STRATEGIC HRM: IT'S ALL IN THE GAME

Exploring configurational theory in HRM
using a simulation model and serious game

LUUK COLLOU

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Luuk Dirk Collou

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EXPLORING CONFIGURATIONAL THEORY IN HRM USING A SIMULATION MODEL AND SERIOUS GAME

DISSERTATION

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In Enschede, the Netherlands

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Chapter 1

Introduction

I guess, this is my dissertation, welcome to graduation
— Kanye West

In this first chapter we elaborate upon why and how the creation of a simulation model can help us further HRM theory and practice. The challenges that we faced in the creation of the simulation model are presented in this chapter and the research goal is defined.

Introduction

It has been argued numerous times; employees drive organizational performance through their behavior (Jiang, Lepak, Hu, & Baer, 2012; Schuler & Jackson, 1987). Consequently, organizations aspire to shape employee behavior so that it contributes to overarching organizational goals. It does this by using a set, or configuration, of human resource management (HRM) practices. Combining HRM-practices in an HRM configuration is assumed to result in synergistic effects; if designed correctly the individual HRM-practices amplify each other in shaping employee behavior (Becker & Gerhart, 1996; Chadwick, 2010). One specific configuration of HRM-practices has been studied extensively; the configuration of high-performance work practices (HPWPs). Combining practices like comprehensive employee recruitment and incentive compensation, HPWP configurations are shown to relate to organizational performance (Huselid, 1995). However, questions remain. HPWPs suggest a best practice, universalistic approach to HRM while there is wide agreement on the importance of combining HRM-practices in a configuration that reflects the organizational context, and the organizational strategy in particular (Gratton & Truss, 2003). However, unfortunately, there is no consensus on which HRM-practices need to be combined (Boon, Den Hartog, & Lepak, 2019). Furthermore, how to design those HRM-practices to achieve synergistic effects is unclear (Chadwick, 2010).

The ongoing debate on which HRM-practices need to be combined, and how to design those practices given a specific organizational context or strategy, shows limited progress. We call it an "HRM configurations paradox": despite the consensus to establish workable and strategy-aligned HRM configurations, there is no detail available on the content of aligned HRM configurations, and there is little practical input to help to design such applicable configurations. Consequently, the question on how to design a firm specific HRM configuration that does indeed impact strategy enhancing employee behavior remains largely unanswered. Here, we pose that the time is ripe to build upon prior strategic HRM studies by adding a layer of detail to HRM configurations using the configurational mode of theorizing. While configurations (i.e. combinations, or 'systems') of HRM-practices such as HPWPs have been studied extensively, the configurational approach to HRM constitutes a mode of theorizing that has the potential to increase our understanding of HRM.

Contributing to prior configurational HRM research (e.g., Gooderham, Parry, & Ringdal, 2008; Knol, 2013; Rauf, 2015; Verburg, Den Hartog, & Koopman, 2007; Visser, 2010), and aspiring to unlock its full potential (Short, Payne, & Ketchen, 2008), we aim to specify the underlying assumptions and dynamic implications of this mode of theorizing. In response to the broad conceptualization and lack of clarity on what constitutes HRM systems (Boon, 2019), we strive to define and model HRM configurations with a level of detail that enables both research progress and practical relevance. We do so by considering organizational strategy as the contextual factor of importance; an HRM configuration needs to align to the organizational strategy. While we acknowledge that the organizational context potentially includes all the particularities of an organizations' geographical and/or industrial environment, we use organizational strategy (Martín-Alcázar, Romero-Fernández, & Sánchez-Gardey, 2005) as the most relevant factor for HRM (Kepes & Delery, 2009) to be aligned to as strategy dictates the employee behavior needed to succeed. In doing so, this research positions itself in the strategic HRM domain. The research goal of the current dissertation is to make configurational HRM applicable and aid firm specific HRM design by creating a theoretical and empirical grounded simulation model.

In this first chapter, we present the main direction of the dissertation. First, as the creation of a simulation model is pivotal to this research, we define what constitutes a simulation model in the context of this dissertation and elaborate upon why we set out to create a simulation model for HRM. Second, we elaborate upon the sequential steps taken and challenges addressed to achieve our research goal. Third, we present the structuring of the chapters and challenges. In the subsequent chapters that make up this dissertation, the specific challenges are presented, discussed and resolved with more detail.

Simulation model

HRM configurations -bundles of HRM-practices- need to be studied 'holistically' (Meyer, Tsui, & Hinings, 1993); it is the pattern of nonlinear related organizational factors that should be the focus of enquiry (Miller and Friesen as cited in Meyer et al., 1993). However, studying configurations is challenging. The number of potential organizational factors that are relevant to include in research is potentially large. In HRM, numerous HRM-practices, policies, principles, and strategies, on multiple levels, and including their design, can be defined; selecting which one to include in a configurational study is a challenge. Furthermore, the non-linear interdependent relationship between these factors poses a challenge for traditional research methods (Fabri, 2019). To study (HRM) configurations we need a method that can cope with the complexity arising from a large number of nonlinear interdependent factors. A simulation model is such a method. Simulation models have been put forward as tools to explore and verify complex systems (Gilbert & Troitzsch, 2005). Furthermore, as HRM professionals can use a simulation model to gain insights concerning their decision-making outcomes, a simulation model has the potential to be a valuable tool for HRM professionals designing firm specific HRM.

Models come in a variety of shapes and sizes. The terms 'simulation' and 'model' are used individually, in combination and sometimes interchangeably. Hence, a definition of what a simulation model entails in the context of this dissertation is in order.

"A model aeroplane is recognizably an aeroplane, even if it is much smaller than a real aeroplane and has none of its complex control systems"
(Gilbert & Troitzsch, 2005, p. 2)

Building a model is a way to understand the world; a model is a simplification - smaller, less detailed, less complex - of some other structure or system (Gilbert & Troitzsch, 2005). A model can be defined as a less complex specification (mathematical equation, logical statement or computer program) of a real-world phenomenon representing certain specific aspects of that real-world system (Bunge, 1998). Simulation is a specific method of modeling. A simulation model has two additional characteristics that differentiate it from other types of models. Firstly, a simulation model enables one to generate simulated data; the model can be run forward through time and outcomes are generated. This characteristic enables a simulation

model to be dynamic. Secondly, included in a simulation model is an explicit representation of the processes that are key to the phenomenon that is being simulated. The dynamic capabilities and a focus on processes differentiate simulation models from, for example, statistical models. In this dissertation we refer to our simulation model as a tool that has the dynamic capabilities to simulate how, over time, (changes in) an HRM configuration affects multiple levels of HRM alignment.

The goal of this research is to create a theoretical and empirical grounded simulation model that specifies (and makes applicable) configurational HRM. To create the simulation model, several sequential steps are taken (figure 1).

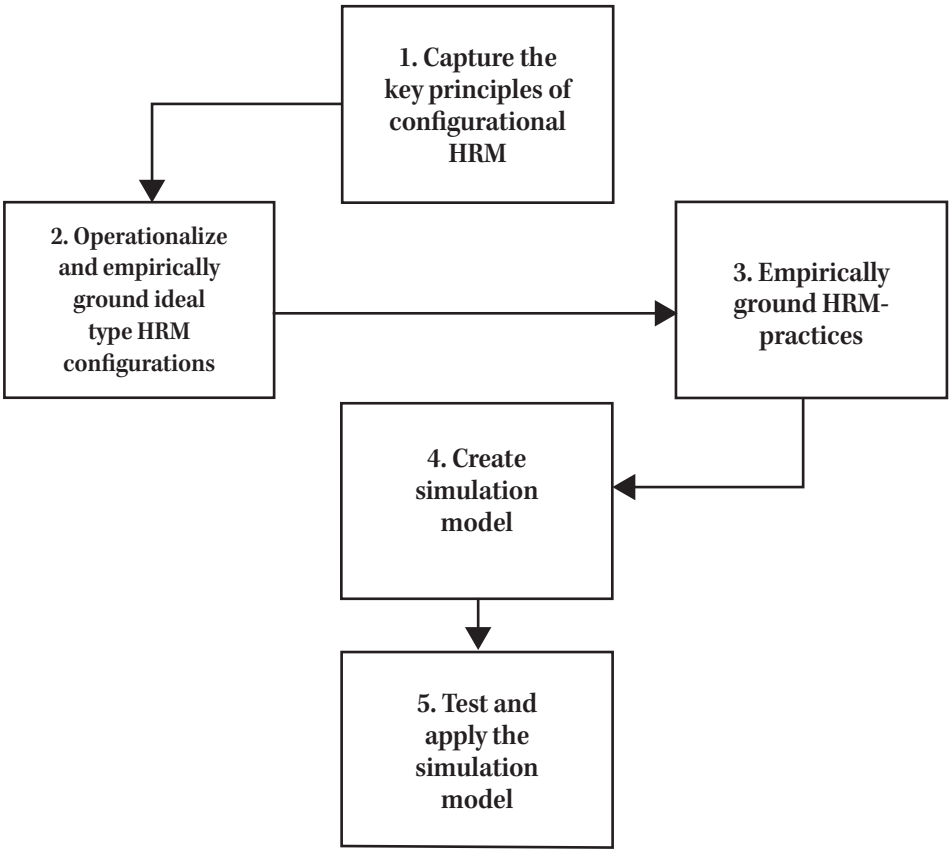


Figure 1. Graphical representation of research outline

We strive to specify configurational HRM, and aid firm specific HRM design, by creating a theoretical and empirical grounded simulation model. To do so, five sequential steps are taken. First, to specify configurational HRM and to facilitate the creation of a simulation model that reflects the configurational mode of theorizing, key principles of configurational HRM are defined. Second, to ground the simulation model (theoretically and empirically), we define and empirically explore ideal type HRM configurations - combinations of HRM-practices that are theoretically "ideally" related to specific strategy enhancing employee behavior. Thirdly, to add an additional layer of detail to configurational HRM and empirically ground the simulation model, we collect and present the solidified practical knowledge of HRM professionals on the alignment of HRM-practices. Fourthly, to specify configurational HRM and aid firm specific HRM, an initial simulation model is created and tested. Finally, after theoretical and empirical grounding,

creation, and testing of the simulation model, we implemented the simulation model in a serious game and applied it during gameplay sessions with HRM professionals. We did so to assess the simulation model in terms of plausibility of the outcomes produced, its research potential, and its ability to aid HRM professionals in firm specific HRM design.

Using these five steps we addressed and resolved the challenges we faced to create a simulation model. We now present these challenges. In the subsequent chapters of this book, these specific challenges, and how we addressed and resolved them, are presented with more detail.

Challenge 1: The Key Principles of Configurational HRM

What are the key principles of configurational HRM that need to be included in the simulation model?

Configurational HRM is a diffuse theory. Some argue that configurational theory finds it origins in sociology (Quintaneiro, 2006) while others argue for its roots in biology and system theory. The core of configurational theory however lies in its criticism on methodological reductionism. By explicitly drawing on a holistic principle of enquiry to identify configurations, the configurational approach postulates that understanding the whole requires more than studying individual parts. Applied to HRM this implies the need to study a configuration of HRM-practices holistically. This notion of studying HRM systems has been adopted in strategic HRM at large and has distinct similarities with system theory (von Bertalanffy, 1968). Similarly, the sociologist Elias assessed that sociological configurations cannot be studied in isolation and emphasized the importance of interdependency between individuals (Korotka et al., 2016). According to the configurational approach, HRM configurations are to be studied using ideal types, a concept articulated by the sociologist Weber (1922). Ideal types are theoretical constructs providing a frame of reference for empirical (in this case HRM) research. In addition, it has been argued that equifinality occurs in HRM configurations; "the same final state may be reached from different initial conditions and in different ways" (von Bertalanffy, 1968, p. 40). Configurational HRM takes in elements from different research disciplines.

The configurational approach has been a longstanding topic of discussion amongst HRM scholars. However, when applying the configurational mode of theorizing to HRM, several challenges emerge. First, one can argue that

it is impossible to truly study HRM configurations holistically. Considering all influencing factors is just too complex. Secondly, it is challenging if not impossible to determine the necessary levels of detail and the number of factors to examine when applying a holistic approach. Third, methodological challenges occur as there is a need for nontraditional research methods that can deal with nonlinearity, interdependencies and a vast number of variables. Perhaps due to these challenges, empirical support for configurational theory in explaining the relationship between HRM and organizational performance has been limited (Gerhart, 2007).

Application of the configurational mode of theorizing has come to mean that, in order for HRM to increase strategy enhancing employee behavior, there needs to be alignment. Designing for alignment is "the fluid and evolving process, in which two or more elements are being designed simultaneously to result in shared outcomes" (Gratton & Truss, 2003, p.75). While we acknowledge that HRM can be aligned to all the particularities of an organizations, we use organizational strategy Martín-Alázar et al., 2005) as the most relevant factor for HRM (Kepes & Delery, 2009). Strategy dictates the employee behavior needed to succeed. Three specific dimensions of alignment have been put forward commonly and are used here. First, there needs to be alignment between the HRM configuration and the organizational strategy; vertical alignment (Gratton & Truss, 2003). Secondly, the HRM-practices that make up the HRM configuration need to be consistent amongst one another; horizontal alignment (Gratton & Truss, 2003). Thirdly, there is a need to safeguard that the HRM intentions are transferred to the aspired employee behavior; implementation alignment (Nishii & Wright, 2008). The configurational tradition claims that the desired employee behavior is achieved if vertical alignment is supported by the horizontal alignment and is strengthened by implementation alignment. Using these dimensions of alignment, and considering organizational strategy, nonlinear interdependency between HRM factors and the intended interpretation of those factors by employees, implies a holistic perspective on HRM.

However, questions remain on what it means to consider an HRM system as a whole, which HRM-practices to include, what level of reductionism to uphold and how to deal with the concept of equifinality. As a result, we face the challenge of creating the simulation model without having a set of principles that guide design decisions; we need design principles.

Design principles can be defined as general guidelines based on current knowledge that inform the specific design of the simulation model. For example, in their quest to create a simulation game to increase clinical reasoning amongst nurses, Koivisto et al., (2018) defined and used the design principle "use of realistic patient scenario's" to create their simulation. However, in HRM, no recognized set of configurational principles are defined as of yet (for an exception, see Korotka, Bos-Nehles, Bondarouk, 2016). Perhaps due to this lack of predefined principles, the application of specific configurational elements in HRM research differs from article to article. Here, we capture the key principles by tracing back to the origins of configurational theory and its application to HRM. We subsequently use these principles of configurational HRM as design principles for our simulation model.

We address this challenge by defining the key principles of configurational HRM in chapter two of this dissertation. We go back to the roots of configurational HRM and address ideal type HRM configurations that can serve as a framework of reference and assess how the concepts of alignment and equifinality need to be addressed in the simulation model. Once captured and defined, these principles enable us to specify configurational HRM, create a simulation model that reflects the configurational mode of theorizing and enables HRM professionals to experience the complexity of designing a firm specific HRM configuration. By defining configurational HRM principles we build on prior work and aspire to further the configurational mode of theorizing.

Challenge 2: The Level of Detail in Configurational HRM

Which ideal type- and empirical hybrid- HRM configurations can be used as a framework of reference for the simulation model?

Exploring configurational HRM using a simulation model requires a specification of the HRM configurations to be included. Following the configurational tradition, the simulation model needs to be designed using ideal type HRM configurations. These ideal type HRM configurations are theoretical constructs in which ideal alignment (i.e. optimally enhancing the employee behavior needed given a specific organizational strategy) is attained. Once defined, we can use these ideal types as a framework, or departure point, for the simulation. Scholars have defined ideal type HRM configurations (for examples see Hauff, Guerci, & Gilardi, 2018; Verburg, Den Hartog, & Koopman, 2007). However, the HRM-practice details needed

to make a configuration applicable is often missing. For example, one of the configurations defined and empirically assessed by Verburg et al., (2007) includes the HRM-practice selection which was assessed by asking respondents to indicate which procedures were used during employee selection (standard forms, interviews, assessments, etc.). In doing so, one does not assess the focus of those procedures; do the assessments focus on innovative employee behavior? Or on collaboration? Including the focus enables us to assess the alignment of that HRM-practice with the organizational strategy. Without the detailed knowledge of the focus of the HRM-practices, the simulation model will not be able to aid HRM professionals in their challenge to optimize HRM alignment. This level of detail is a prerequisite for the practical value of the simulation model. HRM professionals do not only select HRM-practices, they design their focus and the way they should be executed as well. As the simulation model aims to aid HRM professionals in their HRM decisions, HRM-practice focus and operational execution needs to be considered.

