent variables, and (c) when the independent-mediating path and the mediating-dependent path are controlled, a previously significant relationship between the independent and the dependent variable is no longer significant (full mediation) or is reduced (partial mediation). Parallel mediation relies on the assumption that no mediator is influencing another mediator in the model (Hayes, 2017). If such an influence exists, then it is likely that a multiple-step, or serial, mediation exists.

The second model, serial multiple mediation, allows for the influence of one mediator on another. In this model, the mediation path defines the relationship ($IV \rightarrow M_1 \rightarrow M_2 \rightarrow DV$). In contrast to a parallel mediation, a serial mediation assumes “a causal chain linking the mediators, with a specified direction of causal flow” (Hayes, 2012, p. 14). While the other mediation paths (e.g. $IV \rightarrow M_1 \rightarrow DV$) can exist and, where they are significant, do not detract from the serial mediation path, the distinguishing feature of this model is that a serial mediation path exists and is significant. The Baron and Kenny criteria can be used in a serial mediation model in the same manner as in other mediations, but with a further assessment of the strength of the serial mediated path relative to other indirect paths.

The mediation analysis was conducted in three stages. The first stage tested hypotheses 1(a) and 1(b), where a parallel multiple mediation was conducted for each dependent variable, with all mediating variables included in the model. After identifying and removing mediating variables not meeting the Baron and Kenny (1986) criteria, the parallel mediation was run again to confirm that none of the remaining mediating variables became non-significant. The mediations were conducted using Model 4 of the PROCESS macro

(Hayes, 2017), with 5,000 bootstrap samples and a 95% confidence interval.

The next stage of the mediation analysis, to prepare for the serial mediation, was a partial correlation analysis of significant mediators in the parallel mediation analyses, controlling for the independent variable, perceived HRM. This test was used to determine whether influence existed between any mediating variables. If a bivariate relationship was not significant or where the correlation was weak, the bivariate relationship did not show indicators of influence.

The final stage of the mediation analysis, testing hypotheses 2(a) and 2(b), was a serial multiple mediation analysis. This analysis tested whether a serial path ($IV \rightarrow M_1 \rightarrow M_2 \rightarrow DV$) existed. While theory informs the assessment of which mediator might have a causal relationship with the other, the analyses were performed for each mediating pair in both directions to allow a quantitative evaluation of the sequential direction. Adapting the Baron and Kenny (1986) criteria, where the serial path has the largest effect size, there is partial serial multiple mediation, and if the direct path is non-significant then full serial mediation exists. The mediation was conducted using Model 6 of the PROCESS macro (Hayes, 2017), with 5,000 bootstrap samples and a 95% confidence interval.

Results

There were 246 survey responses, nine of which had substantial missing data, rendering 237 usable. Of the usable responses, there were 106 (44.7%) female respondents and 71 (30.0%) male respondents, while 60 (25.3%) respondents did not provide a response for gender. Respondents were generally professionally qualified, with 101 (42.6%) respondents being professionally (e.g. Chartered Accountant) or masters-level qualified, while 60 (25.3%) held a bachelor-level or diploma-level degree, and 76 (32.1%) respondents were not qualified or elected not to respond to the question.

Descriptive statistics and bivariate correlations are presented at Table 3. As the table

demonstrates, there is high and significant correlation between most of the measures. This suggests a high level of interaction can be expected within the model.

Each test was run with controls for sex, age and education, and the results did not differ from those presented.

Table 3. Correlations, reliabilities and descriptive statistics

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Perceived HRM	14.04	2.91	(.95)								
2. Managerial effectiveness	11.50	2.10	.65*	(.91)							
3. HR system strength	8.69	1.98	.59*	.49*	(.79)						
4. LMX	26.28	5.53	.67*	.72*	.36*	(.92)					
5. POS	39.47	9.97	.76*	.59*	.55*	.53*	(.90)				
6. Commitment	46.53	11.98	.67*	.52*	.43*	.52*	.76*	(.96)			
7. Professional growth	20.44	5.34	.76*	.63*	.44*	.67*	.68*	.72*	(.92)		
8. Job satisfaction	22.00	4.68	.72*	.63*	.46*	.66*	.71*	.70*	.78*	(.86)	
9. Loyalty	15.20	3.68	.59*	.47*	.47*	.43*	.71*	.83*	.69*	.69*	(.91)

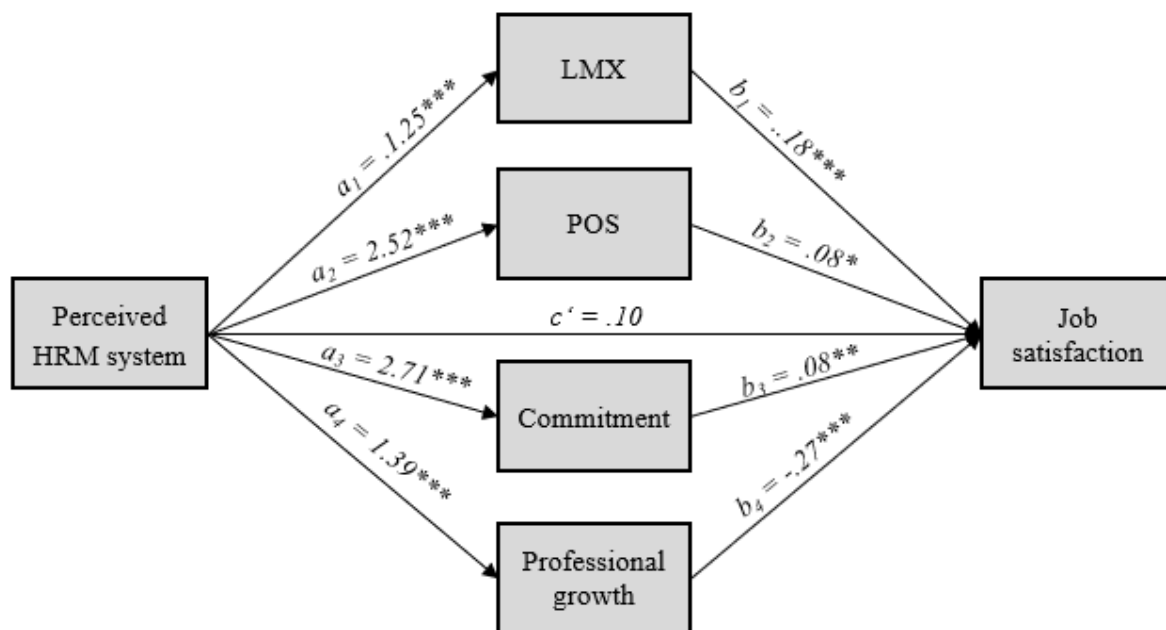
* $p < .001$ Cronbach's alpha in parentheses on the diagonal. n/a = composite measure, no Cronbach's alpha

