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RESEARCH METHODS & INNOVATION

Advancing multilevel thinking and methods in HRM research

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Abstract

Purpose – Despite the growing belief that multilevel research is necessary to advance human resource management (HRM) understanding, there remains a lack of multilevel thinking – the application of principles for multilevel theory building. The purpose of this paper is to propose a systematic approach for multilevel HRM research.

Design/methodology/approach – The paper proposes an agenda for multilevel HRM research by addressing three obstacles (concerning questions, theories and methods) that impede advancement in this field.

Findings – The paper provides an inclusive definition of multilevel HRM research that serves to advance its use, and maps out a multilevel HRM research landscape that captures the various aspects of this concept. The paper identifies unanswered multilevel questions within 16 research domains and develops a systematic approach to tackle these research questions by invoking three relevant theories and methodologies.

Research limitations/implications – Some of the identified research questions could not be answered due to limitations in mainstream multilevel theories and methodologies. In response, this paper proposes theories and methodologies that can address some of the multilevel HRM research questions identified in this paper.

Practical implications – The findings can help HRM academics working on cross-disciplinary and cross-level research problems with a clearly structured approach to what multilevel HRM research is and what steps should be taken in conducting such research.

Originality/value – The originality lies in the systematic approach that precisely describes multilevel HRM research, and addressing obstacles that inhibit rigorous and relevant multilevel HRM research by highlighting relevant research questions, theories and methodologies.

Keywords Human resource management, Levels of analysis, Multilevel research, Multilevel theory building

Paper type Conceptual paper

Introduction

Multilevel human resource management (HRM) research, the integration of constructs from different organizational levels, is rooted in the belief that organization-level HRM practices influence organizational performance through individual attitudes and behaviours (Ostroff and Bowen, 2000; Paauwe, 2009; Schuler and Jackson, 1987; Wright and Boswell, 2002). This view implies that the strategic HRM research field is inherently multilevel and that core assumptions can be drawn from multilevel theory (Ostroff and Bowen, 2000; Kozłowski and Klein, 2000). Recent years have seen a growing number of multilevel HRM studies, with recent contributions providing two particular insights: into why actual and perceived HRM differ (e.g. Liao *et al.*, 2009; Aryee *et al.*,

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2012); and how organization-level HRM practices affect individual-level outcomes including commitment and job performance (e.g. Ang *et al.*, 2013; Bal *et al.*, 2013).

Compared to other organizational research fields, such as strategy and entrepreneurship, HRM has been slow to adopt a multilevel perspective (Molloy *et al.*, 2010). Further, the majority of multilevel HRM studies have examined top-down effects, and studies examining the lower level emergence of phenomena (i.e. bottom-up effects) remain scarce. The few multilevel HRM studies that have examined bottom-up effects (Nishii *et al.*, 2008; Aryee *et al.*, 2012) have restricted their analysis to so-called composition models that assume that phenomena (e.g. the organizational climate) essentially remain unchanged as they emerge and move upward. As a result, HRM research has arguably missed the possibilities that compilation models offer in explaining how phenomena (such as human capital resources and collective performance of interdependent team members) differ between levels (Ployhart and Moliterno, 2011). A literature review highlighted that some of the core principles of multilevel theory, such as entrainment, bond strength and unit specification, have not yet found their way into HRM research (Renkema *et al.*, 2015). This is remarkable given that these principles could help identify the most relevant levels of analysis for selected HRM phenomena. As a late adopter of multilevel research, the HRM field still lacks multilevel thinking and this impedes further developments in this field. Currently three obstacles prevent multilevel HRM research from advancing:

- (1) The principles of multilevel theory building are not applied systematically in HRM research. Rather, the multilevel principles on how, where and when multilevel effects occur are applied arbitrarily, and this hampers our ability to build an integrated understanding of phenomena that unfold across organizational levels and explain how HRM is related to performance (Kozlowski and Klein, 2000).
- (2) In-depth insights and understanding of appropriate statistical and analytical methods for testing multilevel models are lacking (Shen, 2015). Popular multilevel-modelling software, such as HLM, and multilevel structural equation modelling (Hox, 2013) are primarily designed to test top-down models, and there is a lack of mastery of techniques for analysing bottom-up effects. This results in conceptual and statistical problems associated with multilevel analysis procedures such as a lack of appropriate sampling techniques for exploring multilevel effects (Preacher *et al.*, 2010).
- (3) HRM research traditionally relies on theories that at best can explain bi-level relationships, and lacks theories that explain multilevel or bottom-up relationships (Van Veldhoven, 2012). When bottom-up relationships are considered, composition-based theories that explain similarity dominate, rather than theories that explain emergence because of variability. HRM research needs to broaden its use of theories that could explain cross-level phenomena, and develop more-inclusive theories as it adopts multilevel research.

In addressing these three obstacles, we have three cascaded sub-goals: to provide new research directions based on multilevel HRM thinking; to suggest multilevel HRM theories; and to explore multilevel HRM methods and data analysis (see Figure 1). The first sub-goal leads to formulating unanswered multilevel HRM research questions based on the pillar of multilevel HRM thinking. Multilevel HRM thinking is defined as the application of principles of multilevel theory building (Renkema *et al.*, 2015; Kozlowski and Klein, 2000). This lays the foundations for future multilevel HRM research questions because it shows where research gaps exist in the multilevel

HRM literature. The second sub-goal, based on the pillar of multilevel theorizing, leads to identifying a set of theories to explain cross-level relationships in multilevel HRM research and to guide the operationalization of multilevel HRM relationships (the transformation from multilevel thinking to multilevel theorizing). The third sub-goal, based on the pillar of multilevel research, leads to an explanation of data analysis techniques and methodologies for answering research questions on multilevel effects in HRM.

Once achieved, these three sub-goals help overcome the three obstacles to multilevel thinking in HRM research described earlier by helping HRM researchers to conduct ground breaking, rigorous and relevant multilevel HRM research.

A multilevel HRM research landscape

Multilevel research is a term that HRM researchers increasingly use to indicate studies that include variables that reside at more than one organizational level of analysis, typically to better account for the structural hierarchy in which organizational actors are embedded. A key tenet of such multilevel thinking is that organizational entities exist in nested arrangements (Hitt *et al.*, 2007). Although many scholars share this fundamental understanding of what multilevel HRM research incorporates, and agree about the necessity to conduct it, we lack a definition of multilevel HRM research that captures the full breadth of a multilevel approach. There are five reasons why multilevel HRM research needs to be more precisely defined.

First, multilevel HRM research is about more than including variables at two different organizational levels of analysis. We need a definition that incorporates the need for multilevel HRM research to provide insights into managing people nested in organizational structures that enable and constrain their attitudes, behaviours and cognitions. Research therefore has to treat these employees, teams and organizations as embedded entities, each of which can be managed in many different ways and at different levels, and not as independent actors.

Second, we need a definition that emphasizes that the HRM construct is inherently multilevel because: it consists of nested components such as philosophies, policies and practices which are hierarchically ordered (Schuler, 1992); each of which can be manifested at different organizational levels (Ostroff and Bowen, 2000); and each of which consists of intended, introduced and perceived activities which ideally are hierarchically ordered (Wright and Nishii, 2013); thereby stressing the interconnectedness of the various HRM systems components.

Third, we need a definition that leads to studies utilizing variables that exist at multiple organizational levels. The dominant approach to multilevel HRM (e.g. Kehoe and Wright, 2013; Bal *et al.*, 2013) views HRM systems as being provided on the unit level and perceived by employees at the individual level (Jiang *et al.*, 2013).