We address this challenge by defining and specifying ideal type HRM configurations in chapter three. In addition, to ground our simulation model empirically, we explored the ideal type HRM configurations amongst 23 small/medium sized enterprises (SMEs). The ideal type HRM configurations and empirical exploration presented in chapter three provides input for the simulation model; we gauge if the ideal types HRM configurations have practical relevance and asses if we can infer HRM alignment using them.

However, to actually create a simulation model, there is need for an additional layer of detail. Specifically, we need information on the extent to which the individual HRM-practices that make up the ideal type HRM configuration align to a specific organizational strategy. Currently, this information is lacking; the extent to which and how specific HRM-practices affect employee behavior is unclear. We infer the extent to which these HRM-practice align to a specific organizational strategy based on the competing values model and using the solidified practical knowledge of HRM professionals (N=178). These outcomes are presented in the first part of chapter four. The second part of chapter four is dedicated to the creation of the simulation model.

Challenge 3: Creating the Simulation Model

How does HRM alignment change over time and how can we create a simulation model so that it captures these changes in HRM alignment?

Configurational HRM provides the theoretical underpinnings on how HRM affects employee behavior; through alignment. Hence, the simulation model ought to enable us to explore configurational HRM, and aid HRM professionals in their quest to design aligned HRM configurations. Creating a simulation model that assesses vertical and horizontal alignment requires a frame of reference in terms of strategy and HRM. The competing values framework (Cameron & Quinn, 2006) was selected as it enables us to create a simulation model using the ideal type HRM configurations (chapter three). However, configurational HRM revolves around aligning the HRM configuration to the organizational strategy over time. A simulation model is a particular valuable tool as it enables us to explore how alignment changes over time. It has the potential to capture the dynamic nature of configurational HRM. To do so, we first need a rationale on how alignment changes and second, we need to capture this rationale in our simulation model. The challenge of specifying how these changes in alignment happen over time -creating our simulation model- is addressed in chapter four.

We use the design principles (chapter two), the empirically grounded ideal type and hybrid HRM configurations (chapter three) and specified HRM-practices (chapter four) to create the actual simulation model in chapter four of this dissertation. We first present the detailed HRM-practice scores that enable us to create a simulation model in the first part of chapter four; these scores are the last precursor for creating the simulation model. Second, we present the actual simulation model. Thirdly, we present the outcomes of trial runs performed to gauge if the model adheres to the principles of configurational HRM. Finally, we address how the simulation model enables us to explore and address configurational HRM.

Challenge 4: Applying the Simulation Model for Research and Practice

What are the outcomes, theoretical and practical implications when using the simulation in a serious game?

On the one hand, configurational HRM is intuitively appealing (Delery & Gupta, 2016); HRM-practices are selected, designed and implemented as systems, employees perceive multiple HRM-practices at once, and alignment to strategy seems to be important. On the other hand, configurational HRM is complex (Delery & Gupta, 2016) due to its nonlinear relationships, vast amount of HRM options, equifinality and the prerequisite of proportional alignment to strategy. By creating a simulation model, we specify this intuitive but complex notion of configurational HRM and make it applicable. However, the proof of the pudding is in the eating; the simulation model needs to be applied and used by researchers and practitioners to provide value. The research potential of the simulation model in terms of exploring configurational HRM is addressed at the end of chapter four. The potential of the simulation model in terms of providing HRM decision aid, as well as exploring the decisions of HRM professionals, is what we turn to in chapter five of this dissertation.

The configurational mode of theorizing in HRM implies that multiple combinations of individual HRM-practices within one HRM configuration lead to the desired end-state. Additionally, configurational HRM posits interdependence between (a large set of options in) HRM design and (a large variety in) organizational strategies. This interdependency and variety in both HRM and strategy cause the task of designing firm specific HRM to be complex (Campbell, 1988). In addition, HRM professionals are challenged to reason strategically when designing an effective HRM configuration. Studying the decision-making of HRM professionals in search for the optimal HRM configuration design is challenging as these decisions are rarely explicated. A serious game enables us to study and analyze the decision-making process by providing an abstract representation of reality in which HRM professionals face a variety of HRM choices. InLine enables us to study the behavior (Jackson, 2011) of HRM professionals in terms of the HRM design decisions.

Games are characterized by being interactive, based on an agreed set of rules and constraints, providing feedback, and directed towards a clear goal (Wouters, van Nimwegen, van Oostendorp and van der Spek 2013).

Serious games distinguish themselves from games in general by having the objective of not mere entertainment, but using that entertaining quality for training, education and or learning (p.250). InLine, the serious game created here, serves a specific purpose in the context of this research; it enables us to use and present the simulation model to HRM professionals. Specifically, InLine challenges HRM professionals to be explicit about their HRM-practice decisions given a specific organizational strategy. The game enables us to gauge the quality of our simulation model and analyze the HRM decisions made by HRM professionals.

The simulation model aims to aid HRM professionals' decision making by making explicit the level of HRM alignment achieved, based on HRM-practice decisions over multiple years. During InLine play sessions HRM professionals provided the input (HRM-practice decisions) and were presented with the outcomes (HRM alignment) of the simulation model. Using their experience with the simulation model during the serious game InLine we assess the plausibility of the outcomes and quality of the simulation model. We can simultaneously study the decisions HRM professionals make given a (specific) organizational strategy.

In chapter five we present the design of InLine, elaborate upon how the simulation model was implemented, and present the outcomes of 30 InLine play sessions (N=423). We will reflect on the simulation model as a tool to potentially aid HRM decisions, as well as a tool to specify configurational HRM through specifying the decisions made by HRM professionals.

HRM simulation model and serious game

By addressing these challenges, we detail 4 ideal type HRM configurations that are specified for the strategic positions of organizations. These ideal types are filled with the relevant HRM-practices in six well known and distinct categories of HRM-practices. These HRM-practices include a specified focus on employee behavior and are based on the experience of HRM professionals working in the field. The 4 ideal type HRM configurations are subsequently used in a simulation model that allows us to detail and specify hybrid strategic positions and corresponding well aligned HRM configurations that should lead to the necessary employee behaviors given the strategic company goals. Creating and applying a simulation model and serious game is a novel way to approach HRM that provides new opportunities for both research and practice.

Using the simulation model and serious game, the effect of these hybrid HRM configurations can be empirically assessed for efficacy with this level of detail for the first time. The tools allow for the specific HRM-practices within the different configurations to be tested in a configurational setting to assess their combined effect on behavioral outcomes. By doing this, specific individual practices can be researched, not as individual interventions, but as a part of a combined configurational effect. This is a leap forward when compared to more traditional HRM research that usually only allows testing for direct individual effects without taken the combined effect of interventions into consideration.

The simulation model allows HRM professionals to design optimal strategically aligned HRM configurations for all possible organizational strategic goals and assess their efficacy beforehand based on the best available theoretical and practice based HRM knowledge. After implementation of the designed HRM-practices, their effects on behavior can be observed which allows, over time, to empirically test the models' predictions and hence allows researchers to improve the model. The work therefore has scientific value; it provides a means and a method to test the effect of different individual practices as part of a configuration on employee behavior and allows adjusting these practices while preserving the configurational context. Individual practices can be manipulated, and their effect observed to optimize the configuration, while improving the model.

Dissertation outline

To create and apply a strategic HRM simulation model we face the challenges of defining configurational HRM principles, defining and exploring ideal type HRM configurations, specifying HRM-practices and creating the simulation model, and finally, applying the simulation model. These challenges are addressed in the chapters of this dissertation, figure 2 provides an overview.

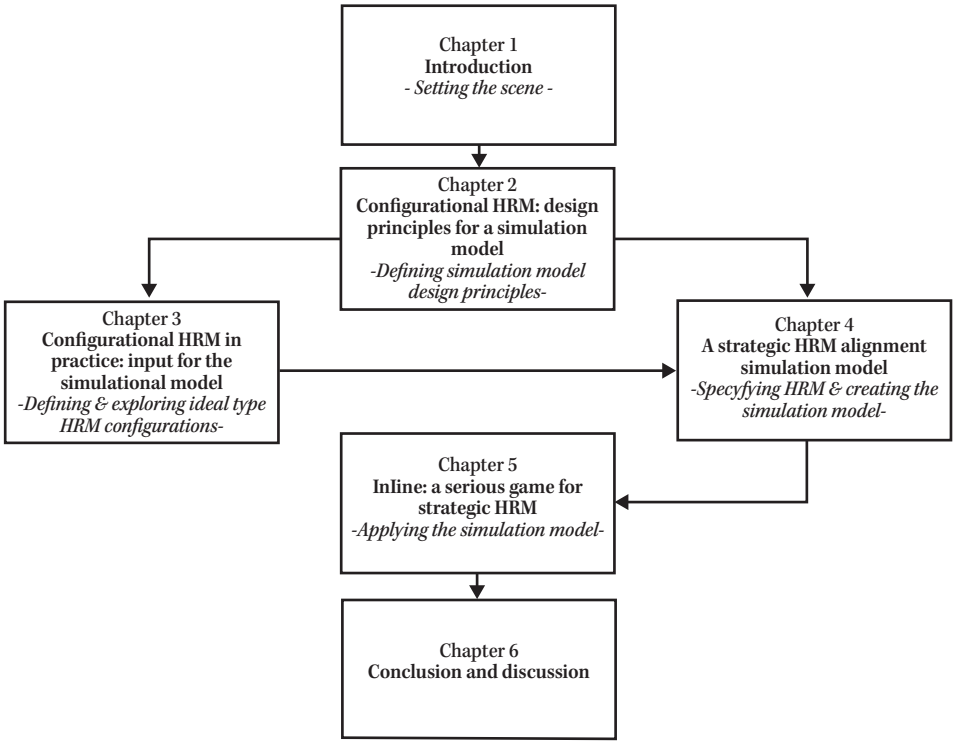


Figure 2. Graphical display of dissertation chapters

References

References can be found on page 139.

Chapter 2

Configurational HRM: design principles for a simulation model

Everything should be made as simple as possible, but no simpler
— Albert Einstein

In this research we suggest a simulation model to support the HRM scholarly and practitioner community in applying configurational HRM. To support our call presented in chapter one, we trace back to the origins of configurational theory in this chapter and develop configurational HRM principles that represent necessary conditions for the creation of the simulation model. The three configuration design principles we define here inform the creation of the simulation model that is presented in later chapters.

This chapter is based on a conference paper entitled "the configurational mode of theorizing in HRM: a way forward" presented at the human resources international conference (Collou, Bondarouk, & Bruinsma, 2019) but offers a more detailed explanation.

Introduction

We pose that HRM scholars have not fully reaped the benefits of the configurational mode of theorizing yet, after its introduction to HRM in 1996 (Delery & Doty, 1996). We are convinced that the time is ripe to bring together the accumulated HRM knowledge and push the state of the art strategic HRM research using configurational theory. We suggest a simulation model to support the HRM scholarly and practitioner community in applying configurational HRM. Such a model aims to enhance understanding and application of this holistic and dynamic way of strategic HRM inquiry. However, to create such a model we need design principles. In this chapter, we defined these principles by tracing back to the theoretical origins of configurational HRM for the first time since its introduction.

Most organization scholars agree that organizations are ever changing entities that need to adapt to internal and external environments to survive. Developments such as consumer product individualization, short product development time (Lasi, Kemper, Fettke, Feld, & Hoffman, 2014) and trends towards more flexible labor agreements (Bolhaar, Brouwers, & Scheer, 2016), force organizations to be ever more flexible. If we are to explain and understand organizations we need to consider them as (open) systems (e.g., Katz and Kahn, 1966). In this chapter we pick up this classical (open) system argument and posit that the system perspective is perhaps more relevant now than ever in understanding organizations in general and HRM in particular, due to the increasing complexity and speed of change in both the internal and external environment.

At the risk of being trivial let us remind the reader about what constitutes a system. A system consists of two or more parts, (1) each of which can affect the performance of the whole, (2) none of which have an independent effect on the whole, and (3) no subsystem (i.e. system made up of two or more parts which is part of the larger system at hand) can have an independent effect on the whole (e.g., Ackoff, 1994). In other words, a system is "in exchange of matter with its environment, presenting import and export, building-up and breaking-down of its material components" (von Bertalanffy, 1968, p. 141). In addition, every individual system is embedded in a larger system, making the survival of any one particular (sub)system a derivative of its ability to contribute to the larger system. From this perspective, we consider organizations as parts of a larger economical, geopolitical, and/or technological system. Their longevity depends on the extent to which they

can transform input to valuable output in terms of these larger systems. To explain and understand a system as a whole, the system approach emphasizes the importance of the interaction of its individual parts. This means that the properties of a system are the products of the interaction of its individual parts.

"No part of an automobile by itself can transport a person from one place to another. When a system is disassembled, as it is when analyzed, it loses its essential properties. When a part of a system is separated from that system, that part loses its essential properties. An automobile's engine cannot move even itself when removed from the car (Ackoff, 1994, p. 182)".

After a reminder of what system theory entails, we suggest applying this perspective to HRM. We see several reasons to justify this approach. First, we view HRM as a system of selected, designed and implemented HRM-practices that is a subsystem within a larger system (an organization). Secondly, similar to the organization at large (Sheppeck & Militello, 2000), HRM has (open) system characteristics (Delery & Gupta, 2016; Martín-Alcázar et al., 2005): it takes in organizational information such as the strategic orientation for inputs, and transforms employee behavior for outputs (Jackson & Schuler, 1995). Thirdly, its existence depends on the extent to which it contributes to the overarching organizational goals. Finally, it is made up of multiple individual parts (e.g. recruitment and selection, training and development, performance management, etc.) that interact with one another and the environment (Doty, Glick, & Huber, 1993).

The call for a system perspective on HRM has been formulated long ago (e.g., Delery & Doty, 1996; Jackson, Schuler, & Jiang, 2014). This plea for the consideration of the systemic nature of HRM manifested itself most explicitly through the formulation and use of the configurational mode of theorizing in HRM. However, we observe that scholars have yet to explicitly address the systemic elements of HRM in their configurational research endeavors. We argue that the systemic approach will enhance the explanatory power of HRM configurations. As a result, HRM scholars and practitioners will gain both more actionable and conceptual understanding on how to design effective HRM. We acknowledge that the configurational theory has been applied to the HRM domain. However, these applications have been fragmented to favor empirical settings, which did not allow research to fully reap the benefits of this mode of theorizing. Here, we revisit the capacity of configurational theory

and define configurational HRM principles. HRM studies have accumulated a great deal of knowledge to show important elements of configurational theory. The interrelationship between HRM-practices, for example, is shown to affect the association between high performance work practices and firm performance (Huselid, 1995). Similarly, interrelated HRM-practices combined in internally consistent HR bundles empirically relate to organizational performance (Macduffie, 1995). Consistency and consensus amongst HRM-practices are found to explain how employee attributes accumulate to affect organizational effectiveness (Bowen & Ostroff, 2004). As said above, individual elements have been used, but there seems to be a lack of a predefined set of configurational principles applied in HRM research (for exception see Korotka, Bos-Nehles, Bondarouk 2016).

We argue that the development of such principles is also important for HRM professionals. So far, there seems to be an intuitive match between the reality of constructing HRM in practice and the configurational mode of theorizing; HRM professionals select, design and implement HRM-policies and specific practices out of a multitude of interrelated options. Configurational theory in its current state however does not provide any specifics that can be used by HRM professionals in their design of effective configurations. Unfortunately, this mode of theorizing currently leaves professionals empty handed as it does not specify what the HRM options are and how to design and implement them. The configurational principles defined here will enable professionals to design workable HRM systems.

Having clearly defined configurational principles will enable us to create a simulation model as a powerful tool to explore and verify (Gilbert & Troitzsch, 2005) HRM configurations as complex systems. Design principles support the creation of the simulation model by formulating the following logic: if you want to design intervention X [a strategic HRM simulation model], you are best advised to give that intervention the characteristics A, B and C [configurational characteristics] and do that via procedures K, L, and M [configurational procedures] because of arguments P, Q, and R [configurational arguments] (Van den Akker, Branch, Gustafson, Nieveen, & Plomp, 1999). Design principles are general guidelines that inform the specific design of a simulation model.

The goal of this chapter is to define and specify design principles for a configurational HRM simulation model. In what follows we do so by first tracing back to the diffuse roots of configurational theory. Second, we revisit the application of configurational theory to HRM and address deficiencies. Thirdly, we define configurational HRM principles.