Hypotheses 1(a) and 1(b)

Parallel multiple mediation was used to test hypotheses 1(a) and 1(b). The initial parallel multiple mediation included all six mediating variables, for each of the dependent variables plus job satisfaction and loyalty. With reference to Baron & Kenny's criteria, the mediation model for job satisfaction found that all six mediators met criterion (a) as perceived HRM had a significant relationship with each of them. Criterion (b) was met by four of the six variables, with LMX, POS, commitment, and professional growth demonstrating significant relationships. Criterion (c) was met, with the direct relationship ceasing to be significant. Therefore, while mediation is found, two mediators are not significant and require removal prior to re-test. The mediation model for loyalty found that all

six mediators met criterion (a) as perceived HRM had a significant relationship with each of them. Criterion (b) was met by four of the six variables, with only HR system strength, POS, commitment, and professional growth demonstrating significant relationships. Criterion (c) was met, with the direct relationship ceasing to be significant. Therefore, while mediation is found, two mediators are not significant and require removal prior to re-test.

As described in the analysis, each model was then run again, with non-significant mediators removed. The parallel multiple mediation for job satisfaction met all three mediation criteria, with all mediators demonstrating significant relationships with both perceived HRM and job satisfaction (criteria (a) and (b)), while the perceived HRM-job satisfaction relationship is not significant (criterion (c)). A full mediation is demonstrated by the data, which provides support for hypothesis 1(a). Figure 4 illustrates the path results.

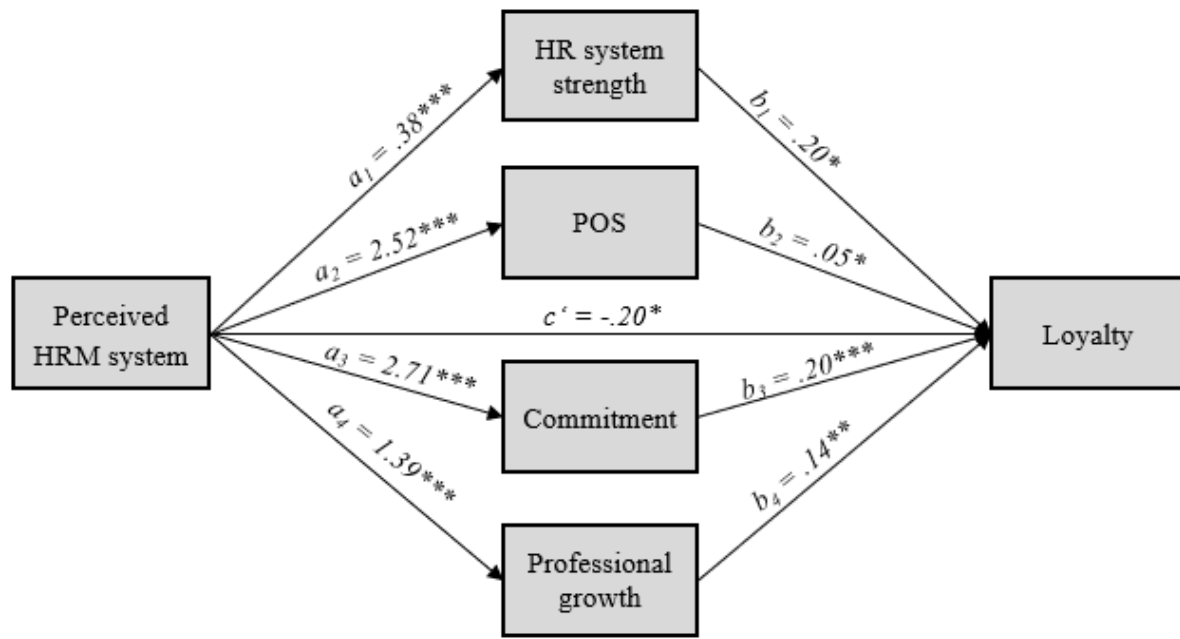


Paths are unstandardised coefficients, * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 4. Parallel multiple mediation of perceived HRM and job satisfaction, final model

The parallel multiple mediation for loyalty meets two of the three mediation criteria fully, and the third criterion partially. All mediators demonstrate significant relationships

with both perceived HRM and loyalty (criteria (a) and (b)). The relationship between perceived HRM and loyalty is now significant (criteria (c)), though with a negative effect size. Therefore, a partial mediation has been demonstrated by the data, and hypothesis 1(b) is supported, but only as a partial mediation. Figure 5 illustrates the path results.



Paths are unstandardised coefficients, * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 5. Parallel multiple mediation of perceived HRM and loyalty, final model

Hypotheses 2(a) and 2(b)

Serial multiple mediation was used to test hypotheses 2(a) and 2(b).

Correlation analysis for mediating variable cross-influence. A partial correlation was performed, controlling for perceived HRM, to determine whether influence existed between significant parallel mediators from the results of Hypothesis 1. This analysis was used to identify which mediator relationships might have a serial nature to them. Hypothesis 1 proposed a serial mediated relationship between intended HRM, implemented HRM, perceived HRM and outcomes. **Error! Not a valid bookmark self-reference.** presents the results of the analysis. A significant relationship was found between intended HRM and

implemented HRM ($B = .18, p < .05$). Neither intended HRM nor implemented HRM had a significant relationship with perceived HRM. Perceived HRM had a significant relationship with job satisfaction ($B = 1.07, p < .001$), loyalty ($B = .50, p < .001$) and perceived performance ($B = .05, p < .05$). Implemented HRM had a significant relationship with perceived performance ($B = .23, p < .001$). The serial mediation from intended HRM to implemented HRM, then to perceived performance was found to be significant (.04, 95% confidence .00, .08). No other serial mediations were significant.