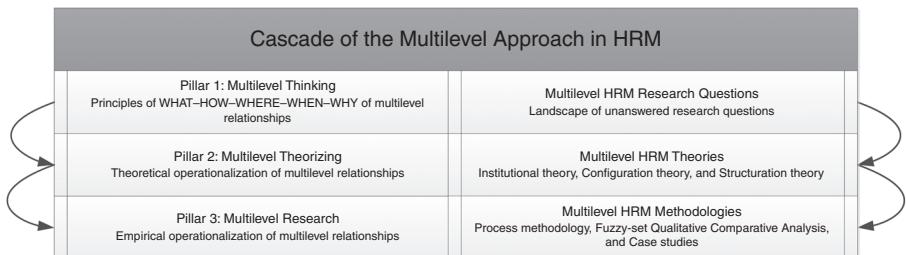


Figure 1.
Cascading multilevel approach to HRM research

Several HRM studies examining the relationship between actual and perceived HRM systems (e.g. Aryee *et al.*, 2012; Den Hartog *et al.*, 2013; Liao *et al.*, 2009) have highlighted that HRM system components exist at multiple levels. HRM-performance relationships have been shown to exist at least at three organizational levels of analysis, classified as the individual, unit and organizational levels (Jiang *et al.*, 2013), based on the view that organization-level HRM systems affect organizational performance by inducing organizational and psychological climates (Ostroff and Bowen, 2000). These climates reside at both the organizational and the individual levels, indicating that HRM-performance relationships are present at least at two levels of analysis. Additional levels have been included, such as the department or branch level (Liao *et al.*, 2009) and more recently the team level (Chang *et al.*, 2014).

Fourth, given that the application and effect of HRM practices are dependent on the external context of the organization (situational opportunities and constraints) (Pauwe, 2009; Pauwe and Boselie, 2003), we need a definition that allows the context to be included in multilevel HRM research. It is widely acknowledged that organizations face institutional and competitive drivers, leading to different adoptions and adaptations of HR practices (Farndale and Pauwe, 2007), thereby influencing multilevel HRM-performance relationships. There may be systematic contextual effects: the influence of HRM systems and climates may be more top-down in stable organizations, whereas they can have a stronger bottom-up influence in changing organizations (Ostroff and Bowen, 2000). In changing organizations, individuals can have a greater bottom-up impact on HRM systems, climate and normative contracts, and their influence on higher level constructs may be more prominent, when the institutional environment is unstable (Bitektine and Haack, 2015). Hence, the extra-organizational level, incorporating aspects such as institutional and competitive factors, potentially influences HRM-performance relationships.

Fifth, the definition of multilevel HRM research needs to highlight the importance of time. Many organizational phenomena are influenced by temporal issues: multilevel relationships can change direction over time (Kozlowski and Klein, 2000); and there is a time lag between the adoption of HR practices and an improvement in organizational outcomes (Huselid and Becker, 1996). However, time is frequently not included in multilevel models (House *et al.*, 1995) despite temporal issues potentially influencing the strength and direction of cross-level relationships.

To address these five aspects, we offer the following broader definition of multilevel HRM research:

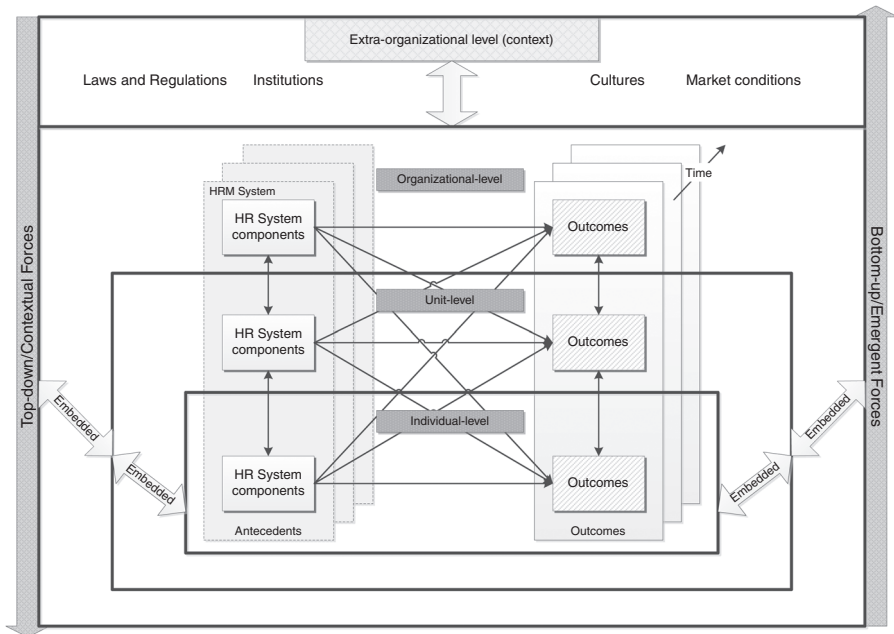
The study of time-dependent interconnections among various HRM system components and their relationships with contextual antecedents and outcomes at different organizational levels.