Configurational theory: origins

Configurational HRM is a diffuse theory; its ideas seem to stem from a system approach, but a pure configurational perspective is difficult to pinpoint. Some argue it finds its origins in sociology. The sociologist Norbert Elias, for example, considered human societies as configurations that cannot be deduced from less complex levels, as is common in the physical and natural sciences (Quintaneiro, 2006). In addition, ideal types, a concept defined by sociologist Max Weber (1922), are commonly used in configuration theory. Parsons (1951), another famous sociologist, supported a systemic perspective stating that: "the interaction of individual actors, takes place under such conditions that it is possible to treat such a process of interaction as a system in the scientific sense and subject it to the same order of theoretical analysis which has been successfully applied to other types of systems in other sciences" (p.1). Others argue that the roots of configuration theory are to be found in biology as von Bertalanffy (1968) stresses the importance of considering organisms as holistic systems that exist in relationship to other systems. Moreover, application of "configurational like" approaches involving studying systemic elements can be found in fields such as psychology and economics as well (de Leeuw, 1974).

We posit that, whatever roots of the configurational mode of theorizing we take as prevalent, its core lies in criticism of reductionism. Methodological reductionism implies that entities as a whole can be explained by the behavior of smaller parts that make up the larger entity. Reductions do not only provide a method to simplify those things that might otherwise be too complex, reductionism posits that causal mechanisms that explain an entities' state are to be found at this reduced level (Sayer, 2005). Accordingly, the whole behaves no different than can be explained by studying the individual parts. Borrowing this concept of reductionism from different fields, organizational researchers commonly use the contingency approach, "which invokes reductionism as its dominant mode of enquiry" (Meyer et al., 1993, p. 1177); one tries to understand a social entity by studying its individual parts.

Studying the individual parts that make up a social entity however does not enable one to study the interaction of those individual parts. This is problematic as the interaction of the individual parts enables the system as a whole to function; a hand in and of itself cannot write, but attach that hand to a body and it can. In response to the deficiencies of reductionism, and fueled by a realization about the complex and dynamic nature of organizations (Ashmos & Huber, 1987), system theory, posited in its day as a new paradigm, satisfies this need for a holistic perspective. On the one hand, system theory was introduced as a possible answer to the pursuit of scientific unity; one unifying theory for all sciences. On the other hand, system theory provided an opportunity for the needed scientific cohesion (de Leeuw, 1974). Accordingly, a system is a cohesive conglomeration of interrelated and interdependent parts. Open system theory acknowledges the importance of relationships between elements that make up a system. Additionally, it poses a need to consider interaction between the system and its environment (von Bertalanffy, 1968).

In organization studies a similar need to include the interaction between organizational elements to fully understand and explain organizational effectiveness was formulated as a response to specialization and fragmented knowledge (de Leeuw, 1974). As early as 1961, Koontz referred to the Chicago social system school in which researchers attempted to identify the nature of relationships of groups within organizations and show these as an integrated system. Applied to organizations, system theory was defined as "a philosophy which accepts the premise that the only meaningful way to study organizations is to study them as a system" (Scott, 1961, p.15). Organizations are seen as systems for getting work done (Perrow, 1966).

Configurational theory labels systems -multidimensional constellations of conceptually distinct characters that occur together (Meyer et al., 1993)- as configurations. This holistic stance implied by the configurational approach often results in a quest "to identify configurations, or unique patterns of factors, that are posited to be maximally effective" (Delery & Doty, 1996, p. 808). Applying the configurational approach initiates the need to identify patterns of factors in which interdependency and interaction with outside factors is acknowledged. One example of such configurations being the entrepreneurial, machine, professional, diversified, political and missionary configuration defined in the work of Mintzberg (1979, 1983) in which organizations are categorized based on their structure and power relationships.

To identify maximally effective configurations, ideal types are often mentioned. Ideal types are theoretical artifacts constructed by the researcher as a framework of reference that allows one to study deviation from these ideal types empirically. Introduced by the sociologist Max Weber, ideal types are viewed as unified analytical constructs "formed by the one-sided accentuation of one or more points of view and by the synthesis of a great many diffuse, discrete, more or less present and occasionally absent concrete individual phenomena, which are arranged according to those one-sidedly emphasized viewpoints" (Meyer et al., 1993, p. 1179): *"Er wird gewonnen durch einseitige Steigerung eines oder einiger Gesichtspunkte und durch Zusammenschluss einer Fülle von diffus und diskret, hier mehr, dort weniger, stellenweise gar nicht, vorhandenen Einzel Erscheinungen, die sich jenen einseitig herausgehobenen Gesichtspunkten fügen, zu einem in sich einheitlichen Gedankenbilde" (Weber, 1922, p.191).*

While the specific origins of configurational theory remain diffuse, there seem to be clear similarities between configurational theory and (open) system theory. We do acknowledge the differences; on the one hand, system theory is portraited as a unifying attempt of all sciences while configurational theory seems to be applied more narrowly on domains such as sociology and more specific domains such as HRM. In addition Quintaneiro (2006) states that configurational theory is not based on harmony and balance while system theory is (p.8). However, the systemic nature of organizations is a pivotal element in both theories. Both call for a holistic perspective and consideration of interrelated parts that make up a system/configuration. And while system theory has been put forward to address the relationship between HRM and performance (Fleetwood & Hesketh, 2006), the similarities between configurational theory and system theory seem to have been forgotten. We argue that by focusing on the systemic characteristics (pivotal in both theories) of HRM systems/configurations we can increase our understanding of HRM configuration design.

Now, we first elaborate upon the tradition and deficiencies of applying configurational theory in the HRM domain after which the design principles for the simulation model are presented.

Configurational theory applied to HRM: traditions and deficiencie

HRM researchers often use a reductionist lens. For example, seminal work on high performance work practices (HPWPs) and financial performance (e.g., Combs, Liu, Hall, & Ketchen, 2006; Huselid, 1995; Macduffie, 1995) has been done using a reductionistic framework; a group of individual HRM-practices and their effect on financial performance has been studied. These studies included control variables such as firm size, capital intensity and growth, and sometimes include measures of 'fit' (Huselid, 1995). Other examples include relationships between employee engagement and business unit level performance (Harter, Schmidt, & Hayes, 2002), and employee ownership and firm performance (O'Boyle, Patel, & Gonzalez-Mulé, 2016). These studies have accumulated valuable knowledge about the contribution of HRM to firm performance. However, we argue that at their core they study individual parts without considering the interdependency between those individual parts and without the interaction between the whole and its environment. As a result, the characteristic of "the whole" is lost in vision.

We identify three traditions applied in HRM research that relate to configurational theory.

HRM configurations tradition 1: HRM systems alignment

Configurational theory applied to HRM has come to mean that there is a need for alignment when designing HRM. Alignment is a well-known concept in HRM; it's the fluid and evolving design process, in which two or more elements are being designed simultaneously to result in shared outcomes (Gratton & Truss, 2003, p. 75). A holistic point of view is safeguarded when designing for alignment as one needs to understand business strategy (which is the most often used alignment factor, see Martín-Alcázar, Romero-Fernández, & Sánchez-Gardey, 2005), translation of strategy into HRM-policies and practices, and HRM implications for employees. Three specific dimensions of HRM alignment are suggested (Gratton & Truss, 2003). First, vertical alignment concerns alignment between the HRM configuration and the organizational strategy (Bowen & Ostroff, 2004; Macduffie, 1995). Secondly, configurational HRM posits the importance of distinctiveness, consistency and consensus amongst the individual HRM-practices (Delery & Doty, 1996; Saridakis, Lai, & Cooper, 2017). The extent to which alignment amongst individual HRM-practices is achieved, is labeled horizontal alignment. Thirdly, there is a need to safeguard that the HRM intentions of management are transferred to the aspired employee behavior. Guaranteeing that

employees perceive HRM as indented by management (Gratton & Truss, 2003; Nishii & Wright, 2008) is labeled HRM implementation alignment.

The configurational HRM tradition claims that the desired employee behavior is achieved if vertical alignment is supported by horizontal alignment and is strengthened by implementation alignment. Accordingly, an aligned HRM configuration is supposed to send a consistent message about HRM content to employees which in turn can be translated to the aspired employee behavior (Bowen & Ostroff, 2004). As a result, studying HRM configurations revolves around the development and empirical examination of interrelated patterns of HRM factors that as a whole affect employee behavior. Designing for alignment implies a holistic lens; one needs to consider not just an individual HRM-practice but a set of multiple interacting HRM-practices, organizational strategy and also the process of implementation.

However, we assess that the concept of alignment has not lived up to its full potential. Firstly, what constitutes an HRM configuration, that needs to be aligned, is up for debate (Paauwe, Guest, & Wright, 2013). Secondly, there is no consensus on how to assess HRM configuration alignment, and no levels of alignment have been defined and verified. Thirdly, alignment does not provide any specifics on how changes in one HRM-practice affect the other HRM-practices, the level of HRM alignment or the process of implementation. Specifically, it does not provide information on the mechanisms how these changes come about. This is troubling as an open system (and configurational) perspective does assert that changes in one (HRM) element changes all other elements and the system as a whole (von Bertalanffy, 1968). Fourthly, while there seems to be consensus on the importance of a holistic perspective (Boon et al., 2019) defining what a holistic perspective entails for HRM and applying a predefined concept of this holistic mode of enquiry is scarce (Hauff, Guerci, Dul, & van Rhee, 2019). These caveats limit the value of the concept of alignment; in its current application it does not provide the needed content nor process information on how to change employee behavior through HRM alignment. The concept prescribes the importance of alignment but lacks the specifics on how to align HRM. We therefore question the extent to which the principle of alignment has reached its full potential.

HRM configurations tradition 2: ideal configurations of HRM

The tradition of using ideal types to assess alignment seems to be characteristic for configurational HRM as well. Studying patterns of HRM factors initiates a methodological need for a frame of reference. Once defined, one can assess deviation from this reference framework empirically and study the effects of alignment on desired employee behavior. As a frame of reference, ideal types can be used. These are artifacts purposefully constructed by the researcher in which, in this particular case, the HRM-policies and practices are matched to ideally align vertically, horizontally and for implementation, to stimulate desired employee behavior (Doty & Glick, 1994; Meyer et al., 1993).

One warning related to these ideal types is that they tend to exclude the detailed interpretation of the HRM-practices that make up an HRM configuration. We pose three levels of detail when defining HRM-practices. On the categorial level, one can assess the presence of, for example, the HRM-practice recruitment; does the firm use the HRM-practice recruitment? On a focus level, one can assess the focus of that specific HRM-practice category within a firm; does the recruitment practice focus on one specific kind of employee behavior? Finally, on an operational execution level, one can assess what is practically done in terms of recruitment; e.g. does the firm use assessments in their recruitment and if so, which one? All these levels are relevant to assess the effects of HRM configurations on employee behavior.

If an organization applies an ideal type strategy, and matching ideal type HRM configurations are defined that include the focus and content of the HRM-practices, HRM professionals can design and implement those ideal type HRM configurations in practice. However, real life organizational strategy is likely to deviate from the ideal type strategies, thus becoming 'hybrid'. Corresponding hybrid HRM configurations can still achieve effectiveness, as long as alignment is achieved, as Delery and Doty (1996) point out: "An HRM configuration should deviate from the ideal type HRM configuration exactly proportional to the extent to which the organizations' strategy deviates from the ideal-type strategy" (p.813). The presence of hybrid configurations vastly increases the complexity of HRM configuration design as there is a need to combine elements (HRM-practices) of different ideal types. What HRM-practices to combine, and the extent to which a specific combination of HRM-practices is aligned with a hybrid strategy is an insurmountable task for most HRM professionals. Currently, no tools have

been created that enable HRM professionals to design firm specific HRM systems based on ideal type HRM configurations that include HRM-practice category, focus and operational execution, and allow for hybrid HRM configurations.

HRM configurations tradition 3: equifinality principle

Lastly, the configurational HRM tradition postulates the concept of equifinality. With origins in open system theory, equifinality means that "the same final state may be reached from different initial conditions and in different ways" (von Bertalanffy, 1968, p. 40; italics added). In organization studies, equifinality has come to mean that similar organizational performance can be achieved through multiple organizational structures if organizations face the same contingencies (Gresov & Drazin, 1997); two or more organizational configurations can be equally effective in achieving high performance (Fiss, 2007b; Gresov & Drazin, 1997). Translated to HRM, equifinality deviated from the original meaning asserting that different HRM configurations can be designed that are equally effective in terms of increasing the desired employee behavior. However, von Bertalanffy (1968) argued that the same final state may be reached from different initial conditions and then in different ways. This implies that when there are different initial levels of employee behavior (different initial conditions), the final state (the ideal type employee behavior) can be achieved in multiple ways. Now this makes perfect sense, after all, HRM will have to apply different practices to get to the desired end state if employees behave differently to begin with.

The concept of equifinality has been mentioned in HRM research, perhaps due to a feeling of obligation to mention the concept as it was introduced in the early work on configurational HRM (Delery & Doty, 1996), but empirical exploration is scarce (Hauff, 2019). We argue that the original message was misinterpreted by using equifinality in a sense that different combinations of HRM-practices would lead to the same end result. Using equifinality in such a general sense makes the predictive power (and also the prescriptive quality for that matter) of configurational theory questionable; it could justify why predictions were not confirmed when studying HRM configurations. For example, if a specific HRM configuration is hypothesized to increase employee performance, and empirical studies illustrate that multiple HRM configurations affect employee performance, equifinality can be asserted. In his quest to identify complementarities within HRM configurations, Meuer (2016), for example, empirically finds six HRM configurations that

are associated with high labor productivity. This could be explained by equifinality; multiple combinations of HRM-practices result in high labor productivity. However, we question if these types of findings necessarily imply equifinality at all and plead for a more precise definition of the level at which equifinality might be found. After all, these types of findings could equally well be explained by different employee behavior at the outset, leading to different necessary interventions to achieve the same end result.

Specifically, we plea for the consideration of equifinality given three levels of HRM-practice definitions: category, focus, and operational execution. On a category level, HRM-practices are defined based on their presence. Using this level, one can assess if the HRM-practice performance appraisal, for example, is present within an organization. On a focus level, the HRM-practices are defined based on their focus towards a specific employee outcome. Using this level, one can assess the extent which performance appraisal is focused towards innovative employee behavior, commercial employee behavior, or a combination of both. On an operational execution level, the actual methods are defined with which an HRM-practice, in a specific category, focusses on specific employee behavior. Using this level, one can assess if performance appraisal focused on innovative behavior is done using 360 degrees input, SMART goal formulation, or any combination of specific tools.

We argue that equifinality can be found at the category HRM-practice level: one might observe different sets of HRM-practices categories producing similar outcome and in terms of a general employee outcome (employee performance). However, we argue that if, for example, innovative employee behavior is desirable given the organizational strategy, the focus of the HRM-practices ought to be on innovative employee behavior. At the level of HRM-practice focus, there is no room for equifinality: focusing HRM-practices on cooperative employee behavior will not increase innovative behavior as much as a focus on innovative behavior would. Hence, we question if equifinality is still present when not only the category but also the focus of HRM-practices and specific employee outcomes are assessed. In addition, at more specific operational execution level, equifinality could be present. Using a specific but different assessment tool or training method as long as they are focused on specific behavior, might very well be equally effective. Figure 3 illustrates equifinality at the category, focus and operational execution levels using an example of the HRM-practice recruitment.

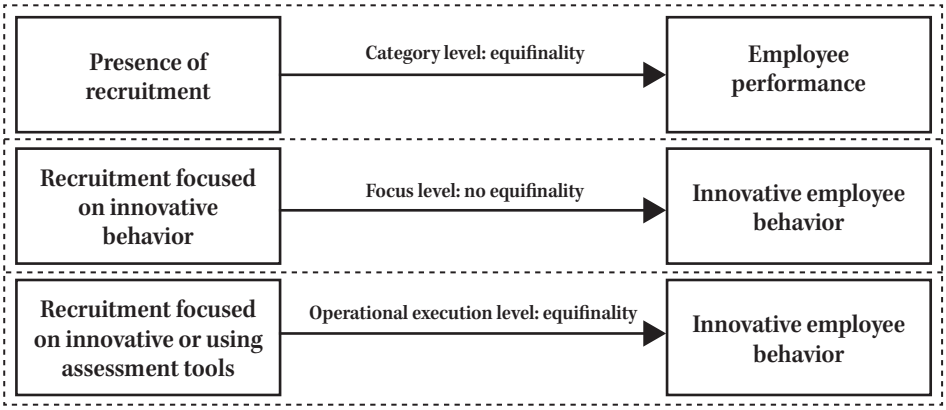


Figure 3. Examples of equifinality at different HRM-practice levels

Based on our reflections on the configurational traditions in HRM studies, we argue that the deficiencies in the current application of configurational HRM have limited the scholarly progress. A holistic perspective has proven to be challenging and scattered application of configurational elements resulted in fragmented knowledge. In what follows we pose a way forward for the configurational mode of theorizing by the creation and use of a strategic HRM simulation model.