Table 4 provides the results of the correlation analysis. The bivariate relationships that presented the strongest significant correlations were POS-commitment and commitment-professional growth, and therefore are tested for a serial mediation relationship.

Table 4. Partial correlations for job satisfaction and loyalty, controlling for perceived HRM

Job satisfaction	1	2	3
1. LMX			
2. POS	.05		
3. Commitment	.12	.53***	
4. Professional growth	.35***	.25***	.45***
Loyalty	1	2	3
1. HR system strength			
2. POS	.20**		
3. Commitment	.08	.53***	
4. Professional growth	-.02	.25***	.45***

* $p < .05$, ** $p < .01$, *** $p < .001$

Job satisfaction. In line with the analytical process described and based on the partial correlation analysis, four serial mediation models were tested (Table 5). Model 1 tested the mediation path from perceived HRM, to commitment, to professional growth, to job satisfaction. Model 2 tested the mediation path from perceived HRM, to professional growth, to commitment, to job satisfaction. Model 3 tested the mediation path from perceived HRM, to POS, to commitment, to job satisfaction. Model 4 tested the mediation path from perceived

HRM, to commitment, to POS, to job satisfaction path. Criterion (a) of Baron and Kenny (1986) was met in Models 1-4, in that perceived HRM displayed a significant relationship with each mediating variable. Criterion (b) of Baron and Kenny (1986) was met in Models 1-4, in that each mediating variable displayed a significant relationship with job satisfaction. Criterion (c) of Baron and Kenny (1986) was only partially met in Models 1-4, in that the perceived HRM-job satisfaction relationship continued to be significant, but the relationship was reduced. The perceived HRM-job satisfaction relationship was weaker in Models 1 and 2 ($B = .35, p < .01$) than in Models 3 and 4 ($B = .55, p < .001$). The indirect effect of the serial-mediated relationship was significant in Model 1 (.17, 95% confidence .06, .32), Model 2 (.17, 95% confidence .05, .34) and Model 3 (.25, 95% confidence .11, .43), but not in Model 4 (.09, 95% confidence -.00, .19). Due to the weak and ambiguous results, a supplementary analysis was performed with a three-step serial mediation model, however those results were not significant. Based on these results, support is not found for hypothesis 2(a).

Table 5. Hypothesis 2(a), serial mediation, job satisfaction, models 1-4

Model 1	Commitment		Professional growth		Job satisfaction	
	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI
Perceived HRM	2.71***	2.28, 3.14	.91***	.71, 1.11	.35***	.14, .56
Commitment			.17***	.13, .22	.11***	.06, .15
Professional growth					.35***	.23, .48
Model 2	Professional growth		Commitment		Job satisfaction	
	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI
Perceived HRM	1.39***	1.22, 1.56	1.11***	.51, 1.70	.35**	.14, .56
Professional growth			1.16***	.83, 1.48	.35***	.23, .48
Commitment					.11***	.06, .15
Model 3	POS		Commitment		Job satisfaction	
	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI
Perceived HRM	2.52***	2.21, 2.83	.86***	.30, 1.41	.55***	.33, .76
POS			.74***	.57, .90	.08*	.01, .16
Commitment					.14***	.08, .19

Model 4	Commitment		POS		Job satisfaction	
	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI
Perceived HRM	2.71***	2.28, 3.14	1.48***	1.12, 1.83	.55***	.33, .76
Commitment			.38***	.30, .47	.14***	.08, .19
POS					.08*	.01, .16

* $p < .05$, ** $p < .01$, *** $p < .001$, CI = Confidence Interval

Loyalty. As with job satisfaction, four serial mediation models were tested (Table 6). Model 5 tested the mediation path from perceived HRM, to commitment, to professional growth, to loyalty. Model 6 tested the mediation path from perceived HRM, to professional growth, to commitment, to loyalty. Model 7 tested the mediation path from perceived HRM, to POS, to commitment, to loyalty. Model 8 tested the mediation path from perceived HRM, to commitment, to POS, to loyalty. Criterion (a) of Baron and Kenny (1986) was met in Models 5-8, in that perceived HRM displayed a significant relationship with each mediating variable. Criterion (b) of Baron and Kenny (1986) was met in Models 5-8, in that each mediating variable displayed a significant relationship with job satisfaction. Criterion (c) of Baron and Kenny (1986) was met in Models 5-8, in that the perceived HRM-job satisfaction relationship was not significant. Therefore, all four models indicate that a full mediation has been achieved. The indirect effect of the serial-mediated relationship was significant in Model 5 (.06, 95% confidence .01, .13), Model 6 (.36, 95% confidence .22, .51), Model 7

Table 6. Hypothesis 2(b), serial mediation, loyalty, models 5-8

Model 5	Commitment		Professional growth		Loyalty	
	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI
Perceived HRM	2.71***	2.28, 3.14	.91***	.71, 1.11	-.05	-.20, .10
Commitment			.17***	.13, .22	.22***	.19, .26
Professional growth					.13***	.04, .22

Model 6	Professional growth		Commitment		Loyalty	
	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI
Perceived HRM	1.39***	1.22, 1.56	1.11***	.51, 1.70	.05**	.14, .56

Professional growth	1.16***	.83, 1.48	.13**	.04, .22
Commitment			.22***	.19, .26

Model 7	POS		Commitment		Loyalty	
	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI
Perceived HRM	2.52***	2.21, 2.83	.86***	.30, 1.41	-.02	-.17, .12
POS			.74***	.57, .90	.06**	.01, .11
Commitment					.22***	.18, .26

Model 8	Commitment		POS		Loyalty	
	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI
Perceived HRM	2.71***	2.28, 3.13	1.48***	1.12, 1.83	-.02	-.17, .12
Commitment			.38***	.30, .47	.22***	.18, .26
POS					.06**	.01, .11

* $p < .05$, ** $p < .01$, *** $p < .001$, CI = Confidence Interval

(.41, 95% confidence .27, .58), and Model 8 (.07, 95% confidence -.00, .15). These results provide support for hypothesis 2(b), and based on the relative strength of the four models suggest that Models 6 and 7 represent the strongest serial mediations.