Together, multilevel HRM theories and research models need to conceptualize how constructs at different levels of analysis are linked, where these top-down and bottom-up processes originate and culminate, why they are linked, and how these linkages are influenced by time and context (Kozlowski and Klein, 2000).

Having more clearly defined what we mean by multilevel HRM research, we now construct a landscape of unanswered multilevel HRM research questions warranting scholarly investigation (see Figure 2) that addresses the first sub-goal of the paper.

Based on the above review, the landscape includes four levels of analysis, including an extra-organizational level of institutional or competitive factors that potentially influence HRM-performance relationships. We further emphasize the need to take account of the influence of the organization's external context on the direction

Figure 2.
The landscape of unanswered multilevel HRM research questions



of multilevel HRM relationships. Further, the landscape illustrates how outcomes are linked. HRM system components not only influence individual-level outcomes, but also higher level outcomes through bottom-up relationships in which individual-level characteristics exert influence. These bottom-up relationships are often overlooked in HRM research, resulting in a failure to accumulate knowledge on how individuals contribute to the outcomes of organizational units. Finally, the landscape incorporates the important role of temporal issues by highlighting the development of multilevel relationships over time.

Research questions overview

There is a gap between the proposed landscape and current empirical work. To systematically address all the multilevel research issues and variables in the existing HRM literature to identify important research questions for the future, we integrate 16 research domains that capture the intersections between the four levels that describe HRM-outcomes relationships (see Table I) in the proposed landscape. We analyse the antecedents and outcomes on three organizational levels plus the contextual environment level using relevant HRM constructs, providing sample research questions addressing the intersections.

The two central cells on the top row refer to research to examine the relationship between contextual factors and organization- and unit-level phenomena. These domains have received scant attention in multilevel HRM research, but the few examples available show that contextual factors (e.g. culture) affect the organization-level adoption of HRM practices (Peretz *et al.*, 2015). There are several other questions about multilevel HRM that have not been answered. First, there are questions about the influence of institutional pressures on the adoption and

	Extra-organizational-level outcomes	Organizational-level outcomes	Unit-level outcomes	Individual-level outcomes
Extra-organizational-level antecedents	To what extent do institutional pressures influence the adoption of HRM practices across industries?	How do external context variables influence the adoption of HRM practices?	In what ways does culture affect collective sensemaking of HRM practices?	How do market conditions influence employees' perceptions of HRM?
Organizational-level antecedents	How can organizational HRM policies influence existing institutions?	To what extent do HRM policies and practices contribute to organizational performance?	How do organizational-level HRM activities influence unit-level HRM practices and outcomes?	To what extent do top management characteristics affect employees' climate perceptions?
Unit-level antecedents	To what extent do teams contribute to economic growth?	How do organizational-level HRM outcomes emerge through the integration of various units?	What is the strength of the relationship between team interdependence and shared perceptions of the HRM climate?	How do team leaders affect the HRM perceptions of employees?
Individual-level antecedents	How do employees' preferences regarding work design affect labour laws?	How do individual-level constructs, such as attitudes and behaviours, contribute to organizational-level HRM outcomes?	How do individual-level attitudes and behaviours aggregate as a collective unit-level construct?	To what extent do HRM attributes fluctuate over time under the influence of adopting new HRM practices?