A way forward for HRM: simulations and design principles

The fundamental characteristics of configurational HRM conflict with the methodological lens that has been used to study strategic HRM thus far (Fabri, 2019). Our current knowledge is primarily based on(empirical) studies upholding a linear perspective (Kaufman, 2015) often using the classical linear regression model (Paauwe et al., 2013). Huselid, (1995), for example, uses regression analysis to conclude a positive effect of HPWPs on performance. Combs et al., (2006) apply a predominantly linear model in their meta-analysis to explain the relationship between HRM and performance concluding that "organizations can increase their performance by .20 of a standardized unit for each unit increase in HPWP use". More recently, focusing on longitudinal studies in the HRM domain, Saridakis et al., (2017) asserted an overall correlation of 0.287 between HPWPs and performance.

The dominance of the linear model has not gone unnoticed (Martín-Alázar et al., 2005), several authors argue for the adoption of theoretical frameworks and corresponding methods that enable a more flexible picture of HRM systems (Hauff, 2019; Kaufman, 2015; Paauwe et al., 2013). Fiss (2007b) in

particular postulates a mismatch between configurational theory and the methods applied. In their review of the methodological choices in HRM research Bainbridge, Sanders, Cogin and Lin (2017) infer substantial developments in analytical methods. Structural equitation modeling (SEM) in particular has been put forward as a method that can increase our understanding of the complex interrelationship between HRM and organizational outcomes (Ringle, Sarstedt, Mitchell, & Gudergan, 2018). Specifically, SEM models can account for nonlinear relationships and latent variables (Jöreskog, 1998). However, as the number of HRM-practices and their possible designs is large, constructing SEMs that account for all the intricacies of HRM configurations is increasingly difficult. In addition, the underlying notion of SEM remains a linear relationship.

Qualitative comparative analysis (QCA) also facilitates some of the configurational elements. Using QCA and also cluster analysis we can empirically observe HRM configurations and assess how different configurations can lead to similar outcomes. However, current HRM studies using these methods tend to derive configurations based on empirical observations (see for exceptions Knol, 2013; Verburg et al., 2007). This leaves room for a more theoretical approach in which holistic configurations are based on theory development and assessed in terms of empirical presence and outcomes. In our view, simulation modelling can further current understanding based on the of above-mentioned techniques, and will serve as a good alternative approach that can account for the systemic and dynamic characteristics of an HRM configuration.

Simulation models & configurational HRM

As early as 1968, von Bertalanffy hinted towards the use of simulations to increase our understanding of open systems. Gilbert and Troitzsch (2005) note that with complex nonlinear models it can be very difficult to apply analytical reasoning, and hence simulation can be seen as the only way. Till now, the use of simulation models is scarce in HRM research (for exceptions, see Hafeez & Abdelmeguid, 2017; Kamath, Rodrigues, & Desai, 2009). We postulate that by using a simulation model, the holistic perspective can, but also needs to, be defined with more rigor. As one builds a simulation model, the factors and their interdependencies need to be defined. In addition, such a model enables HRM professionals to simulate, "run the model forwards though (simulated) time" (Gilbert & Troitzsch, 2005, p. 16), and see what happens if adjustments are made in their HRM configuration

design. While the number of HRM-practice options remains large due to the ambition to cover all employee related practices, HRM professionals can experience the consequences of design decisions which will increase the practical applicability of the configurational mode of theorizing. A simulation model allows us to define what constitutes HRM configurations, what the underlying relationships are and how effects change over time. The inferred outcomes of the simulation model can be tested empirically and based on this empirical assessment the model can be improved. Hence, aspiring to further the state of the art knowledge on configurational HRM and create a tool for HRM decision making, we set out to create a strategic HRM simulation model. Based upon the current application of the configurational mode of theorizing we start with the design principles that uphold a configurational perspective.

Three principles to design an HRM configurational simulation model

After we presented three distinct configurational traditions in HRM research, we define three design principles that are based on these configurational HRM traditions. These design principles inform the creation of our simulation model by providing the direction of the specific design. While they do not depict details of how specific elements of the simulation model are to be created, they do provide a framework upon which specific requirements can be defined. In the following, we address how the limitations of the current application of these configurational HRM traditions are addressed in a simulation model.

Design principle 1: *Holistic enquiry through alignment.* We argue that HRM configurations need to be considered as open subsystems in a larger system which is the organization. The well-known concept of alignment potentially provides a holistic approach. Therefore, the concept of alignment is to be included in the simulation. However, as priory addressed in this chapter, there are limitations to the current application of alignment. To remedy these limitations, we need to specify with great detail how alignment can be assessed, and how alignment changes over time. In doing so, the simulation model aspires to provide HRM professionals with workable HRM insights and also contribute theoretically by specifying the concept of alignment to a new level of verifiable detail.

Design principle 2: *Aligned ideal types and hybrid HRM configurations.* If the simulation model is created to infer (changes in) alignment, there is a need for a framework in terms of organizational strategy and HRM. Based on this framework ideal types ought to be designed that reflect perfectly aligned HRM configurations. In addition, as organizational strategies vary, the simulation model needs to allow hybrid HRM configurations. The simulation model ought to specify the extent to which alignment is attained in (hybrid) HRM configurations and how the selection of interrelated HRM-practices that make up the configuration changes alignment over time. In doing the simulation model does not only provide professionals with a tool that enables them to experiment with HRM configuration design, it provides a wide range of very specific hypotheses that can be tested empirically to improve the simulation model over time.

Design principle 3: *Define equifinality at the HRM-practice focus level.* We assess, based upon the scarce application and loosely defined principle of equifinality, that there are more ways to achieve the same outcome depending upon the level of reductionism that is upheld. On a categorical level, different HRM-practices can lead to the same outcome. If we specify our scope with more detail in terms of HRM-practices and assess their focus, equifinality is questionable. We assert that in order to achieve a specific employee behavior, the HRM-practices ought to be focused on that specific employee behavior in order to be effective. There is no 'room' for a different focus. We set out to explore the concept of equifinality by defining it with more rigor in the simulation model.

The three design principles are summarized in table 1 including some examples of the more specific design characteristics of our simulation. These examples are added to provide an elaboration of how the design principles result in more specific design requirements but are not meant to be exhaustive as the actual simulation model will be presented in chapter three.

Table 1. Configurational HRM design principles and application

Principle	Application in simulation mode	A specific design example
Holistic enquiry through alignment	- Application of alignment to uphold holistic lens - Specify how alignment is measured and achieved - Specify how alignment changes over time	Numeric scores are assigned to the strategy and the HRM configuration, the difference between these scores representing the (vertical) alignment
Aligned ideal types and hybrid HRM configurations	- Defined ideal types are framework of reference - Defined ideal types on HRM practice focus level - Allow for effective hybrid HRM configurations	Four ideal type HRM configurations are designed based on the four ideal type strategies in the competing values model. Enabling combining elements out of these ideal types allows for hybrid configurations
Equifinality at the HRM-practice focus level	- Specify equifinality - Define equifinality at HRM practice focus level	Scores are assigned to every individual HRM-practice (defined at a focus level) using the solidified knowledge of HRM professionals exploring the equifinality concept with more detail

In addition to these design principles, the quality of a simulation model is dependent on the extent to which it represents empirical reality in a plausible manner. Therefore, we set out to use empirical data to refine and specify the model at hand. We explore the ideal types used in our simulation model empirically, and also use the solidified knowledge of HRM professionals on the extent to which specific HRM-practices trigger specific employee behavior Later in this dissertation we will elaborate upon the methods used.

Configurational HRM simulation model: a way forward

Applying the configurational mode of theorizing to HRM is challenging. There is a need for a holistic perspective, a need to determine the level of detail to uphold, ideal type HRM configurations, a need for nontraditional research methods and a need to address equifinality. While promising, in its current state, the alignment concept is not specified enough, application of hybrid HRM configurations results in an enormously large set of options

that severely limits the practical applicability and, equifinality triggers more questions than answers. As such, configurational HRM seems stuck and progress has been modest. We question the concept of equifinality that has been used as a Holy Grail in the HRM configurational tradition. We advocate an added layer of detail that safeguards a holistic approach, renders falsifiable statements and provides a dynamic perspective with enough detail to provide HRM professionals with practical input on the design of HRM. To achieve this additional layer, we set out to design a configurational HRM simulation model. As mentioned before, simulation models come in a variety of shapes and forms. Here, we aspire to design a simulation model with high functional fidelity (Hays & Singer, 1989): the relationships and effects in the simulation model ought to mirror the relationships and effects of designing an actual HRM configuration. We focus on functional fidelity, as opposed to for example physical fidelity, as it will enable us to explore configurational HRM theory and aid HRM decision making without the need to mirror the physical reality of designing HRM configurations. In addition, something we consider a valuable bycatch, by designing a simulation model for HRM, a combination can be made between the fields of simulations and HRM to endeavor into unknown territory. Limited (for exception see Kamath et al., 2009) research into simulation models of HRM has been done and hence our initial model is an exploration of the possibilities of combining these fields. Therefore, we propose a way forward to reap the benefits of this mode of theorizing by creating a simulation model.

References

References can be found on page 139.

Chapter 3

Configurational HRM in practice: input for the simulation model

In theory, there is no difference between theory and practice, while in practice there is

— Benjamin Brewster

In this chapter, we elaborate upon the development, definition and empirical exploration of the ideal type HRM configurations used as a framework of ref erence for the creation of our simulation model. The ideal type HRM configurations presented in this chapter are a specification of the design principles presented in chapter two, and a prerequisite for the creation of the simulation model presented in chapter four.

This chapter is based on a conference paper entitled "HRM alignment: a toolbox" presented at the international human resource workshop (Collou, Riemsdijk van, & Bruinsma, 2018) but offers a more detailed explanation. The attentive reader might encounter some repetition, mainly concerning configurational theory, a topic that is discussed in detail in chapter two. This repetition is a consequence of the fact that the chapter is based on a conference paper.

Introduction

Configurational theory postulates that unique configurations of relevant HRM factors result in optimal organizational performance (Delery & Doty, 1996) by increasing the desired employee behavior (Gratton & Truss, 2003; Miles, Snow, & Snow, 1985; Schuler & Jackson, 1987). Studying configurational HRM empirically is a challenge due to its inherent complexities (see chapter two). Prior research has underscored the difficulties one faces when studying configurational HRM, especially when aspiring to add a new level of detail (Knol, 2013; Rauf, 2015). We could even argue that the methods used in the "classical" empirical HRM tradition -relying on surveys and regression based analysis primarily- is at odds with the characteristics of configurational HRM. A configurational HRM simulation model would enable us to explore and specify configurational HRM, and also aid HRM decision making.

To create a configurational HRM simulation model, we need precise (HRM) input; what needs to be modelled? Which HRM-practices, combined in what manner? Using what framework? We need a holistic perspective on HRM by using alignment (design principle 1), and ideal type HRM configurations as a frame of reference (design principle 2). In addition, as one of the main characteristics of a simulation constitutes that it is a model of reality (Sauvé, Renaud, Kaufman, & Marquis, 2007), we need to verify that the input we use for the simulation model does not contradict the actual practice of HRM. Hence, we empirically explore the HRM configurations and alignment measures.

In this chapter we present the input and empirical exploration of that input, for our simulation model. First, we present the theoretical model used to construct ideal -meaning perfectly aligned- type HRM configurations. Secondly, we define the ideal type HRM configurations that are used as input for our simulation model. These ideal type HRM configurations allow for hybrid HRM configurations where HRM-practices of ideal types are combined. Thirdly, we present the outcomes of an empirical exploration of these ideal type HRM configurations using two surveys. The goal of this empirical exploration is to gauge the extent to which the ideal type HRM configurations present a useable method to assess alignment, and also to distinguish organizations based on their levels of HRM alignment. By exploring the ideal type HRM configurations we calibrate the framework of the simulation model empirically. The empirical exploration is done using two surveys. In addition to providing input for the simulation model,

these surveys and their method of analysis provide organizations with an instrument to assess their current HRM alignment as well. While designing a multiyear effective HRM configuration does entail the need for a simulation model, the surveys and method of analysis used for our empirical exploration do provide an independent tool to assess the current HRM alignment and pinpoint directions for improvement.

A reference framework for alignment

In order for an HRM configuration to affect employee behavior, three dimensions of HRM alignment are suggested (Gratton & Truss, 2003). Vertical alignment refers to the extent to which an HRM configuration is derived from and reflects the organizational strategy (Bowen & Ostroff, 2004; Macduffie, 1995). Horizontal alignment refers to the extent to which there is distinctiveness, consistency and consensus amongst the individual HRM-practices (Bowen & Ostroff, 2004; Delery & Doty, 1996; Gratton & Truss, 2003; Saridakis et al., 2017). Implementation alignment refers to the extent to which employees perceive HRM as intended by management to safeguard that the HRM intentions of management are transferred to the aspired employee behavior (Gratton & Truss, 2003; Nishii & Wright, 2008). The configurational HRM tradition claims that the desired employee behavior is achieved if vertical alignment is supported by horizontal alignment and is strengthened by implementation alignment.

We set out to create a simulation model that assesses (changes in) the (dimensions of) alignment. To create it, we need a frame of reference which provides the starting point from which HRM alignment is assessed. Specifically, a framework that enables us to assess the extent of alignment between a specific organizational strategy and a specific combination (i.e. configuration) of HRM-practices. Here, this frame of reference is designed using the competing values model, based upon which we defined ideal type HRM configurations. An ideal type "represents a unique combination of the organizational attributes that are believed to determine the relevant outcomes" (Doty & Glick, 1994, p. 232). They are artifacts purposefully constructed by the researcher in which, in this particular case, the HRM configuration is ideally aligned vertically, horizontally and for implementation, to stimulate desired employee behavior (Doty & Glick, 1994; Meyer et al., 1993).

HRM configurations have been defined in prior research (see for examples: Hauff, Alewell, & Hansen, 2014a; Li, Dong, Chen, & Yang, 2014; Meuer, 2016; Verburg et al., 2007). To create a strategic HRM simulation model that furthers HRM theory and also helps HRM professionals, the level at which HRM-practices are defined is pivotal. Measures used to assess the categorical presence (not the focus) of, for example, a high performance work practice like training and development (see for example: Huselid, 1995) can result in hypotheses that are generic (i.e. at the 'category' level). Hypotheses like there is a positive relationship between the presence of recruitment practices and employee performance do not specify with enough detail what type of recruitment is executed, if that recruitment is aligned to the organizational strategy, and to what specific employee outcomes it relates. In addition, these generic HRM-practice measures give raise to difficulties when considering the concept of equifinality; they are not specific enough. Different combinations of HRM-practices seem to result in the same outcome (see chapter two). Using these categorical presence type of measures renders the theoretical value of configurational HRM limited as no specifics are addressed. Furthermore, from a practical perspective, using these categorical measures does not provide the HRM professionals with specific guidelines; the presence of an HRM-practice does not provide any detail on how it should be designed and executed to steer employee behavior. To create a simulation model that aids HRM professionals in their quest to design effective HRM configurations, as well as contributes to specifying configurational HRM with more detail, ideal type HRM configurations need to be defined that do include specific information on the focus and design of HRM-practices. In doing so we provide input for our simulation model, but also add to prior research that does include HRM-practice focus information (see for example: Arthur, 1994; Chow & Liu, 2009).

Ideal type HRM configurations using the competing values model

Based on prior research (Knol, 2013; Miles & Snow, 1984; Rauf, 2015; Schuler & Jackson, 1987) we defined four ideal type HRM configurations using the competing values model, an organizational typology framework from Cameron and Quinn (2006). Each ideal type HRM configuration aligns to the characteristics of one particular ideal type strategy and thus in theory steers the employee behavior towards that strategic direction.

According to Gratton and Truss (2003) an HRM configuration (i.e. people strategy) consists of HRM-policies and HRM-practices. The HRM-policies refer to an overall approach to managing people that permeates all the activities of the HR function while the HRM-practices refer to putting that approach into action using actual practices (Ibid. p. 75). Here, we will define HRM configurations consisting of HRM-practices only. We do so for several reasons. First, HRM-policies refer to overarching approach to managing people and are therefore abstract concepts that are challenging to assess. Secondly, our goal is to add a layer of detail to configurational HRM; this detail is to be found at the HRM-practice level. Thirdly, as the HRM-practices are the exhibition of the HRM-policies put into action, measuring the HRM-practices provides us with a proxy of the HRM-policies; if the HRM-practices are aligned we can assume that the HRM-policies -of which they are the practical operationalizations- are aligned as well.

The essence of defining an organizational strategy revolves around the fundamental choices that the dominant coalition in an organization makes in terms of what type of company they want the organization to be (Child, 1972). In the competing values framework, these fundamental choices result in a categorization where an organization can focus strategically on the effectiveness criteria 'flexibility' versus 'stability' and on the effectiveness criteria that emphasize an 'internal' versus an 'external' orientation (Cameron & Quinn, 2006). Four strategic orientation types emerge, see figure 4.