Table 7. The serial mediated regression relationship between perceived HRM, perceived organisational support, commitment and loyalty

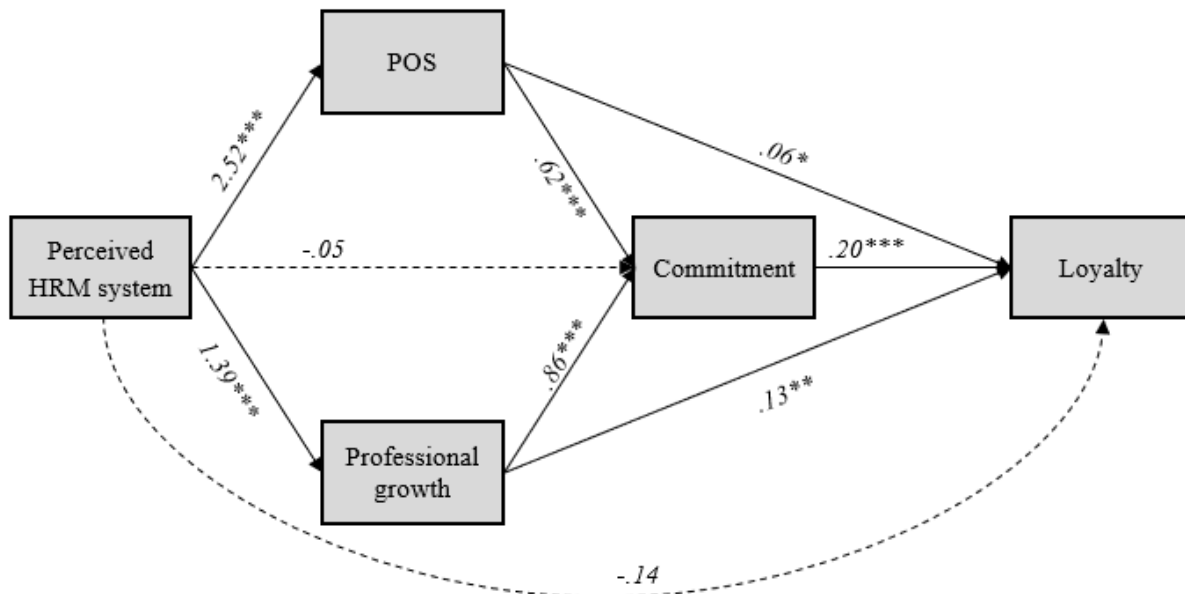
	POS		Professional growth		Commitment		Loyalty	
	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI	<i>B</i>	95% CI
Perceived HRM	2.52***	2.21, 2.83	1.39***	1.22, 1.56	-.05	-.65, .55	-.14	-.31, .02
POS					.62***	.46, .78	.06*	.01, .11
Professional growth					.86***	.57, 1.16	.13**	.04, .22
Commitment							.20***	.16, .24
<i>R</i> ²	.57		.58		.66		.73	
<i>F</i>	254.20***		266.00***		123.19***		125.76***	
					Effect	<i>SE</i>	95% CI	
Direct effect of perceived HRM on loyalty					-.14	.08	-.31, .02	
Indirect effect of perceived HRM on loyalty					.88	.09	.70, 1.04	
Path A: through professional growth alone					.18	.08	.02, .34	

Path B: through POS alone	.16	.07	.01, .30
Path C: through commitment alone	-.01	.08	-.16, .14
Path D: through professional growth and then commitment	.24	.06	.13, .36
Path E: through POS and then commitment	.31	.07	.18, .46

* $p < .05$, ** $p < .01$, *** $p < .001$, CI = Confidence Interval, SE = standard error

Due to the strongest serial mediation relationships being through professional growth then commitment and through POS then commitment, a supplementary analysis was performed to determine whether a more complex serial relationship existed. PROCESS Model 80 was used, with the same settings as the prior analyses, for the test. Model 80 tests a relationship in which two or more mediating variables mediate in parallel to a single further mediator, prior to introducing the dependent variable relationship. The results of this model fit the Baron & Kenny criteria, whereby (a) perceived HRM has a significant relationship with both POS ($B = 2.52, p < .001$) and professional growth ($B = 1.39, p < .001$), (b) POS and professional growth have significant relationships with commitment (respectively, $B = .62, p < .001$ and $B = .86, p < .001$) and loyalty (respectively, $B = .06, p < .05$ and $B = .13, p < .01$), as well as commitment having a significant relationship with loyalty ($B = .20, p < .001$), and (c) perceived HRM does not have a significant relationship with commitment ($B = -.05, p = .88$) or with loyalty ($B = -.14, p = .10$). The model contains five indirect paths: Path A (perceived HRM→ professional growth→ loyalty), Path B (perceived HRM→ POS→ loyalty), Path C (perceived HRM→ commitment→ loyalty), Path D (perceived HRM→ professional growth→ commitment→ loyalty) and Path E (perceived HRM→ POS→ commitment→ loyalty). A significant serial-mediated relationship was found on Path A (.18, 95% confidence .02, .34), Path B (.16, 95% confidence .01, .30), Path D (.24, 95% confidence .13, .36) and Path E (.31, 95% confidence .19, .46). Path C (-.01, 95% confidence -.16, .14) was not significant. Figure 6 illustrates this model and provides regression coefficients and significance, and Table 7 provides the full regression results. While

hypothesis 2(b) was already supported in the initial analysis, this supplementary test provides further explanation for the relationships tested and provides a more adequate solution.