Table I.
Multilevel HRM
research domains
with sample research
questions

effectiveness of HRM practices. Second, there are many unaddressed questions about the underlying reasons for the differences between actual (organization level) HRM practices and (individual level) perceptions of HRM practices. Third, bottom-up emergence of HRM phenomena received scant attention. Scholars often opt to conceptualize individual-level phenomena at the organizational level by aggregating individual-level outcomes (e.g. Nishii *et al.*, 2008), predominantly based on perceived similarities among employees in a single unit. Despite some advances, there is still a need to address bottom-up effects in more detail, in particular by using compilation models that analyse differences between individuals rather than similarities (Kozlowski and Klein, 2000). Fourth, time needs to feature more strongly in multilevel HRM research, especially when addressing the emergence of HRM phenomena (Kozlowski and Klein, 2000). Many questions remain open about how HRM-performance relationships change over time.

All these questions, in one way or the other, relate to the complex roles of context and time in multilevel HRM relationships. As Pettigrew (1987) observed nearly 30 years ago, a multilevel analysis requires taking account of both vertical (multiple levels of analysis) and horizontal (sequential interconnectedness) relationships, and the interconnections between them, over time. Given the influence of context and time, these aspects deserve greater attention in multilevel HRM research.

Theories for multilevel HRM research

The second pillar of this paper identifies theories that can be used to explain multilevel relationships in HRM research. We have identified three broad theories with potential value for multilevel HRM research: institutional theory, configuration theory and structuration theory.

Institutional theory

The unique contribution of institutional theory for multilevel research is its focus on explaining both the top-down influence of structures on behaviour and the bottom-up cross-level relationships and role of agents in the institutionalization processes. This makes it useful in examining multilevel HRM models that focus on how HRM influences employee behaviour and how employee behaviour leads to organizational changes. Institutional theory addresses the processes through which structures, such as schemes, rules, norms and routines, are developed into guidelines for social behaviour, and how these elements are created, diffused, adapted and abandoned over time (Scott, 2005). Further, agency is also important, with actors playing an important role in the institutionalization process (DiMaggio, 1988). Two examples show how institutional theory can aid multilevel theorizing.

First, Bitektine and Haack (2015) highlight how cross-level relationships can change direction under the influence of institutional processes. In a stable environment, the legitimacy process has a top-down influence that reinforces existing practices whereas, under conditions of institutional change, the legitimacy is weaker because of there are competing arguments (Bitektine and Haack, 2015). Second, Smets *et al.* (2012) revealed, from a multilevel study examining the bottom-up institutional change process, that employees' improvisations can generate institutional change. A crucial factor of their model is that practice-driven change is advanced within rather than across boundaries of the organization. They highlighted two enabling dynamics that affect the speed at which a practice-level improvisation will affect the field as a whole: organizational coordination and institutional distancing. As such, HR practices can be an important dynamic, for example by recruiting employees with no attachment to the existing organizational logics (Battilana and Dorado, 2010).

In further theorizing on this bottom-up institutional change process in HRM, coordination theory could be used to uncover how organizational performance is linked to individual contributions and their interdependence (Van Veldhoven, 2012), and how HRM policies and practices influence individual efforts that lead to institutional change within organizations. These examples show that institutional theory opens several avenues for multilevel theorizing in HRM.

Configuration theory

Another theory that could help advance multilevel HRM research is configuration theory whose unique contribution lies in its ability to explain how combinations of embedded constructs lead to aggregated outcomes. Configuration theory can address several multilevel HRM research questions.

First, configurational thinking should be central to research into HRM systems since these are inherently multilevel with at least three hierarchically ordered components (Schuler, 1992). That is, HRM systems consist of philosophies, on how the organization regards its employees as sources of organizational success, that translate into policies, which are objectives for managing employees, that are ultimately operationalized as

practices in the form of specific instruments used to implement HRM policies (Jiang *et al.*, 2012). Configurational theory uses the concepts of equifinality and substitution to help explain how HRM practices aggregate into HRM policies (Jiang *et al.*, 2012). Equifinality reflects the idea that different systems of multiple attributes can reach the same final state (Meyer *et al.*, 1993). According to Jiang *et al.* (2012), different HRM practices can act as substitutes in realizing the same HRM policy where those practices have overlapping goals. Consequently, configuration theory has value when examining how HRM practices can be substitutes when aggregating to the HRM policy level.