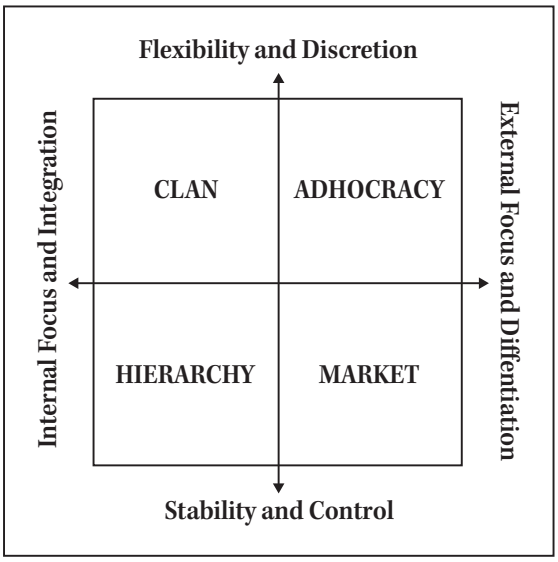


Figure 4. The competing values model (Cameron & Quinn, 2006)

Knol (2013) asserted in his research considering HRM alignment amongst SMEs that the original titles of these four strategic ideal types (clan, adhocracy, hierarchy, market) limit the ability of the model to distinguish SMEs. The title 'clan organization' has a positive connotation in that particular context, which resulted in a large share of the organizations in his preliminary study opting for being a 'family like' clan organization. In addition, the hierarchy label was noted to have a negative connotation resulting in organizations avoiding that label though they had a lot of the characteristics that portray a hierarchy type organization. Therefore, Knol (2013) retitled the quadrants. In our simulation model we adopted these retitled quadrants, see figure 5, to avoid a bias based on labels.

We now detail the ideal type strategies as presented in figure 5 including the types of employee behavior that are assumed to support these strategies. Thereafter we will present the HRM configurations that are tailored to solicit these behaviors and hence support these strategies.

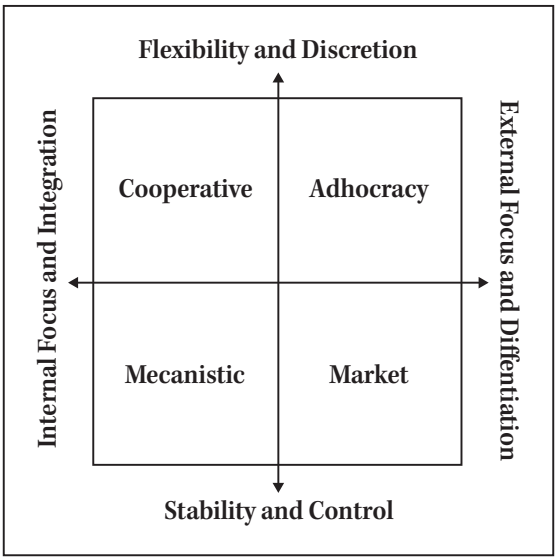


Figure 5. Competing value framework including retitled quadrants based on Knol (2013) and Rauf (2015)

An organization upholding a **cooperative strategy** is characterized by a strategic focus on flexibility and discretion combined with an internal focus and integration. This type of organization focusses on serving its customers through sensitivity, participation and teamwork. Success is defined as serving the needs of their clients and caring for their employees. We argue that strategic cooperative organizations can achieve their goals if employees exhibit organizational citizenship behavior, and civic virtue in particular. Defined as "behavior on the part of an individual that indicates that he/she responsibly participates in, is involved in, or is concerned about the life of the company" (Podsakoff, MacKenzie, Moorman, & Fetter, 1990, p. 115), this type of employee behavior aligns to the cooperative organizations' goals and definition of success. If an employee exhibits high levels of involvement with the organization and sees himself as being part of the whole that is the organization (Podsakoff, MacKenzie, Paine, & Bachrach, 2000, p. 225) it is likely that employees will work together, help each other, build teams, are flexible and service oriented, enacting the company vision of working together to satisfy customers' expectations.

An organization upholding an **adhocratic** strategy is characterized by a strategic focus on flexibility and discretion combined with an external focus and differentiation. This type of organization focusses on innovation and

creativity. Risk taking and experimenting is appreciated. Success is defined as the development and successful launch of new products and/or services. We argue that strategic adhocratic organizations can achieve their goals if employees exhibit innovative employee behavior. Defined as developing, carrying, reacting to, and modifying ideas (Scott & Bruce, 1994), this specific employee behavior aligns to the organizational goals and definition of success. If employees do indeed develop and carry ideas, it is likely that more innovative products and/or services are launched by the company compared to organizations where no innovative employee behavior is present. By exhibiting innovative behavior, employees contribute to organizational performance as defined by an adhocratic strategy.

An organization upholding a **market** strategy is characterized by a strategic focus on stability and control combined with an external focus and differentiation. This type of organization focusses on competitiveness and goal achievement. There is a strong emphasis on winning in the marketplace and hard driven goals. Success is defined as goal achievement, increasing market share and profitability. We argue that market organizations can achieve their goals if employees exhibit entrepreneurship (Knight, 1997) and/or intrapreneurship (Gawke, Gorgievski, & Bakker, 2017; Hornsby, Kuratko, Holt, & Wales, 2013). While originally entrepreneurship assessed the proactive and innovative disposition of a firm as a whole, it does capture the individual employee behavior needed in a market organization. Entrepreneurship is characterized by a need to be better than others, taking risks when potential benefits are high, willingness to introduce new products/service to customers, and making decisions that will increase the likelihood of organization goal achievement. Intrapreneurship entails employees acting to create new ventures for their organization (Gawke et al., 2017). This type of employee behavior increases the likelihood of increased profitability and market share and therefore seems to align to the market strategy.

An organization upholding a **mechanistic** strategy is characterized by a strategic focus on stability and control combined with an internal focus and integration. This type of organization focusses on adherence to rules and procedures. Formal rules and policies are dominant. Success is defined as achieving uniformity, efficiency and low costs. We argue that strategic mechanistic organizations can achieve their goals if employees exhibit generalized compliance behavior (Parker, Williams, & Turner, 2006). General compliance refers to scrupulous adherence to rules, regulations, and procedures that, although not necessarily helping any specific individual,

can help the overall system (Podsakoff et al., 2000). General compliance will enable mechanistic organizations to achieve their goals as employees adhere to the rules, regulations and procedures set out by the organization to enable low costs and efficiency.

The HRM configuration in an organization can be designed to increase the specific employee behavior needed (as defined by its strategy). It affects employee behavior by designing the HRM-practices so that an organization recruits, selects, facilitates and stimulates employees to exhibit specific goal achieving behavior. Five HRM-practices categories are considered to be important for any organizations (Knol, 2013; Rauf, 2015):1. Recruitment and selection, 2. job design, 3. training and development, 4. performance appraisal, 5. compensation. These HRM-practices ought to be aligned to the organizational strategy (and to each other) in order to enhance goal achieving employee behavior. Some of these HRM-practices are closely connected; recruitment and selection have a strong connection, training and development do too, and also performance appraisal and compensation are closely related to one another.

Here, the HRM-practice training and development is conceptualized as one HRM-practice category. Training and development overlap, the goals are (very) similar, and it is often a matter of dispute whether something constitutes employee training and/or employee development. The HRM-practices performance appraisal and compensation are defined as separate HRM-practices, while they are related, clear distinctions can be made; appraising an employee on specific employee behavior can, but does not always, lead to rewards based on that same specific employee behavior. We initially defined the ideal type HRM configurations and undertook our empirical exploration using the priory mentioned 5 HRM-practices. However, for our simulation model we decided to use 6 HRM-practice categories based on the following arguments: While recruitment and selection are very closely connected, there are distinct differences as well (in contrast to training and development); they can be done by different professionals in one organization, and recruitment tends to be 'outwards' oriented (looking for new employees outside the organization) while selection is more 'inwards' oriented (selecting those employees that will fit the organization). Hence, for our strategic HRM simulation model, we decided to define the HRM-practices recruitment and selection as two distinct practices. As a result, the ideal type HRM configurations used for the simulation model are made up by

six HRM-practice categories (1. Recruitment 2. Selection, 3. Job design, 4. Training and development, 5. Performance appraisal, 6. Compensation) while our initial empirical exploration was done using 5 HRM-practice categories which underlines the iterative nature of this research.

Using the four ideal type strategies presented in figure 5, we defined four ideal type HRM configurations. Every ideal type HRM configuration ultimately consists of specific designs for all the 5 (6 for the simulation model) HRM-practices, that reflect the HRM-policies in place, which in turn reflect the organizational strategy. Organizations geared towards the adhocratic ideal type strategy, for example, compete on the basis of innovation. In order to innovate, they need employees that are focused on, and have the ability to, come up with new products/services. To get new employees showing these behaviors, recruitment and selection should be based on finding people with specific expertise, complex problem-solving capabilities and innovativeness. Hence, both selection and recruitment practices geared to achieving this goal should be part of the ideal type adhocratic HRM configuration. But the other HRM-practices (job design, training and development, performance appraisal and compensation) should be designed to align with the adhocratic strategy as well, to present a distinctive, consistent and consensus-based people strategy (HRM-policies and practices taken together) that is aligned with the adhocratic corporate strategy.

The ideal type HRM configurations matching the ideal type strategies are presented in table 2. Note that table 2 present the 5 HRM-practices as used during the empirical exploration. For the simulation model we used 6 HRM-practices; we distinguished the HRM-practice recruitment and selection. We have defined three design options per HRM-practice for every ideal type strategy. We did so to capture the variety in design possibilities within one HRM-practice. For the HRM-practices job design, for example, we defined employees solve complex problems, employees are part of multiple project teams, and employees create unique products/service for customer to be geared towards the adhocratic ideal type strategy. As the HRM-practices (1) recruitment and (2) selection are so closely connected, we use the same three design options for those two HRM-practices. Similarly, we use the same three design options for the HRM-practices (5) appraisal and (6) compensation.

This results in twelve (3 options * 4 strategies) design options per HRM-practice. Also, it results in eighteen distinct HRM choices per configuration (3 options * 6 practices). This leads to a total of 72 (3 options * 6 HRM-practices * 4 strategies) HRM practice design options.

Table 2. Ideal type HRM configurations, a framework of reference

Cooperative HRM configuration	**Adhocratic HRM configuration**
• **1. Recruitment & 2. selection** Based on accuracy, versatility and craftsmanship. • **3. Job design** Based on pace of work determined by employees themselves, employees cover other employees' work, and quality enhancement over speed. • **4. Training & development** Increase job specific knowledge, increase collaboration amongst colleagues, quality enhancement. • **5. Appraisal & (6.) compensation** Based on accuracy, collaboration and craftsmanship.	• **1. Recruitment & 2. selection** Based on specific expertise, complex problem solving and innovativeness. • **3. Job design** Based on employees solve complex problems, employees are part of multiple project teams, employee create unique products/services for customer • **4. Training & development** Deepening specific knowledge, learning how to operate in project teams, finding new solutions. • **5. Appraisal & (6.) compensation** Based on innovation, specific capacities, contribution to project teams.
Mechanistic HRM configuration	**Market HRM configuration**
• **1. Recruitment & 2. selection** Based on speed, production time and getting the job done. • **3. Job design** Based on employees complying with assigned tasks, have clear instructions and do routine work. • **4. Training & development** Increase efficiency, speed and efficient job completion. • **5. Appraisal & (6.) compensation** Based on speed, production and getting the job done.	• **1. Recruitment & 2. selection** Based on candidates being able to attract new customers, result orientation and commercial skills. • **3. Job design** Based on employees acquire own assignments, work individually and determine their own way to get the job done. • **4. Training & development** Increase personal results, commercial competencies, getting better at thing employees are already good at. • **5. Appraisal & (6.) compensation** Based on commercial competencies, personal targets and work is done individually.

The ideal type strategies to which these ideal type HRM configurations are tailored are theoretical constructs. In practice, organizational strategies deviate from ideal type strategies; they are usually 'hybrids'. A hybrid is defined by the extent to which there is priority on one, two, three or even all four ideal types. The definition of success for such an organization is a specific combination of the definitions of success in 'pure' ideal type strategies. Consequently, the employee behavior needed also is a combination of the employee behaviors needed in the different ideal type strategies. Hybrid HRM configurations can still be effective in steering the needed employee behavior, but on one condition; "an HRM configuration should deviate from the ideal type HRM configuration exactly proportional to the extent to which the organizations' strategy deviates from the ideal-type strategy" (Delery & Doty, 1996, p. 813).

The presence of hybrid configurations vastly increases the complexity of HRM configuration design. If an organization upholds a hybrid strategy, there is a need to combine HRM-practices of the different ideal types. The number of possible combinations of the (72) HRM-practices using the four ideal types is baffling and makes the task of creating aligned HRM challengingly complex. What specific set of HRM-practices deviates proportionally to the extent to which the organizations' strategy deviates from the ideal type strategy? Assessing the extent to which the organizational strategy deviates from an ideal type strategy is a challenge, selecting a set of HRM-practices -including their focus and operational execution- that deviates proportionally even more so. In addition, the HRM-practices that make up an HRM configuration are interdependent. This means that the selection, focus and operational execution of one HRM-practice affects the selection, focus and operational execution of the other HRM-practices. Furthermore, this holistic HRM configuration affects the extent of (multiple dimensions of) alignment. Lastly, these HRM-practice decisions need to be made using a multiyear perspective; organizational strategies are defined considering multiple years and hence, HRM configurations need to have a multiyear perspective as well. The enormity of the challenge that HRM professionals face is apparent. We argue that a decision aid tool is welcome; enabling HRM practitioners to maneuver through this complexity can be done using a simulation model.

Like we said, the ideal type strategies and related HRM configurations presented in figure 5 and table 2 respectively are theoretical constructs. As we aspire to create a simulation model that explores configurational HRM with an unprecedented level of detail while at the same time aid HRM decision making, an empirical exploration of those ideal types is an important and necessary step.

This empirical exploration serves three particular needs. 1. We explore the extent to which these ideal types and hybrid HRM configurations are empirically present. If the ideal types and hybrid HRM configurations defined here are not present empirically we will not be able to validate our model and outcomes. 2. We assess if the ideal types defined here do indeed allow us to assess vertical and horizontal alignment. If the ideal types are present but fail to provide us with a measure of alignment there is no meaningful input for our simulation model as we set out to model HRM alignment. 3. We assess if the ideal types and methods developed enable us to discriminate between organizations based on HRM alignment. If the ideal types are present, and we can assess HRM alignment, but cannot differentiate between organizations, we cannot verify our model. If the alignment outcomes of organizations are identical, there is no way to test if differences in alignment measures affect any outcomes. Furthermore, we cannot aid HRM decision making using our simulation model as all modelled outcomes will be similar. By exploring the HRM configurations and the concept of alignment empirically, we aspire to increase the plausibility of our model.

We undertake this exploration amongst SMEs. The limited empirical confirmation of configurational HRM up till now, might be due to the fact that HRM and the alignment concept has been explored primarily in large firms; Winnubst and de Kok (2008) state for example that research on HRM in SMEs might be overly focused on those HRM-practices that are relevant in large organizations. With multiple layers of hierarchy, a large number of departments, and multiple staff functions, attaining perfect HRM alignment is extremely challenging in large companies. SMEs do not face these complexities: HRM is done primarily by the executive director based on his or her personal values (Kotey & Meredith, 1997). Furthermore, an open system perspective seems particularly well suited to SMEs as the HRM-practices in these companies are rather informal and emerging (Harney, 2006). Hence, we decided to study the concept of alignment amongst a sample of SMEs.

Empirical exploration of aligned HRM configurations

To assess the presence of the ideal HRM configurations, verify if we can gauge HRM alignment within SMEs, and distinguish organizations based on those HRM alignment measures we need to assess the strategy, the HRM configuration and the perception of the HRM configuration by employees. To assess strategy and the HRM configuration we need input from managers/ owners of SMEs as they define and implement the organizational strategy and HRM configuration. To assess the perception of the HRM configuration we need input from the employees. To assess alignment and infer if we can differentiate between SMEs on the basis of those alignment measures, we need a method of analysis that enables us to infer the three dimensions of alignment (horizontal, vertical and implementational). Hence, 2 surveys and a method of analysis were created and applied.

We first present survey 1: a survey for the executive director to assess strategy and the HRM configuration, and present the insights attained using this tool. Second, we present survey number 2: a survey for the employees of the same organization, to assess their perception of the HRM configuration and present the insights gained from that. Third, we elaborate upon how these two tools and resulting insights help shape our initial simulation model. The surveys presented here were made in Dutch and translated into English (for the purpose of this dissertation), all surveys were distributed in Dutch as all firms in our explorative sample are located in the Netherlands and the (main) language spoken in these firm is Dutch.