Paths are unstandardised coefficients, dashed lines are non-significant, * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 6. Serial mediated regression between perceived HRM and loyalty with parallel mediation by POS and professional growth on commitment

Discussion

The purpose of this study was to examine the nature of the relationship between the employee-perceived HR system and the employee outcomes of job satisfaction and loyalty as a means of advancing understanding of the HR causal process model. Specifically, a range of employee-organisation relationship (EOR) influences were expected to mediate the relationship. However, due to the expected complexity of the EOR, the nature of the mediated relationship was the focus of the study. By adopting a multi-stage parallel and serial multiple mediation analysis approach, this study identified which EORs formed part of a multiple mediation process and in part identified the nature and direction of serial mediation relationships in the intended-implemented-perceived HRM model.

The findings in relation to job satisfaction suggest a parallel, interactive mediation,

but not a serial, sequential mediation. Results suggest LMX, POS, organisational commitment and professional growth act in parallel as mediators in the perceived HRM-job satisfaction relationship. Further, the results suggest a weak serial mediation, and a lack of clarity in the sequence of mediation, through organisational commitment and professional growth, and a weak serial mediation through POS and then commitment. These results suggest that LMX, POS, organisational commitment, and professional growth act in concert with one another to mediate the perceived HRM-job satisfaction relationship. The serial mediation relationships found are weak, and therefore we cautiously conclude there is a sequential nature to the mediation process. That these four influences work in a mixture of combinations is logical. For example, POS and LMX represent different types of social exchange, on the one hand between the individual and the organisation, and on the other hand between the individual and another individual and have been found to influence employee outcomes in parallel (Bos-Nehles & Meijerink, 2018; Ertürk, 2014; Settoon, Bennett, & Liden, 1996). Further, synergistic effects have been found between POS, LMX and commitment on individual performance outcomes (Casimir, Ngee Keith Ng, Yuan Wang, & Ooi, 2014). The way these combinations might work together can be illustrated by example. Firstly, both a high-quality relationship between an employee and their manager and an employee's perception of organisational support are likely to improve the employee's opportunity for and perception of their professional growth, and the combined perception influences that employee's job satisfaction. Secondly, the quality of the employee-manager relationship together with the perception of professional growth will together influence commitment to the organisation, and then all three have a bearing on job satisfaction. These combinations, not just pairs and without a clear causal direction, act as a virtuous circle and mutually reinforcing one another to improve the employee outcome.

The results in relation to loyalty suggest a clearer relationship. In the same parallel

manner as described for job satisfaction, the results point to HR system strength, POS, organisational commitment, and professional growth acting in parallel to mediate the perceived HRM-loyalty relationship. However, in contrast to the job satisfaction result, a clear serial-mediated relationship was identified, with perceived HRM influencing both POS and professional growth, which together influence commitment to influence loyalty. While seemingly complex, this relationship makes sense. An employee's perception of HRM in their firm is likely to influence their perception of support from the organisation, and to influence their sense of growth as a professional. The norm of reciprocity will then play a part in influencing the employee's commitment to the firm (Gouldner, 1960; Jakobsen & Andersen, 2013). It is then this commitment which compels the employee to display loyalty. The findings of a relationship from POS, to commitment, to loyalty support previous research (Wang, 2009).

This study contributes to an unravelling of the complexity of the mediated relationship between employee-perceived HRM and employee HR outcomes, including job satisfaction and loyalty. However, the study contains some limitations. The research design is cross-sectional. While some results suggest a causal pathway, this can only be a suggestion if it is not tested longitudinally. The mediated relationship tested six mediating variables and two employee outcome variables, however the literature has many examples of mediation and dependency beyond those. There may be other key influences not tested which would alter the findings. Further, the mediating variables may be insufficiently distinct for respondents to distinguish between them, resulting in conflation of constructs. Future research could examine additional and more widely diverse mediation combinations, and to explore the nature of the mediated relationship on additional outcomes such as turnover intentions, and to push further along the path of the causal chain into productivity measures and ultimately financial performance. In addition, despite our best endeavours, because the data were

collected from the same employees through the same survey instrument, the results may be subject to common method bias. Future research could use alternate methods of data collection, including split employee groups, data collection at different points in time or experimental designs, to counteract the potential for common method bias.

Notwithstanding these limitations, this study has important implications for research. Using just two outcome measures, a combination of relationship types was identified. The mediated relationship between perceived HRM and job satisfaction had no clear causal path, suggesting what may be termed a “virtuous circle” of influence and relationship. The mediated relationship between perceived HRM and loyalty demonstrated a clear serial path through which perceived HRM influences loyalty. These findings can inform future research as to the nature of this important relationship and provide avenues for future research to better understand reciprocal, bi-directional influences and sequential influences on employee perceptions and responses. Importantly, this study has introduced a novel analytical design which, while robust in its function, has not been widely used in the field. Serial mediation is a promising methodological design that may be used to further explore causality in relationships, and future researchers may wish to refine this technique when exploring similar research questions.

In our experience and supported by the literature, practitioners rarely have a deep understanding of the steps between the HR systems they deploy and the outcomes that flow from those systems. Practitioners can benefit from the findings of this study by understanding that for HR practices to have an effect on outcomes, not only do those practices need to be implemented by managers and perceived by employees in a consistent manner, but they will then be influenced by important aspects of the relationship between the employee and the organisation, such as the relationship between the employee and their manager, and their feeling of support. The findings of this study will help practitioners by providing a basis for

explaining how they can have a tangible effect on outcomes within the organisation through the HR systems they put in place, and by designing aspects of the HR system to address these psychological and relational influences.

Conclusion

The mechanisms through which perceived HRM translates into employee outcomes is crucial in the development of understanding of the broader HRM-performance link. This study provides initial evidence and a promising pathway for investigation to explain this relationship. Increasing understanding of the complexity of the mediation process, and the pathways between perceived HRM and employee outcomes, provide a crucial next step in explaining how HRM and performance relate.

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Conclusion to Study Four

Study four demonstrates that the pathways between HR practices as perceived by employees and employee outcomes is complex and is mediated by the employee-organisation relationship. Study 4 provides compelling initial evidence for the manner in which perceived HRM translates into employee outcomes. Empirical research that seeks to explain this intricate and opaque relationship is lacking, and therefore this evidence provides much needed data and is an important advance in the field. While the study is exploratory in nature, the evidence contained provides opportunities for future research to progress. The complexity of this point in the HRM-performance link requires further theoretical development, to understand what psychological and sociological processes are in operation, in what combination, and affecting what outcome. Furthermore, empirical studies can provide further evidence for the manner in which perceived HRM and employee outcomes relate to each other, by validating the present findings through replication, and by testing additional EOR measures together with alternative employee outcomes.