Second, configuration theory discusses causal asymmetry, which can be helpful in understanding bottom-up effects in HRM-performance relationships. Kozlowski and Klein (2000) argue that bottom-up effects can be characterized by both content (i.e. raw elements that emerge at higher levels of analysis) and process (i.e. interactions that enable elemental content to emerge). Bottom-up effects are likely to be causally asymmetric, i.e. “causes leading [to] the presence of the outcome can be different from those leading to the absence of the outcome” (Fiss, 2011). Causal asymmetry follows from the notion that causes can vary in their necessity and sufficiency for producing an outcome of interest. Individually, the content and process of an emerging construct, and thus the HRM practices that build them, are probably necessary, but not sufficient, for bottom-up effects to occur. For example, HRM practices such as training and staffing are likely to affect the knowledge of individuals, but this will not emerge as organization-level human capital resources unless those individuals interact (Ployhart and Moliterno, 2011). Since interaction and knowledge-exchange depend on other HRM practices, multiple HRM practices are probably necessary and sufficient for bottom-up effects to occur. Thus, using configuration theory, multilevel HRM researchers could distinguish between content-enhancing and process-enhancing HRM practices and examine whether these are necessary and/or sufficient to explain bottom-up effects.

Structuration theory

Structuration theory offers a unique contribution for multilevel HRM research by integrating the interaction between individuals and structures while including both time and space. Structuration theory, as proposed by Giddens (1984), focuses on the dynamic nature of social reality, seen as being both time and context dependent. Multilevel theory indeed argues that, to understand the multilevel nature of HRM-performance relationships, one has to understand their dependency on time and context. This requires understanding the contextual features of “locales through which actors move in their daily paths and the regionalization of locales stretching away across time-space” (Giddens 1984, p. 286).

This theory merges the ideas of a constructed society based on the micro-actions of individuals and the macro-social worlds of modern life, which is another element that can locate structuration theory in multilevel HRM research. The theory proposes viewing “objective” structures and subjective interpretations as a mutually interacting duality rather than as independent elements (Jones and Karsten, 2008). Consequently, HRM systems and practices can be viewed as being created by human agents through actions that produce and reproduce the HRM systems. As such, the structuration process of HRM systems is understood as involving the reciprocal interaction between human agents and structural organizational features: human actions are enabled and constrained by rules and resources (i.e. structures) that are the result of previous actions. We argue that a structured HRM system implies an established system of domination within the HRM context that is legitimated by, and inscribed in,

the framework of HR professionals, managers and non-managerial employees as part of their sensemaking processes. That is, HRM actors draw on existing culturally embedded HRM organizational properties of meaning, power and moral structures, and on existing HRM knowledge frames, to build assumptions about HRM systems (Prasad, 1997).

HRM researchers such as Björkman *et al.* (2014) have started to rediscover the value of structuration theory by applying it to conceptualize intersections between practitioners' views, practices and behaviour to understand the HRM-performance link. Meijerink (2014) conceptualized that employee-organization relationships are constructed and that day-to-day activities emerge from the recurrent actions of employees and managers.

In our view, structuration theory can add understanding to multilevel HRM research by conceptualizing the process through which HRM practices become nested within organizations; how HRM effects emerge; and the impact of the various organizational actors on HRM.

Methods for multilevel HRM research

The third pillar of this paper involves identifying research methods that can answer multilevel HRM research questions. We are not denigrating often-used methods for some aspects of multilevel HRM research such as multilevel structural equation modelling and hierarchical linear modelling. Rather, our goal is to offer "new" research methods that can uncover new aspects of multilevel HRM. Here, we outline these methods and highlight their usefulness in multilevel HRM research. Specifically, we argue that multilevel HRM research could benefit from adopting process methodology, fuzzy-set qualitative comparative analysis (fsQCA) and case studies, because all are well placed to uncover multilevel relationships and processes that until now have received scant attention from HRM researchers. We argue that all these approaches have not been fully applied, or could be applied differently, in multilevel HRM research.