Executive director survey

To assess vertical and horizontal HRM alignment, an executive director survey (EDS) was created and used. This survey consists of two parts; a strategy assessment part and an HRM configuration assessment part. With the first part we measure the organizational strategy using the organizational culture assessment instrument (OCAI). With the second part we assess the focus of the HRM-practices using a set of ranking items created for the purpose of this research. Based on these assessments we expect to be able to infer vertical and horizontal alignment.

In the first part of the EDS we assess organizational strategy. Within an SME, a formalized strategy is rare, but the executive director does know what direction he/she wants the organization to go (Knol, 2013). The OCAI created by Cameron and Quinn (2006) highlights that direction. It does so in a valid and reliable manner (for evidence of validity and reliability we refer

to Cameron and Quinn, 2006, appendix A). The organizational strategy is therefore assessed using the OCAI. Based on this information we can indicate the strategic orientation which should be reflected by the HRM configuration. One example question from the OCAI is presented in table 3 (for the full survey see appendix A).

Table 3. OCAI sample items

Strategic emphasis		
A	**The organization** emphasizes human development. High trust, openness, and participation persist.	
B	**The organization** emphasized acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.	
C	**The organization** emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.	
D	**The organization** emphasizes permanence and stability. Efficiency, control, and smooth operations are important.	
Total score		100

In the second part of the EDS we assess the focus of the HRM configuration. We do so by assessing the focus of the 5 HRM-practices defined in the ideal type HRM configurations (recruitment and selection, job design, training and development, appraisal, and compensation). For all of these HRM-practices, a list of 12 items is presented to the respondents. These items correspond with the design options defined in the ideal type HRM configurations. We ask respondents to rank their top 3 most relevant design options (out of the list of 12 design options per HRM-practice). For the HRM-practice recruitment and selection, for example, the following question was presented to respondents (the ideal type strategies which the specific design options are aligned to is added for clarification in this example):

What are the most important reasons to hire new employees at the organization?

> Place the number 1 at the reason that you consider to be the most important. Place the number 2 at the reason that you consider a little less important. Finally, place the number 3 at the reason that you consider important but less important than those with the number 1 or 2. Do not place any numbers at any of the other reasons (!).

Employees are hired because they:
__Are accurate (cooperative)
__Are versatile (cooperative)
__Have craftsmanship (cooperative)
__Have Specific expertise (adhocratic)
__Are able to solve complex problems (adhocratic)
__Are able to come up with new solutions to complex problems (adhocratic)
__Are Able to attract new customers (adhocratic)
__Are Result oriented (market)
__Have Commercial drive (market)
__Are Efficient (mechanistic)
__Are Able to quickly start at the job (mechanistic)
__Are able to quickly start producing (mechanistic)

Comparing the answer from the OCAI (part 1 EDS) and the HRM configuration (part 2 EDS) enables us to assess both horizontal and vertical alignment. For the full survey see appendix A.

Executive director survey: method of analysis and results

The goal of this empirical examination was to explore the presence of the ideal type and hybrid HRM configurations (in SMEs) and our method of assessing alignment. We collected data using the EDS between 2016 and 2018. 23 executive directors of 23 SMEs filled out the EDS. Founding years of these SMEs range from 1914 to 2016. The number of employees employed by these SMEs range from 5 to 231 (average = 59, median = 35). The core business of these SMEs is varied, ranging from health care to engineering, software development, consultancy, and logistics. 7 out of these 23 SMEs are family owned companies. 11 out of these 23 SMEs are covered by a collective labor agreement, 6 are covered by a labor industry scheme and 6 state to have no form of collectivity in their labor arrangements. In 15 of the SMEs the executive director was directly responsible for HRM, in 1 of the SMEs an HRM professional was responsible for HRM, and in 7 SMEs the (line)managers were responsible for HRM.

This data was collected by us, or under our supervision by HRM bachelor students that participated in a thesis supervision group entitled 'effective HRM' that took place at Saxion university for applied sciences. All the students that participated were under our direct supervision and were provided with the instruments as described above. We contacted the organizations at which students collected data at least once and provided support to the bachelor students in collecting the data. Both hardcopy and digital versions of the surveys were available to students.

Based on the data collected with the EDS, we were able to assess vertical and horizontal HRM alignment. To assess vertical alignment, we need an assessment of the organizational strategy and an assessment of the HRM configuration. The OCAI provides us with the strategic direction of a firm by presenting scores on all four ideal type strategies. Using the averages of the individual items presented in the OCAI, we can infer the extent to which the four strategies are present in a SME using a scale from 0 to 100. Table 4 present the strategic orientations of all 23 SMEs based on the outcomes of the OCAI part of the survey.

Table 4. Strategy scores for the 23 firms in the explorative sample

	Cooperative	Adhocratic	Market	Mechanistic
SME 1	33,33	24,17	15,00	27,50
SME 2	31,67	33,33	20,00	15,00
SME 3	25,83	22,50	22,50	29,17
SME 4	29,17	28,33	15,00	27,50
SME 5	37,50	20,00	27,50	15,00
SME 6	28,33	33,33	25,00	13,33
SME 7	29,17	34,17	6,67	30,00
SME 8	30,83	20,83	27,50	20,83
SME 9	23,33	33,33	23,33	20,00
SME10	23,33	33,33	25,00	18,33
SME 11	27,50	30,00	20,83	21,67
SME 12	37,50	31,67	16,67	14,17
SME 13	38,33	22,50	20,00	19,17
SME 14*	29,59	27,09	24,59	18,75
SME 15	46,67	31,67	10,00	11,67
SME 16	30,00	25,00	25,00	20,00
SME 17	28,33	30,00	23,33	18,33
SME 18	29,17	33,33	23,33	14,17
SME 19	33,33	35,00	24,17	7,50
SME 20	52,50	21,67	6,67	19,17
SME 21	46,67	40,00	3,33	10,00
SME 22	16,67	19,17	45,83	18,33
SME 23	25,83	40,00	23,33	10,83

* The respondent in SME 14 scored 1 OCAI item using 90, instead of 100, points. The missing points are divided equally over the four quadrants to total 100 without altering the direction.

These strategic scores underline the theoretical nature of ideal types (in this case strategies); none of the 23 SMEs in our sample uphold a pure ideal type strategy. All strategies are hybrids, combining elements from all four ideal type strategies. While some firms combine elements of primarily two

strategies (SME 7, SME 20, SME 21, for example), we also see SMEs combining elements of primarily three (SME 1 and SME 2, for example) or even all four strategies (SME 3, for example). These (variations in) strategy scores exemplify the empirical existence of, and ability to distinguish based on, organizational strategy using the OCAI. Figure 6 present two SMEs that differ in their organizational strategy.

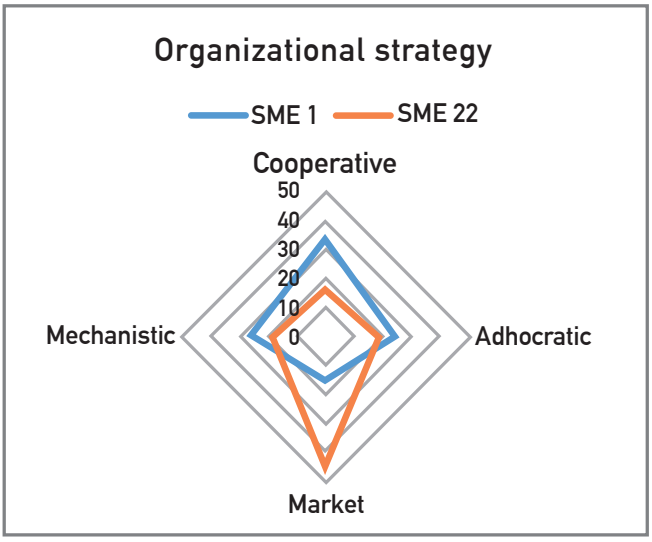


Figure 6. Strategic orientation SME1

To infer vertical alignment, we need to assess the extent to which the HRM configuration of an SME reflects the strategic orientation. We do so by assessing the focus of the HRM configuration. To what extent is the focus of the HRM configuration similar to the focus in strategy? To assess the extent to which the HRM configuration reflects the strategy -in a way that is usable for the simulation model- we need an HRM configuration focus score between 0 and 100 on every ideal type. When we can establish these, we can assess the absolute difference between the strategy score and the HRM score and infer the level of vertical alignment. However, the ranking questions used to assess the HRM-practices do not directly provide a score between 0 and 100. Therefore, we standardized the scores of these ranking questions to a 0 to 100 scale using the following reasoning: we asked respondents to rank their top 3 (out of a list of 12) most important factors that apply to the design of a specific HRM-practice in their firm. In other words, we asked them to distribute 3, 2 and 1 points; 3 points to the most important design option, 2 points to the

second most important and 1 point to least important design option. The total number of points distributed by respondents equals (3+2+1=) 6. The most important design option as selected by the respondent is assigned 3 points which equals 50% (3 out of 6). The second most important design option as selected by the respondent is assigned 2 points which equals 33% (2 out of 6). The third most important design options as selected by the respondent is assigned 1 point which equals 17% (1 out of 6). See table 5 for an example of this standardization process.

Table 5. Focus of HRM-practice recruitment and selection, SME 1

Design option (example)	**Rank by respondent**	**Points**	**Percentage**
Accurate *(cooperative)*	-	-	-
Versatile *(cooperative)*	-	-	-
Craftsmanship *(cooperative)*	-	-	-
Specific expertise *(adhocratic)*	-	-	-
Solve complex problems *(adhocratic)*	2	2	33
Come up with new solutions to complex problems *(adhocratic)*	-	-	-
Attract new customers *(adhocratic)*	-	-	-
Result orientation *(market)*	-	-	-
Commercial drive *(market)*	3	1	17
Efficiency *(mechanistic)*	-	-	-
Ability to quickly start at the job *(mechanistic)*	1	3	50
Ability to quickly start producing *(mechanistic)*	-	-	-

As the HRM configuration consists of five HRM-practices, we take the averages of the scores assigned to the individual HRM-practices (categories) as the HRM configuration (focus) score. The HRM configuration scores of the 23 SMEs in our exploration sample are presented in table 6.

Table 6. HRM configuration score of the 23 SMEs in the explorative sample

	Cooperative	Adhocratic	Market	Mechanistic
SME 1	23	33	13	30
SME 2	53	20	23	3
SME 3	7	47	33	13
SME 4	50	7	23	20
SME 5	27	20	53	0
SME 6	43	40	7	10
SME 7	47	30	17	7
SME 8	57	0	23	20
SME 9	33	40	27	0
SME 10	10	37	30	23
SME 11	50	17	0	33
SME 12	63	23	0	13
SME 13	13	40	47	0
SME 14	30	27	43	0
SME 15	30	23	30	17
SME 16	47	23	30	0
SME 17	23	20	27	30
SME 18	67	20	0	0
SME 19	13	53	20	10
SME 20	83	13	0	0
SME 21	63	37	0	0
SME 22	30	13	27	30
SME 23	53	13	3	30

Again, the theoretical nature of ideal types (in this case HRM configurations) is underlined as none of the 23 SMEs implemented an ideal type HRM configuration. All SMEs in our exploration sample created an HRM configuration combining elements from at least three ideal types.

Combining the data presented in table 5 and 6 allows us to assess the extent to which the HRM configuration reflects the organizational strategy, and graphically display this 'vertical alignment'. We do so by taking the sum of the absolute differences between the strategy and HRM configuration scores.

In table 7 and figure 7 we present the score and graphical display of the vertical alignment of SME 1.

Table 7. Vertical alignment score SME 1

	Cooperative	Adhocratic	Market	Mechanistic
Strategy	33	24	15	28
HRM configuration	23	33	13	30
Vertical alignment score per quadrant	10	9	2	3
Total vertical alignment score		24		

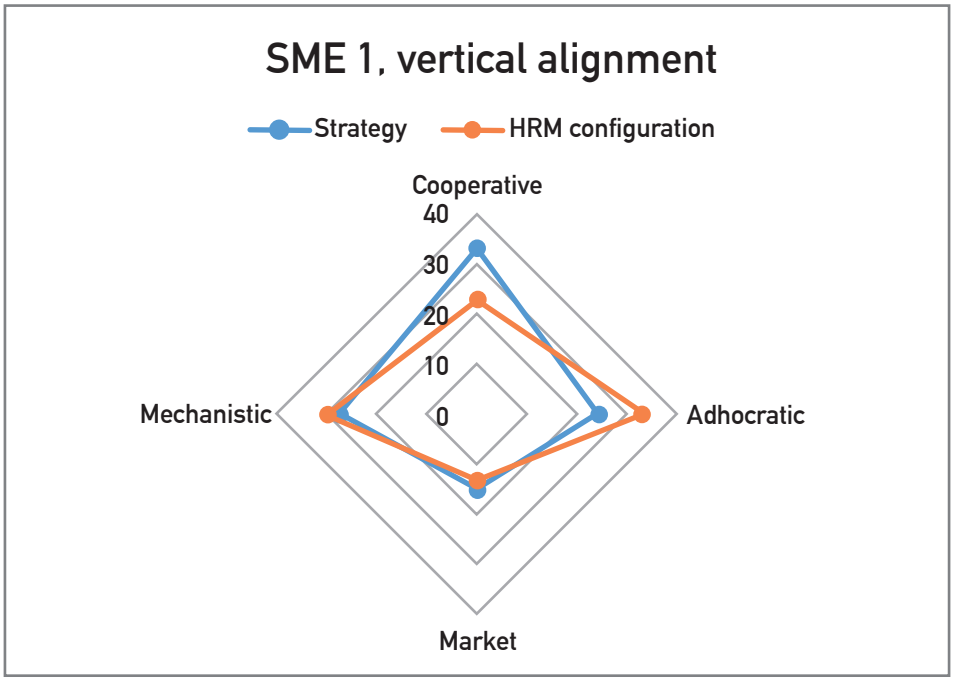


Figure 7. Graphical display of strategy and HRM configuration score (vertical alignment) SME 1

The first survey allows us to assess the organizational strategy and the HRM configuration of an SME. The outcomes underline the theoretical nature of both concepts as all SMEs in our exploration employ hybrid strategies and

HRM configurations. These findings suggest that hybrid strategies and HRM configurations are empirically present and therefore need to be used in our simulation model. Furthermore, we can distinguish between organizations based on these (hybrid) strategies and HRM configurations scores. Furthermore. we can assess vertical alignment amongst the SMEs in our empirical exploration. Hence, the survey output and method of analysis seems promising as potential input for our simulation model. However, we need an assessment of horizontal alignment as well.

Horizontal alignment posits the importance of aligning the individual HRM-practices (that make up an HRM configuration) to one another. This horizontal alignment is inferred by assessing the differences between the focus scores of the individual HRM-practices. We use the standardized scores. However, as we now need to assess the absolute differences between more than two scores, we use the standard deviation as a proxy of the extent to which these individual practices align to one another. The higher the standard deviation, the lower the horizontal alignment. In Table 8 we present the horizontal alignment of SME 1, in figure 8 we graphically display this horizontal alignment.

Table 8. Horizontal alignment score of SME 1

	SME 1 – horizontal alignment			
	Cooperative	Adhocratic	Market	Mechanistic
Job design	50	33	0	17
Recruitment and selection	0	33	17	50
Training and development	33	0	50	17
Appraisal	17	50	0	33
Compensation	17	50	0	33
Standard deviation	17	18	19	12
Horizontal alignment	67			

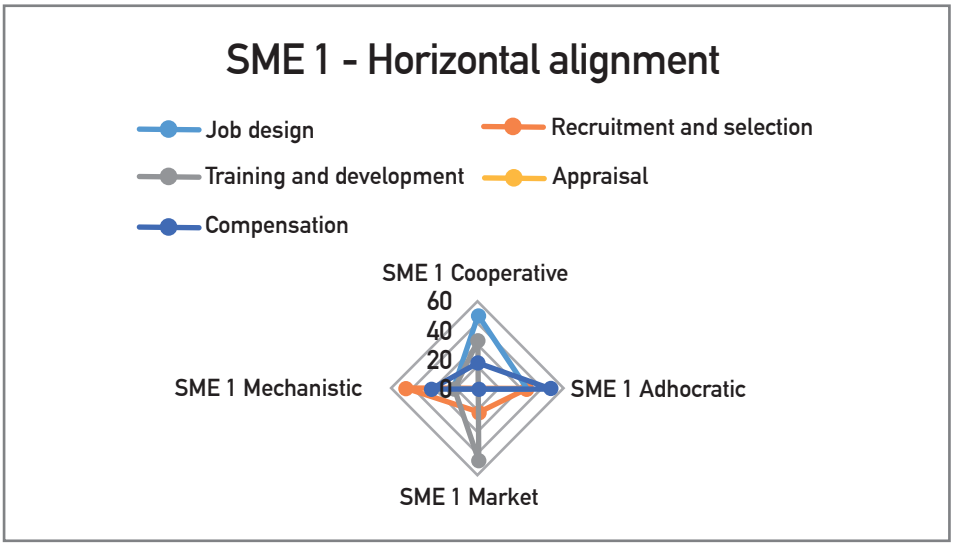


Figure 8. Horizontal alignment SME 1

The EDS allows us to assess the focus of the individual HRM-practices that make up an HRM configuration. The results of our exploration suggest that the individual HRM-practices that make up an HRM configuration are empirically present. Furthermore, these HRM-practices in and off themselves could be seen as hybrids; HRM-practices are made up by a combination of different focusses. For SME 1, for example, we see that job design is primarily geared towards cooperative elements but also includes adhocratic and mechanistic elements. By providing the focus of the HRM-practices on a 0-100 scale we can assess the extent to which the individual HRM-practices have a similar focus. For SME 1, for example, all HRM-practices have at least some focus on cooperative elements, expect for recruitment and selection. These insights provided by the method of analysis do allow an assessment of the vertical alignment and are therefore provide valuable input for our simulation model.