Chapter 6
General Discussion

Overview

This thesis set out to understand the degree and manner through which an HR system operates through the levels of firm intention, manager implementation, and employee perception, before affecting employee and firm outcomes, the HR causal process model (Nishii & Wright, 2008; Purcell & Hutchinson, 2007). A structured review of the literature was performed to determine the current state of the research (Massaro et al., 2016), and to set an agenda for future research, which was responded to in part through the field studies in this thesis. At the outset, there was an expectation that the process approach to HRM would be an important framework to understand the HR causal process model, and that the employee-organisation relationship would play a role in the transmission of HR practices into employee responses, or outcomes (Kuvaas, 2008; Sanders et al., 2014). Over the course of the research, a further influencing construct, managerial effectiveness, was identified and examined. This chapter provides an overview of the key findings in relation to the HR causal process model.

The HR causal process model

The overarching aim of this thesis was to extend understanding of the operation of the HR causal process model at a greater level of detail than is currently found in the literature. The HR causal process model, as a framework, suggests that HR practices are set in place, or intended by the firm, are implemented by line managers, are perceived by employees, which generates an employee response, translating into behaviours, and ultimately business unit and firm-wide performance outcomes (Nishii & Wright, 2008; Purcell & Hutchinson, 2007). Nishii and Wright (2008) suggest it is variability across each of these steps that reduces the effectiveness of the HR system, with calls for research to understand this cross-level variability (Jiang et al., 2013). Support for this suggestion has been found by Khilji and Wang (2006), Piening et al. (2014) and Vermeeren (2014).

The studies in this thesis found further support for the incidence and effect of

variability. Study 2 found divergence between the levels of intention, implementation and perception. Divergence was observed by HR professionals who expressed frustration with line managers who implemented HRM poorly. Line managers expressed variation in their view on the purpose and benefit of HR practices. Employees had a diverse experience of HR, depending on both themselves as individuals and their manager(s). Study 2 found variability occurred between business units, suggesting the appropriate level of analysis of implemented HRM was the business unit rather than the individual manager. This finding may be a finding specific to a professional services environment, where business units can be more like teams than independent business units. Importantly, Study 2 identified four drivers of divergence: alignment, manager prioritisation, manager style, and capability. These drivers were observed as the key determinants of variability in individual manager implementation of HRM. These drivers were reinterpreted in a positive light in Study 3 and Study 4, such that where managers were aligned with intended HRM, managers did prioritise people management, managers adopted a transformational leadership style, and managers were capable, they were seen to be effective, hence the notion of managerial effectiveness.

Study 3 hypothesised that there would be a direct serial relationship between intended HRM, implemented HRM, perceived HRM and the employee and performance did not find support for a relationship with the outcome variables that were measured. While the existence of mediating and moderating influences at points within the HR causal process model was anticipated by Nishii and Wright (2008), the expectation was for the direct serial relationship to be observable, and explained by mediating or moderating influences. This expectation was not validated in the research conducted. This finding points to a need for further theoretical development and investigation, discussed below, to understand how this relationship operates. The expectation for such a relationship remains, as HRM is not perceived by employees in a vacuum, however, the way the relationship forms and is

influenced is not yet known.

The process approach to HRM

The process approach to HRM suggests that an HR system's effectiveness is related to the way employees attach meaning to the HR system. Through effective signalling the HR system has strength, and employees make attributions as to why HR practices are implemented in a certain way (Bowen & Ostroff, 2004; Nishii et al., 2008). The extant literature is unsettled on the level at which HR system strength should be conceptualised and measured, and research explaining the influence of HR attributions on employee perceptions of HR practices and the resultant outcomes of those perceptions is not yet well developed (Hewett et al., 2018; Ostroff & Bowen, 2016). Study 3 went some way to providing evidence for these questions.

As a result of the business unit level variance found in Study 2, both implemented HRM and HR system strength were conceptualised as business unit collective phenomena in Study 3. HR system strength, when measured at this level, was found to have a level of moderating influence on the HR causal process model, such that the serial relationship from intended HRM through to outcomes was significant, suggesting a potential cause-and-effect relationship. The proposition was that HR system strength moderates the relationship between intended and implemented HRM, between implemented and perceived HRM, and between intended and perceived HRM. While a significant relationship across the full causal chain was not observed, parts of the causal chain did experience moderation by HR system strength, in particular intended-implemented HRM and intended-perceived HRM. These findings support the call for future research to better explain the moderating influence of HR system strength. Study 4 included HR system strength, observed at the individual employee level, as a mediating variable between perceived HRM and employee outcomes. While there was some evidence to it playing a role in the mediation to loyalty, the findings overall did not

support HR system strength mediating the relationship, supporting the view that HR system strength is a higher-order phenomenon.

HR attributions were examined in Study 3. The moderated serial mediation for HR system strength was controlled for employee HR attributions of financial performance, employee wellbeing, client outcomes, and similarity with other firms. The relationship between employee wellbeing and client outcomes with perceived HRM was notable. While this study did not seek to explain how this relationship works, these findings suggest the need for further research on the interaction of HR attributions and employee perceptions.

The employee-organisation relationship

While there has been growing attention focused on the cross-level variability of HRM, less attention has been given to the causes of variability at the employee level, between employee-perceived HRM and employee outcomes. Kehoe and Wright (2013) anticipated this relationship may be indirect. Adopting the employee-organisation relationship (EOR) as a framework, Kuvaas (2008) found the relationship between HRM and employee work performance may be influenced by the EOR. Noting that the EOR can take many forms, Kuvaas conceptualised EOR through perceived organisational support (POS), affective commitment, procedural justice and interactional justice.