Process methodology

The process methodology's unique contribution is its ability to reveal multilevel dynamics and developments over time. The process methodology is focused on organizational data that consist of information about events, activities and choices over time; what took place in organizations; and who did what and when (Langley, 1999). This method is appropriate for answering multilevel research questions because it analyses how organizational change unfolds, and what factors influence this change, rather than analysing determinants, success factors and causal relationships. A process explanation for questions concerning organizational change is appropriate because of the temporal order and the sequence of events (Van de Ven and Huber, 1990). Given that process methodology is focused on how and why organizational change emerges, develops, grows or terminates over time (Langley *et al.*, 2013), it can be a valuable methodology in examining the role of HRM in the emergence of bottom-up organizational change or performance. Here, Smets *et al.* (2012) illustrated how a multilevel process study could be conducted into the bottom-up institutional change process using a chronology of key events. They contributed to institutional change theory by showing that improvizations by employees could generate institutional change.

More than a decade ago, Martin and Beaumont (2001) proposed a shift towards a process methodology in HRM. The process methodology addresses an important issue

that was already receiving scholarly attention in the late 1990s: the choice between variance theory and process theory. Traditionally, variance theory has been the dominant approach in organizational research seeking to explain antecedents of strategic change (Langley, 1999). However, this approach fails to provide insights into the processes behind change, such as the key events and the patterns of change and the role of time. The process methodology is characterized by having various units and levels of analysis (emphasizing its multilevel nature), data at multiple points in time (a focus on events, activities, etc.) and the integration of variables and process constructs (Langley, 1999).

As such, the process methodology enables the time-dependent integration of levels of analysis. It can highlight how HRM changes over time and how it influences employee characteristics that eventually lead to organizational change. As such, it is well placed to uncover multilevel relationships. Thus, process methodology, in combination with variance theory, can lead to better insights into HRM-performance relationships and their underlying mechanisms.

fsQCA

The fsQCA methodology is particularly suited to examining bottom-up effects (Fiss, 2007; Ragin, 2000) because of its unique ability to examine bottom-up effects that are characterized by compilation processes. Kozlowski and Klein (2000) view compilation processes as equivalent to configurations of different lower level properties (e.g. knowledge/skills of employees) that emerge as a higher level property (e.g. human capital resource) that plays the same role as, but is not identical to, its lower level properties (Ployhart and Moliterno, 2011). Since fsQCA helps in examining the inner workings of configurations (e.g. Fiss, 2011; Ragin, 2000), we argue that it is a useful methodology for multilevel research focused on compilation effects.

The core aspect of fsQCA in aiding multilevel researchers to study compilation effects is its case-based approach. That is, fsQCA classifies cases (e.g. employees nested in teams) into sets of cases that each represent a distinct value of the selected variable. As such, fsQCA uncovers whether cases that share the same value of the selected outcome variables (e.g. high team performance or low collective turnover) are also all members of certain sets representing the independent variables included in a study. By exploring the way set memberships intersect, fsQCA uncovers how variables combine in configurations that produce the outcome of interest.

By opening up the inner workings of configurations, fsQCA enables two types of multilevel research questions to be answered. First, by examining which sets of cases overlap in producing an outcome of interest, it helps identify variables that represent the content of a configuration, and thus are necessary/sufficient to produce the relevant outcome. Since higher level phenomena emerge from various lower level variables, fsQCA can empirically establish which lower level variables of a set, once aggregated, represent higher level phenomena. Second, fsQCA helps to reveal whether configurational components substitute or synergize in creating a particular outcome. For example, it could show whether different types of individual competences substitute for each other in building team-level human capital resources (Ployhart and Moliterno, 2011). Further, fsQCA could show whether HRM practices synergize with employees' attitudes, cognitions or behaviour so that these employee characteristics emerge effectively on higher levels of analysis. Thus, overall, fsQCA could advance multilevel HRM research by empirically examining how lower level properties combine to produce higher level phenomena.

Case studies

The unique contribution that case studies can make lies in their ability to uncover phenomena in their natural environment, including contextual processes, and expose how higher-order constructs emerge over time and space. We argue that if HRM scholars want to reveal multilevel HRM-performance relationships that are contextually bounded, they should further develop and refine rigorous case-study techniques. A case-study strategy will enable HRM scholars to address recent calls by Ostroff and Bowen (2016) to rethink conceptualizations and measurement approaches to HRM systems at a higher contextual level of analysis. Further, we believe that case studies do not exclude the application of statistical models but rather that their complementarity will help HRM research achieve the desired multilevel understanding.