The simulation model created in this research focusses on exploring and aiding the design of a vertically and horizontally aligned HRM configuration. The EDS explored the ideal type organizational strategies, HRM configurations and method of assessing these two dimensions of alignment. The results of the empirical exploration show that: (1) The ideal type strategies and HRM configurations are theoretical concepts. (2) These theoretical concepts provide a framework for the design/allocation of

empirically present hybrid strategies and HRM configurations. (3) Based on these hybrid strategies and HRM configurations we can distinguish between organizations. (4) The output of the EDS and the method of analysis enable us to assess both vertical and horizontal alignment. Hence, we set out to create the simulation model using the framework, ideal types and method of analysis empirically explored here. Creating the simulation model is presented in chapter four. Before presenting that chapter we first discuss the final dimension of HRM alignment and how it was assessed.

Vertical and horizontal alignment are pivotal for the design of an effective HRM configuration. However, to truly affect employee behavior, implementation alignment is important. Implementation alignment refers to the extent to which employees perceive HRM as intended by management to safeguard that the HRM intentions of management are transferred to the aspired employee behavior (Gratton & Truss, 2003; Nishii & Wright, 2008). This dimension of alignment can't be assessed using the EDS, and it is not a prerequisite for our simulation model, but it is vital in the context of effective HRM. If organizations (SMEs in this exploration sample) truly want to affect employee behavior, employees need to perceive HRM as intended. Therefore, we did not stop after assessing vertical and horizontal alignment but created an employee survey to measure employees' perception of HRM. By combining the EDS and this second employee survey (ES) we create an analysis instrument that enables organizations to assess their current levels of vertical, horizontal and implementation alignment. This instrument enables SME managers, HRM professionals, or anyone concerned with HRM in an organization, to assess the status quo in terms of alignment and provide directions for potential improvement. While it does not represent a direct prerequisite for the creation of the simulation model, the ES does empirically explore the items defined in the ideal type HRM configurations amongst employees adding to the empirical grounding of the simulation model. To aid the design of a multiyear effective HRM configuration and gauge the effects, one would still need a simulation model, but the EDS and ES do provide a good starting point.

Employee survey

To get an indication of the implementation alignment we created the ES. The questions in this survey are created to measure individual employee perceptions of the HRM-practices. We do so by mirroring the questions asked to the executive director in the EDS. For example, we estimate the perception

of employees concerning the focus of the HRM-practice recruitment and selection using the following question (the ideal type strategies which the specific design options are aligned to is added for clarification in this example):

What were the most important reasons for hiring you at the organization?

> Place the number 1 at the reason that you consider to be the most important. Place the number 2 at the reason that you consider a little less important. Finally, place the number 3 at the reason that you consider important but less important than those with the number 1 or 2. Do not place any numbers at any of the other reasons (!).

I was hired due to my:
__Accuracy (cooperative)
__Versatility (cooperative)
__Craftsmanship (cooperative)
__Specific expertise (adhocratic)
__Ability to solve complex problems (adhocratic)
__Ability to come up with new solutions to complex problems (adhocratic)
__Ability to attract new customers (market)
__Result orientation (market)
__Commercial drive (market)
__Efficiency (mechanistic)
__Ability to quickly start at the job (mechanistic)
__Ability to quickly start producing (mechanistic)

We ask the employees to select those 3 items that best represent his/her perception of, in this example, the reason why he/she got hired. Based on this ranking we can assess the focus of the HRM-practices as perceived by the employees. For the full survey see appendix B.

Employees survey: method of analysis and results

Data was collected from 628 employees from 21 SMEs (out of the total of 23 SMEs) in our explorative sample. No employee data was collected from SME 11 and SME 18 (see table 5 and/or 6) after the executive director declined the offer to collect data amongst his/her employees. The average number of years employed by the SME was 5,4 years (median = 3, modus = 1). 603 employee respondents provided their educational level; 18 employees (3%) have not completed any educational program, 21 (3,5%) completed a lower vocational educational program (3,5%), 46 (7,6%) completed an initial vocational educational program, 233 (38,6%) employees completed a

secondary vocational educational program, 57 (9,5%) employees completed a higher secondary general educational program, 7 (1,2%) employees completed a pre-university educational program, 168 (27,9%) employees completed a higher vocational educational program, 53 (8,8%) completed a university educational program.

Based on the information obtained using the ES we can assess the perception of the HRM configuration by employees. We use the same standardization methodology as applied to the EDS ranking questions: we asked them to distribute 3, 2 and 1 points. 3 points to the most important design option, 2 points to the second most important and 1 point to least important design option. To create one score that represents the perception of all employees in an organization, we average the individual employees' perception of the HRM-practices per SME. Subsequently, we average the scores of all the HRM-practices per SME to represent the overall perception of the HRM configuration. We use the HRM configuration perception scores of all employees within one SME and average them to provide 1 score for all respective quadrants. The job design score, for example, presented in table 9, is the average cooperative job design perception of 61 employees of SME 1. However, employees might vary in their perception of the HRM configuration. Hence, we additionally add the standard deviation of the HRM configuration perception scores next to the average score; a high standard deviation implying a larger spread in the perception of HRM by different employees. The mean cooperative job design score in SME 1 is, for example, 34 with a standard deviation of 29 which implies large variety in perception. This could mean that some employees do and some employees do not perceive HRM-practices to be aligned to the organization strategy and/or other HRM-practices. This in turn could underline the need for more consistency in the HRM-practices and how they are selected for different employee groups. The outcomes provided by the survey allocate and specify these employee perceptions. In table 9 we present the scores of the perception of the HRM configuration by employees in SME 1. In figure 9 we graphically display those scores.

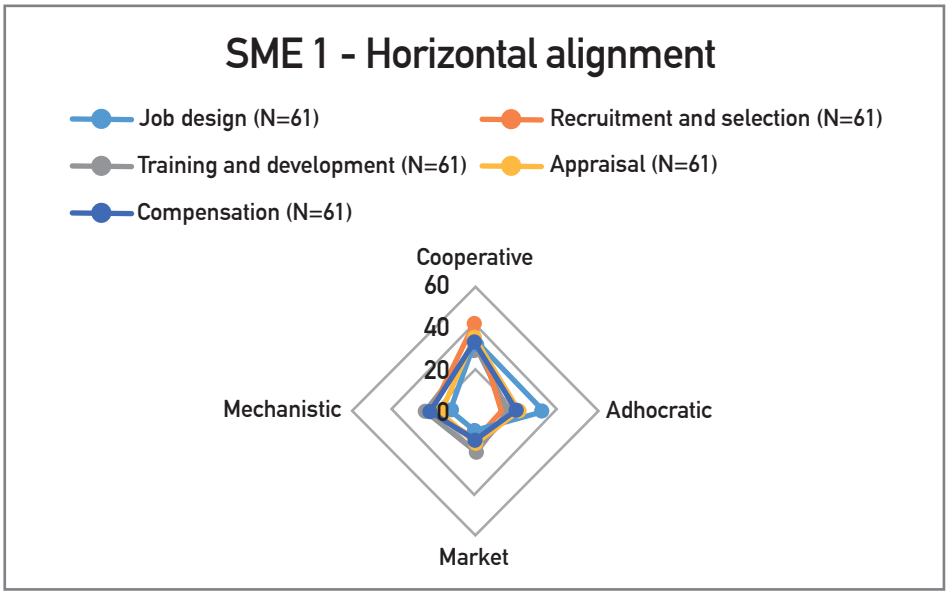


Figure 9. Employee perception SME 1

Table 9. Perception of HRM configuration in SME

	SME 1 – Employee HRM configuration perception			
	Cooperative	Adhocratic	Market	Mechanistic
Job design (N=61)	34 (29)	33 (28)	10 (18)	14 (25)
Recruitment and selection (N=61)	42 (34)	13 (25)	14 (2)	22 (28)
Training and education (N=61)	30 (28)	16 (22)	18 (21)	25 (28)
Appraisal (N=61)	36 (30)	22 (26)	15 (15)	17 (17)
Compensation (N=61)	34 (32)	20 (27)	14 (21)	22 (32)
HRM configuration perception score	35	21	14	20

Based on this assessment of the perception of the HRM configuration by employees we can infer the implementation alignment of a SME. To do so we need to combine the outcomes from the executive director survey and the employees survey; the HRM configuration intention of management is assessed in the EDS, the perception of this intention by the employees in the ES. We infer implementation alignment by assessing the absolute differences

between the HRM configuration focus of the executive director and the HRM configuration focus of the employees. See table 10 and figure 10 for the implementation alignment for SME 1.

Table 10. Implementation alignment SME 1

	Cooperative	Adhocratic	Market	Mechanistic
HRM configuration executive director (intended)	23	33	13	30
HRM configuration employees (perceived)	35	21	14	20
Absolute differences	12	12	1	10
Implementation alignment		36		

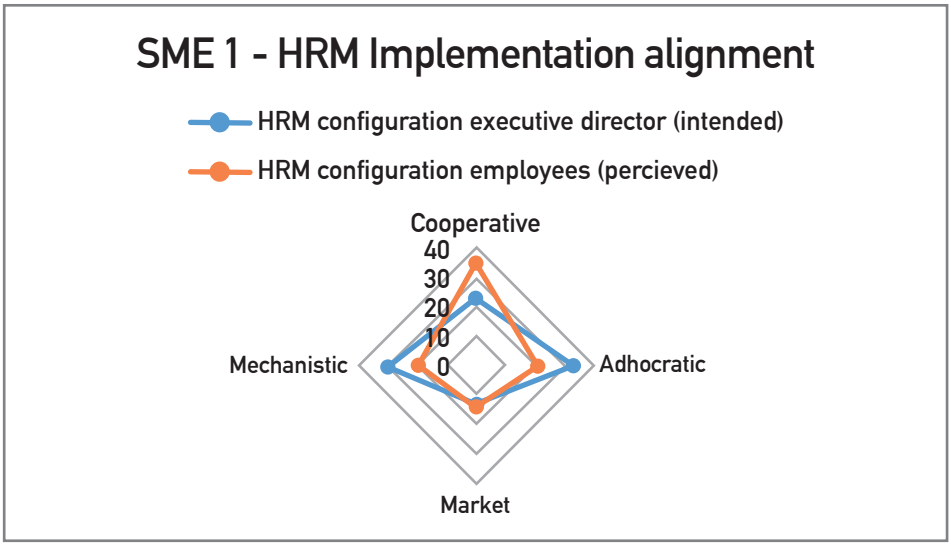


Figure 10. HRM Implementation alignment SME 1

The data gathered using the ES allow us to assess the perception of the HRM configuration on a 0 to 100 scale, over the four respective competing value quadrants. Using those scores and combining them with the EDS outcomes allows us to provide a first approximation of the implementation alignment within an SME. The method of analysis, standardizing and graphical representations are not only input for our simulation model, they

contribute to the specific recommendation we could make using the executive director data only; we can clarify where alignment improvements can be made. For SME 1, the intended focus of the HRM-practices is adhocratic primarily (33) while the strategy has an emphasis on cooperative elements. Based on those findings one could observe a need to increase the cooperative focus in the HRM-practices. However, the perception of employees seems to be that the HRM-practices are emphasizing cooperation already. These findings can help nuance the recommendations; while more focus on cooperative HRM-practices is recommended, employees do already perceive them to be focused on cooperative elements.

Conclusion: an instrument for HRM alignment

We set out to define the framework of reference, ideal type and hybrid HRM configurations to provide specific information needed for the creation of the simulation model. To ground this information used for the simulation model in practice, we set out to do an empirical exploration. We used two surveys and a descriptive method of analysis. Combining the surveys and method of analysis does not only provide us with input for the simulation model. The surveys and method of analysis presented here enable us to provide a detailed mapping of the strategy, HRM configuration as intended by management, and perception of the HRM configuration by employees in an SME. This allows for a detailed assessment of vertical, horizontal and implementation alignment. This assessment can be used as a direction to improve the HRM alignment and thereby steer the employee behavior in organizations. By using the competing values model, ideal type HRM configurations, and our two surveys and method of analysis we specify prior research on configurational HRM (in SMEs) done by Knol (2013) and Rauf (2015).

Conclusion: from surveys to a simulation

To create a simulation model, we need precise HRM input that reflects the practice of designing firm specific HRM. The ideal type HRM configurations provide the detailed input needed. The HRM-practices that make up these ideal type HRM configurations are defined at a focus level and relate to the organizational strategies laid out by the competing values model. By doing so we can create the simulation model to simulate changes in alignment based on changes in HRM-practice selection. Furthermore, there is practical relevance to defining HRM-practices at a focus level as HRM professionals select and create HRM-practices at this level. The results of our empirical

exploration suggest that the ideal type and hybrid HRM configurations exist in practice. Based on the ideal types we can assess HRM alignment and distinguish between organizations based on their organizational strategy, HRM configuration and HRM alignment. As presented, organizations show different hybrid strategies, different foci in HRM configuration and employees perceive the HRM configuration in different ways. Hence, using the HRM-practice items, ideal types and methods of assessing alignment as input for our simulation model enables us to create a tool that specifies alignment for different organizations.

The specified HRM-practices items that make up the ideal type HRM configurations, as well as the method of analysis are used as input for the simulation model. Specifically, the competing values model -presented in figure 5 at the beginning of this chapter- is the assigned framework for both the strategy and the HRM configuration in the simulation model. Furthermore, all the HRM-practices presented in table 2 (ideal type HRM configurations) can be combined and modelled to align with an (hybrid) organizational strategy. The empirical exploration presented here enabled us to create a more precise simulation model that reflects the practice of firm specific HRM. In the next chapter we will present the simulation model in detail.

Conclusion & Discussion

To create a configurational HRM simulation model, we need precise HRM input; a framework of reference using ideal type HRM configurations. In order for the simulation model to enable us to explore configurational HRM and aid HRM decision making in a meaningful way, this framework should not contradict the actual practice of HRM. Based on our empirical exploration presented here, the ideal type HRM configurations, methods of analysis and alignment measures can be used as input for the simulation model. All increase the precision with which the simulation model specifies configurational HRM and aid HRM professionals in their firm specific design challenge. Furthermore, the surveys used to explore these HRM configurations provide organizations with a tool to get a first proxy of their HRM alignment levels and specifies the directions for improvement.

The ideal type HRM configurations presented here provide theoretical constructs used for the simulation model. While the extent to which these HRM configurations cover all relevant HRM-practice (categories) can be

discussed, they do provide us with a framework of reference for the simulation model. Furthermore, by exploring these ideal type HRM configurations empirically we infer if these HRM configurations provide a meaningful way to assess HRM within organizations. Similarly, the surveys including their method of analysis and alignment measures provide specific input for our simulation model. Furthermore, the surveys and methods of assessing alignment provide a first proxy of HRM alignment within organizations. However, the alignment outcomes could imply that HRM alignment can be pinpointed on a 0-100 fine grained scale. Consequently, one could try to alter the focus of HRM by a margin of one to increase alignment. An interpretation of the outcomes on this level of detail defeats the purpose of the survey. We do not strive to specify with this level of detail where improvement in alignment can be made. We acknowledge that by calculating averages of, for example, the perception of the HRM-practices by multiple employees, nuance might be lost. The high variance in our example illustrates that there can be large differences between employees in how the HRM-practices are perceived. We did not however set out to provide a survey that specifies HRM alignment in a psychometric valid and precise way; we set out to define ideal type HRM configurations, allow for hybrid HRM configurations and a method of assessing alignment that we could use for our simulation model. In this chapter we did just that.