Study 4 addressed the call for research, both broadly in relation to variability across the HR causal process model, and specifically from Kehoe and Wright (2013), to understand the relationship between perceived HRM and employee outcomes. Adopting an alternate conceptualisation of the EOR, two mediated pathways were identified, a parallel multiple mediation for job satisfaction and a parallel-serial mediation for loyalty. Beyond the more typical EOR variables of LMX, commitment, and POS, the study included HR system strength, managerial effectiveness, and professional growth as potential mediating influences. As a result of the findings of this study, it is evident that there is an indirect relationship

between perceived HRM and employee outcomes. This indirect pathway, however, is not uniform, and varies depending on the observed outcome. This study has started to fill the gap identified in the literature, and at the same time has highlighted the need for further research to more fully understand this indirect relationship, with a need to consider both further mediating variables and alternate employee outcomes.

Managerial effectiveness

The centrality of line managers in the HR system has been widely observed (Bondarouk et al., 2009; Brewster et al., 2013; Sanders & Frenkel, 2011). Some have noted the challenge of line managers as agents of the company in relation to HR implementation, to the point of frustration (Hope Hailey et al., 2005; McGovern, Gratton, Hope-Hailey, Stiles, & Truss, 1997). In contrast, there has been suggestion that research has conflated good HRM with good management (Guest, 2011; Purcell & Hutchinson, 2007). While this thesis did not set out to explore the contrast of good management and good HRM, the progressive research described in these studies drew attention to the role of managers independent from their role as agents of the firm within the HR system. As a result, these findings have advanced understanding of the interaction of good management and good HRM and raised important questions for future research to explore.

Study 2, in setting out to understand the degree of and reasons for variability across the levels of intention, implementation and perception, identified four managerial drivers of divergence. While those drivers were initially translated in the negative as drivers of divergence, the positive aspect of each driver was reinterpreted and together they were conceptualised as managerial effectiveness. Study 3 hypothesised that managerial effectiveness would moderate the HR causal process model, specifically that there would be an interaction between implemented HRM and managerial effectiveness as part of the overall serial relationship. While the serial relationship was not meaningfully observed, the

interaction between implemented HRM and managerial effectiveness and its effect on perceived HRM was notable. The moderated relationship demonstrated that where there is high managerial effectiveness and low implemented HRM, perceived HRM is at its highest, while high implemented HRM tends to result in similar levels of perceived HRM, regardless of the level of managerial effectiveness. Unsurprisingly, low implemented HRM together with low managerial effectiveness results in the poorest levels of perceived HRM.

These results were not expected, so caution is needed in interpreting meaning from them. One interpretation that would make sense of these results is that where good managers focus on implementing HR systems well, they are forced to choose between managing well and implementing HR well, resulting in poorer perceived HRM outcomes. In contrast, when HR systems are implemented well, a consistent perceived HRM result is achieved, regardless of the effectiveness of managers. While the importance of managers in the HR system is supported by these findings, they raise new questions as to the way that managers manage their employees, and the potential trade-off between effective HRM and effective general management.

Implications for research

The findings of this thesis offer several potential contributions to research. While further evidence has been provided for the existence of the HR causal process model as a means for understanding the relationship between intended HRM and organisational outcomes, these findings highlight the complexity of the indirect pathways, beyond just the posited intended-implemented-perceived-outcome model. A number of indirect effects and interactive effects have been tested, which provide researchers with evidence from which to further develop understanding and explanation of this complex relationship.

More specifically, a range of contributions from these findings can inform future research. The measurement of implemented HRM appears to be most appropriately

performed as an aggregate within business units. While some caution is needed on this implication, specifically with regards to the research context, this finding should inform the specification of measurement. In the same manner as implemented HRM, there is evidence suggesting that HR system strength should be measured as an aggregate at the business unit level. Together, these findings are important contributions to understand the location of phenomena in the HR causal process model. This study is believed to be the first attempt at understanding how HR attributions influence employee perceptions of HR practices. It appears that employees can give multiple distinguishable attributions similar ratings. It is unclear if this means that HR attributions can coexist comfortably at the same level of importance, or if their similar levels are indicative of confusion as to the meaning of HR practices. A further theoretical contribution is the importance of the EOR at the point at which perceived HR practices transmit into employee outcomes. This point of the relationship has received little attention to the level of detail performed in this thesis, and these findings suggest that the EOR is an important contributing factor to the employee outcomes that firms achieve. Finally, the findings around managerial effectiveness open a new line of inquiry, contributing to research by providing initial evidence for the way managerial effectiveness effects employee perceptions of HRM.

Methodologically, two aspects of the research designs in this thesis make contributions to the field of HRM. First, the centrality selection process contained in Study 1 is a process previously not used in the HRM literature. This process brings a high degree of rigour and a measurable objectivity to the selection process for relevant literature. In future surveys of the literature, this selection process may provide a highly structured means of selecting relevant literature. Second, the use of complex serial mediation and serial moderated mediation analyses has not been widely used by HRM researchers. These analytical tools provide a means of analysing sequential pathways and complex interactive

and indirect effects. Such analytical processes may provide alternate means of observing relationships.

Implications for practice

These findings offer a number of learnings that can contribute to management practice. The evidence from Studies 2 and 3 reinforce the need for practitioners to consider what signals they are sending to managers and to employees. Where practitioners may be drawn to communicating *what* the HR practice is and *how* the practice should be enacted, they would do well to consider *how* they want meaning behind the HR practice to be interpreted, and *why* they want the practice to be implemented. While there is much that practitioners cannot control in the complex social system of the firm, they are able to enact some control over the signals they send regarding the HR system.

The implications of the findings regarding managerial effectiveness affect managers. The findings suggest that a well-implemented HR system will have a good, consistent effect on perceived HRM, but not the best effect. Practitioners may want to consider how HR systems can be deployed as a “safety net” for poorer performing managers, but at the same time they do not constrain strong managers from managing their employees effectively. In parallel, an emphasis within the HR system on managerial training, developing managers in their capacity as managers, will elevate perceived HRM and ultimately organisational outcomes.