We believe that the case-study approach is essential to systematically apply multilevel HRM research principles. The primary goal is to explain an individual case embedded in a specific context (and thus, the mutual influence of “behaviours” in upper- and lower level contexts). Research methods that can interpret context-dependency are essential if HRM scholars are to achieve a deep understanding of time-dependent, interconnected and context-bound developments in HRM system components. Relationships between variables usually begin to emerge from a within-site case analysis, leading to identifying or refining a theory. The first step, which is necessary in building a strong theory, is to refine the definition of a construct, and build evidence to measure it, thereby establishing the construct validity that emerges from the analysis process itself (rather than being defined a priori). The second step is to verify that the emerging relationships fit with the evidence in every case (cross-case analysis). In replication logic, cases that support a relationship enhance the confidence in its validity. Qualitative data are particularly useful in understanding why relationships hold, or do not. Moreover, qualitative data, once relationships are supported, deepen the understanding of the dynamics underlying the relationships.

In itself, case-study research can create a nested environment in which other research methods and techniques can be applied to answer more-specific research questions within a holistic inquiry.

Discussion and conclusions

The research questions, theories and methodologies proposed and outlined in this paper are appropriate for conducting multilevel HRM research in line with the suggested definition. Our aim has been to lay a foundation for multilevel HRM research that positions the field and provides impetus for new research directions. The inclusive definition and the resulting research landscape highlight the many aspects of multilevel theory that are yet to be addressed in the HRM literature. Describing crucial elements of multilevel HRM is a prelude to posing many questions that address the gaps. To integrate the issues, we have provided a cascade of a multilevel approach for HRM research. The resulting landscape of unanswered research questions highlights the neglect of several aspects such as the bottom-up emergence of employee outcomes and the part that time plays.

Consequently, we have argued that three theories – institutional theory, configuration theory and structuration theory – have unique potentials to address cross-level relationships and multiple aspects of our research landscape. Each in their own way points to uncultivated ground within multilevel HRM research. They all highlight how concepts embedded in nested arrangements are linked across levels of

analysis. In particular, institutional theory and configuration theory enable top-down and bottom-up relationships to be examined simultaneously. Structuration theory addresses the time-space continuum of HRM systems and is able to address temporal issues in multilevel HRM research. However, we are not suggesting that these theories can answer all multilevel research questions, nor that they are limited to the above contributions.

Using these theories requires specific methodologies. We have proposed three methodologies that can make distinctive contributions to answering multilevel HRM research questions. The process methodology is particularly suited to addressing contextual and temporal issues given its focus on how, when and where multilevel relationships are manifested. Further, a process approach can be combined with both institutional theory, given its focus on the dynamics of change, and structuration theory, because the crucial events identified can provide information on the micro-actions of individuals across space and time in a macro-context. Second, fsQCA, given its focus on how constellations of lower level processes are related to higher level constructs, can answer questions about how and why cross-level constructs are connected, and can serve as a methodology for testing models from a configuration theory perspective, by classifying observations into configurations that lead to higher level outcomes. Third, case studies can be used to determine whether HRM phenomena are multilevel, and if so the levels on which cross-level relationships should be studied, to provide a deeper understanding of the dynamics of cross-level relationships and the role of time in multilevel models, to identify observations that represent a configuration. Further, they can be combined with fsQCA to uncover how lower level variables are organized in a configuration that produces the outcome of interest.

In conclusion, the proposed questions, theories and methodologies combine to divulge how and why constructs at different levels are linked, where top-down and bottom-up processes originate and manifest themselves, and the role of time, all areas seen as necessary by Kozlowski and Klein (2000). They enable the study of time-dependent interconnections between HRM system components and their relationship with contextual and outcome variables across organizational levels. Ultimately, the proposed cascading landscape of multilevel HRM should facilitate a more systematic approach to multilevel HRM research by enabling different routes for linking research questions to theories, and translating these into methodological choices.

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