For practitioners, it is important to understand that effective HR management does not end with the creation and dispersion of HR practices through HR specialists, but that a much more substantive process needs to take place for HR interventions to have an effect. HR practitioners are at risk of taking a “purist” approach to HRM, in which they develop systems and expect them to be implemented and perceived in a consistent manner. Rather than a primary focus on the practices themselves, practitioner focus on how to ensure consistency of

implementation, and understanding how employees perceive those practices and interpret meaning will contribute to achieving desired outcomes. This change in emphasis would require HR practitioners both to think more deeply about how their HR systems will transmit through the firm, and to be more involved “at the coalface,” understanding the manager and employee perspectives.

Limitations

The four studies contained in this thesis make an important contribution to understanding the HR causal process model. However, research is rarely without limitations, and the studies conducted, as with the thesis as a whole, has limitations as outlined below.

The destination of the field research presents limitations. While the qualitative data gathered for Study 2 was rich, it was from a single firm, and participants were selected by firm representatives with guidance from the researchers. These limitations mean the findings must be treated with caution as to their generalisability, and the results may contain selection bias. The survey data gathered for Studies 3 and 4 were from eight mid-tier accounting firms in Australia, and is exposed to self-selection bias. Further, the generalisability of these findings is limited by the industry, firm size, and geographic location of participant firms.

The participating firms were unwilling to provide objective performance data. While perceived performance evaluations are widely used and have been found to represent an accurate measure of actual performance (Ketokivi & Schroeder, 2004), the performance measures do not evaluate either productivity or financial performance in a quantifiable objective manner. Future research that incorporates productivity or financial data would further advance understanding of the impact of the findings contained in this thesis.

The research conducted in this thesis was cross-sectional in nature. While Studies 3 and 4 incorporated serial mediation designs, which are intended to identify sequential relationships rather than relationships that are either bidirectional or reversed, the sequential

nature of the relationship is not conclusive as to the cause-and-effect nature of the finding. Longitudinal research that addresses similar research questions would address this limitation.

Future research

Much of the research conducted in this thesis was exploratory in its nature. While providing valuable insight into the HR causal process model, the findings have raised a number of questions, expected to be fruitful avenues for researchers to pursue in the future.

Most central to the research question, future research that seeks to better understand the interactive and indirect effects within the HR causal process model is needed. The findings of this thesis suggest that the relationships between intended HRM and perceived HRM, and implemented HRM and perceived HRM, are not direct. The moderating influences of managerial effectiveness and HR system strength provide some guidance for future research, but the specific relationships require further theoretical development and empirical examination. Along similar lines, the mediating pathways between perceived HRM and behavioural outcomes requires further research to build a complete picture. Such research would examine additional outcome variables, would consider moderating influences, and would move from EOR mediation to psychological influences, possibly considering employee personality.

The process approach to HRM is an active area of inquiry (Sanders et al., 2019). The findings of this thesis provide a number of questions that researchers focused on the process approach may seek to address. HR system strength was conceptualised at the practice area, or business unit level. Further research that addresses the primary location in which climate develops in a distinguishable manner is needed if the level at which HR system strength is to be measured can be determined. It may be that the strength of the climate itself determines the level of formation, a strong climate may form at the level of the firm and propagate through the firm consistently, while a weak firm-level climate may drop to the business unit

or team level as the primary level of formation. The findings call for further understanding of HR attributions. Most notably, the question of whether multiple, equally-attributed reasons for why HR is done in a certain way coexist for individual employees, or is this a source of confusion, the result of poor signalling, and therefore represents a weakening in HR system strength. If HR attributions coexist, then do they interact, and what are the implications of those interactions. The process approach to HRM is a promising avenue of research, which may provide many of the answers to how the HR causal process model operates.

Finally, the discovery of managerial effectiveness as an influence on perceived HRM opens a number of pathways for future research. Managerial effectiveness was found to influence perceived HRM. However, findings did not point to a strong interactive effect between implemented HRM and managerial effectiveness. This lends support to the contrarian view taken by Guest (2011, p. 7), that “good management” may influence outcomes just as much as, or indeed instead of, effective HRM. Future research that develops managerial effectiveness as a construct, both theoretically and empirically, is needed. Further, examination of managerial effectiveness and its influence on organisational outcomes alongside and in contrast to HRM is likely to go some way to explaining the boundary conditions of HRM and its influence on performance.

Conclusion

The HRM-performance black box is a highly complex question. The research conducted in this thesis has attempted to provide some light for answering this question. It is evident that the way in which HR practices are implemented and perceived, and the level of variability of implementation and perception, plays an important role in organisational outcomes. The central role of managers, and their effectiveness beyond being agents of the HR function, is a relatively under-researched area, for which initial evidence has now been provided. The complex relationship between employees and the organisation, including employee-manager

relationships, is an important influence on the way in which perceived HRM effects outcomes. Although this important area of research continues to require substantial empirical and theoretical inquiry, this thesis has contributed to lighting part of the black box.

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Appendices

Appendix 1

11/20/2017

Gmail - Final Approval



Matt Sykes

Final Approval

1 message

17 November 2015 at 11:20

RE: Ethics Application - Final Approval

Send to: Chief investigator/Supervisor

CC: Co-Investigator or Co-Investigators

Subject Line:

RE: Ethics Application Ref: - Final Approval -

Dear Dr Heys,

RE: 'Advancing understanding of the HR-performance 'black box': an investigation of intended, implemented, and perceived HR practices in Australian accounting firms.' (Ref: 5201500881)

The above application was reviewed by the MGSM Ethics Sub-Committee. The MGSM Ethics Sub-Committee wishes to thank you for your well-written application. Approval of this application has been granted, effective "10/11/ 2015". This approval constitutes ethical approval only.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Chief Investigator: Dr Andrew Heys

Other Personnel: Matthew Sykes

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 10/11/ 2016

Progress Report 2 Due: 10/11/ 2017

Progress Report 3 Due: 10/11/ 2018

Progress Report 4 Due: 10/11/ 2019

Final Report Due: 10/ 11/ 2020

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

1/2

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy/>

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of Final Approval to an external organisation as evidence that you have Final Approval, please do not hesitate to contact the FHS Ethics at the address below.

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely,

Chair
MGSM Ethics Sub-Committee

Email: ethics@mgsu.edu.au
Web: <http://www.research.mq.edu.au/>