References

References can be found on page 139.

Chapter 4

A strategic HRM alignment simulation model

All models are wrong, some are useful
— George P.E. Box

Using the design principles presented in chapter two, and the ideal type HRM configurations presented in chapter three, we set out to create our simulation model. In this chapter we detail how we have gathered and used (additional) input, and present the initial simulation model. We conclude the chapter by elaborating upon the test runs that were performed.

This chapter is based on several papers: a conference paper titled "HRM driven organizational change: developing a game simulation model for strategic HRM" presented at the European conference for game-based learning (Collou & Bruinsma, 2019), an article titled "Het effect van HRM-interventies op gedrag van medewerkers volgens HR-professionals (the effects of HRM interventions on the behaviour of employees according to HR-professionals)" published in tijdschrift voor HRM (Dutch HRM journal) in 2019 (Collou, Bruinsma, & van Riemsdijk, 2019), a conference paper titled: "HR-professionals exploring configurational human resource management using a serious game: what do they miss?" presented at the Dutch HRM conference 2017 (Collou, Bruinsma, & Riemsdijk, 2017) and finally, a conference paper titled: "Digitalization of HRM: desigining a simulation model for HR decision making" presented at the Dutch HRM conference 2019 (Collou, Bruinsma, & van Riemsdijk, 2019). Combining texts from these papers was done with the goal in mind to present a chapter that is comprehensive. The carefull reader might notice some repetition from the previous chapters.

Introduction

In chapter two we presented the theoretical framework and elaborated upon the design principles to create an HRM simulation model. In chapter three we presented the framework of reference (ideal type HRM configurations) and elaborated upon the empirical exploration of that framework. In this chapter, we focus on the simulation model itself. We start by summarizing the theoretical underpinnings. Second, we elaborate upon the assumptions and variables used for the creation of the simulation model. In this second step we present an important prerequisite for the creation of our simulation model; the specification of the HRM-practices according to HRM professionals. After that specification we finalize our elaboration on how the simulation model was built. Finally, we show trial runs and outcomes using fictive data. We first however focus on what constitutes a simulation model and what the purpose of the specific HRM simulation model at hand entails.

A simulation model is a simplified explicit representation of a real-world phenomenon (see chapter one for a more elaborated explanation of what constitutes a simulation model). According to Sauvé et al., (2007) a simulation has four essential attributes. First, a simulation is a model of reality. Secondly, a simulation model is dynamic. Thirdly, a simulation model is a simplified model. Finally, the simulation model has the attribute of fidelity. These attributes are reflected in the initial HRM simulation model presented here: the model is a digital representation of the real world HRM configuration system design and provides feedback to participants; it is a dynamic model that participants can control through HR-choices; it models the essential complexity at hand; and it upholds fidelity by capturing the complexity of firm specific HRM design.

Developing a simulation model entails several steps. First, the purpose of the model needs to be defined. Secondly, one needs to build or select a theory to account for the real-world phenomenon that is being addressed (Stanislaw, 1986). Thirdly, based on the purpose defined and theory selected, the underlying assumptions and variables need to be specified. Specifically, the variables and relationships need to be constituted mathematically to build the actual model (Tsjernikova, 2009). Finally, the simulation model needs to be tested.

Building the model: purpose & theoretical underpinnings

The purpose of the model is to capture and make explicit firm specific HRM design. To build a simulation model for this purpose, a theory is needed that explains how HRM affects employee behavior and also reflects the complexity when designing firm specific HRM. The configurational mode of theorizing provides this theoretical perspective. Configurational HRM has come to mean that three dimensions of HRM alignment are necessary. Vertical HRM alignment stipulates that the HRM configuration needs to reflect the organizational strategy (Bowen & Ostroff, 2004). Horizontal alignment requires the individual HRM-practices that make up an HRM configuration to be distinctive and consistent (Gratton & Truss, 2003)[1]. Implementation alignment requires employees to perceive HRM as intended by management (Gratton & Truss, 2003). In order to actually shape employee behavior, implementation alignment is of key importance. However, the simulation model at hand focusses on the design of an HRM configuration. After an HRM configuration is designed, the implementation can be considered as the next step in shaping employee behavior through HRM. As the purpose of the model is to aid firm specific HRM design, HRM implementation is not a prerequisite for the current model.

Based on the key principles of configurational HRM, presented in chapter two, both vertical and horizontal HRM alignment are important to shape employee behavior in the right direction. Assessing vertical and horizontal alignment requires a frame of reference in terms of strategy and HRM. Additionally, changes in the levels of alignment happen over time. Therefore, a theory that addresses both issues is needed. The competing values model (Cameron & Quinn, 2006) provides that: it enables the categorization of an organizations' strategy based on four competing values; internal versus external focus and stability versus flexibility. The underlying rationale being the competing nature of these values; an external focus, for example, excludes an organizations' ability to focus internally without sending mixed messages to employees and conflicting organization demands (conflicting cultures, structures, etc.). Based on the competing values, four ideal type strategic orientations are defined: cooperative, adhocratic, mechanistic and market. However, in addition to these four strategies, organizations can be (usually are) strategic hybrids (combining elements from the four 'ideal types'). The

[1] For elaboration and nuances see chapter two

competing values model, its strategic ideal types and the related HRM configurations serve as a frame of reference to 'plot' strategy and HRM in the simulation model, see figure 11.

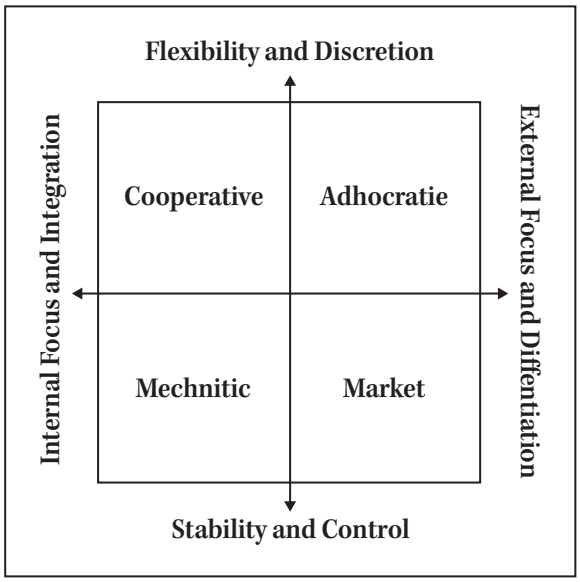


Figure 11. Competing value framework including retitled quadrants based on Knol (2013) and Rauf (2015)

The competing values model also assesses organizational change as it enables the identification of what needs to change and provides input for developing a strategy to make that change happen. The process of organizational change proposed by Cameron and Quinn (2006) suggests a gradual shift from one quadrant to (a) neighboring quadrant(s). Organizational change is an incremental process. When changing 'sideways' as opposed to 'diagonally', the organization can retain one competing value, which enables incremental change. When moving diagonally, both competing values must be switched simultaneously, requiring complete and potentially chaotic change. One example of this incremental pathway of organizational change is the way in which organizations mature according to Cameron and Quinn; from an adhocracy to a cooperative, from a cooperative to a mechanistic, and finally from a mechanistic to a market emphasis (p.55). This concept of organizational change from one quadrant to a neighboring quadrant, rather than 'across' to opposing quadrants, needs to be reflected

by the simulation model (see figure 12 in which an organization moves from the cooperative quadrant towards the market quadrant through neighboring quadrants). The increase in a given quadrant is limited over time as the quadrant gradually becomes more dominant. This 'diminishing returns' concept makes explicit the suggestion that as employee behavior is shaped towards the ideal, actually reaching that ideal type employee behavior becomes increasingly difficult.

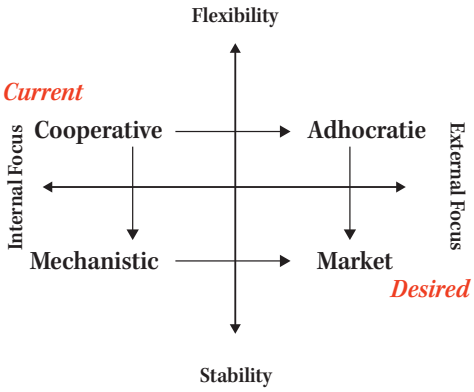


Figure 12. Organizational change process trough neighboring quadrants in the competing values model

Building the model: assumptions & variables

To aid HRM professionals we aspire to design a model with highfunctional fidelity (Hays & Singer, 1989). This implies that 1. the relationships and effects in the model mirror the relationships and effects we would theoretically expect when designing an actual HRM configuration. And 2. a focus on only the key relationships and effects so that HRM professionals are able to experiment with HRM decisions without being challenged by too much detail that will not improve their skills in terms of HRM decision making (Tsjernikova, 2009). The theoretical reasoning elaborated upon in chapter two provides the rationale for focusing on alignment in our simulation model, the (ideal type) strategies and HRM configurations presented in chapter three are the variables that make up the simulation model.

HRM professionals face the challenge of creating an effective HRM configuration by selecting and designing HRM-practices. In order for the simulation model to aid decision making, HRM professionals need

to be able to select HRM-practices based on a current situation and be presented with the results of their choices over time in terms of vertical and horizontal alignment (the effect of their choices). The model starts by calculating the current vertical alignment by assessing the difference between the organizational strategy and the current HRM configuration (see chapter three). Subsequently, a set of HRM-practices is selected (by the HRM professionals), labeled the 'HR-intervention'. Next, the model calculates changes in the current HRM configuration based on the HR-intervention and presents a new HRM configuration. Finally, the model calculates the new vertical alignment by assessing the difference between the organizational strategy and the new HRM configuration, as well as the horizontal alignment by calculating the differences in focus between the HRM-practices that make up the HRM configuration (figure 13).

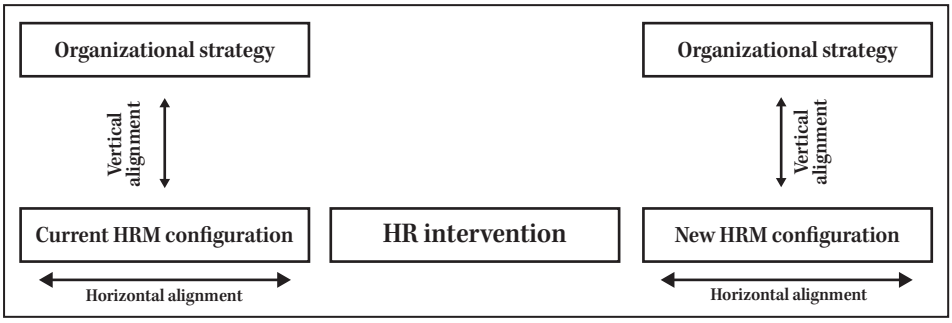


Figure 13. Functional steps in the strategic HRM simulation model

To calculate vertical alignment, scores need to be assigned to both the organizational strategy and the HRM configuration; the difference between these scores being the vertical alignment. The variables 'organizational strategy' and 'HRM configuration' are defined using the competing values framework. Organizational strategy is defined by distributing 100 points over four underlying variables representing the four quadrants (i.e. Cooperative, Adhocratic, Mechanistic, Market). The actual scores can be provided manually, based on fictive or actual company strategy data (see chapter three). Similarly, the HRM configuration score consists of four underlying variables reflecting the four quadrants. These scores represent the HRM focus within an organization in terms of the competing values model. The vertical alignment is calculated by taking the absolute cumulative difference between the strategy scores and HRM scores. The more similarity in the focus of the strategy and the HRM configuration, the lower the HRM alignment score

(lower implying better alignment). If, for example, the cooperative strategy score equals 50, and the cooperative HRM configuration score equals 50 as well, the absolute difference equals 0. This implies that the strategy and the HRM configuration have an equal focus on cooperative elements. Hence, for the cooperative elements, vertical alignment is attained. If, on the contrary, the cooperative strategy equals 50 and the cooperative HRM configuration score equals 0, the absolute difference is 50. In this instance, vertical alignment for the cooperative elements is low as the strategy does focus on cooperative elements while the HRM configuration does not. In a similar fashion, the alignment scores for the adhocratic, market and mechanistic elements are computed. Subsequently, we calculate vertical alignment by adding these four alignment scores together. This in turn implies that the vertical HRM alignment score can be between 0 (perfect alignment) and 200 (no alignment). In table 11 an example is provided.

Table 11. Example vertical alignment score

	Cooperative	**Adhocratic**	**Market**	**Mechanistic**
Strategy	35	30	20	15
HRM configuration	20	40	10	30
Absolute difference between strategy and HRM configuration	|35-20| 15	|30-40| 10	|20-10| 10	|15-30| 15
Vertical alignment	(15 + 10 + 10 + 15 =) 50			

To calculate both vertical and horizontal alignment we need an HRM configuration score (table 11, row 2). This score will allow us to asses vertical alignment (differences between strategy scores and HRM configuration scores) and horizontal alignment (differences in focus between individual HRM-practice scores). If one HRM-practice aligns well with the cooperative quadrant, and another does not, horizontal alignment between the two is low. Six HRM-practice categories were defined for the model based on their relevance; recruitment, selection, job design, training and development, appraisal and compensation (Collou et al., 2019b; Knol, 2013; Rauf, 2015)[2]. However, there are multiple ways to design these HRM-practices. Recruitment can, for example, be focused on craftmanship, or it can be focused on

[2] See chapter three

commercial skills. Taking this diversity into account, 72 HRM-practices have been defined (6 HRM-practices * 3 design options per HRM-practice * 4 HRM configurations)[3].

We set out to create a simulation model using the key principles of configurational HRM (chapter two), the ideal type HRM configurations (chapter three), the method of assessing horizontal and vertical alignment (chapter three and four), and the previously outlined rationale on how alignment changes over time (chapter four). However, to actually create the simulation model we need the 72 HRM-practices to be scored on the extent to which they align with the four respective quadrants. If we do not have these scores, we will not be able to create the simulation model; we cannot specify changes in alignment based on HRM-practice selection. Scoring these 72 individual HRM-practices was done using the solidified practical knowledge of professionals via a quantitative survey. Specifically, we distributed the survey amongst those professionals who have experience in selecting, designing and implementing HRM-practices: HRM professionals. A total of 178 HRM professionals filled out the survey. 75 out of these 178 are employed as HR advisor (42%), 25 are HR-managers (14%), 4 are administrative HR-professionals (4%), and 4 are HR-students (4%) who joined their HRM intern supervisor to a session where the survey was filled out. The rest (70 respondents, 39%) are employed in a variety of ways, some examples are: interim HRM manager, HR coach, senior advisor, advisor organization and strategy and (HR) scholar.

We asked these HRM professionals to distribute 100 points based on the extent to which the individual HRM-practices that make up the ideal type HRM configurations shape the employee behavior needed in one specific strategic quadrant. The HRM-practices in this survey are defined at a focus level. This level of detail enables us to get to grips with the extent to which specific HRM-practices affect specific employee behavior according to experienced HRM professionals. Subsequently, these HRM-practices and their scores are used as input for our simulation model, thus grounding the simulation model empirically. The averages of these scores represent the extent to which an HRM-practice does indeed steer the four specific employee behaviors needed for the four ideal typical strategies, according to HRM professionals. See table 12 for an example in which four variations of the

[3] See chapter three

HRM-practice job design are scored based on the four ideal type strategies. See appendix C for all 72 HRM-practice scores. The number of respondents per HRM-practice varies as we presented subsets of HRM-practices to respondents. In addition, as we average the scores provided by individual HRM professionals, the HRM-practice scores do not necessarily add up to 100.

Table 12. Example scores for HRM-practices job design

HRM-practice	Cooperative *Flexible & internal*	Adhocratic *Flexible & external*	Market *Stabile & external*	Mechanistic *Stabile & internal*
The most important characteristic of job design is that employees are able to determine their own pace of work. (n=52)	33	32	24	13
The most important characteristic of job design is that employees need to solve complex problems. (n=52)	24	44	24	11
The most important characteristic of job design is that employees work individually. (n=52)	17	35	31	19
The most important characteristic of job design is that employees need to comply with the assigned tasks. (n=52)	15	7	13	68

These scores allow for assessing vertical alignment; we can infer the extent to which (a set of) specific HRM-practices align with a specific organizational strategy. To do so, we first calculate the averages of the individual HRM-practice scores to make up the four HRM configuration quadrant scores. Second, we assess the extent to which these four scores overlap with the four strategy scores. In table 13 we present the adhocratic strategy, the HRM configuration made up of the six individual HRM-practices (one out of each category) that align best to the adhocratic strategy according to the HRM professionals in our sample, the HRM configuration score that results from these six individual HRM-practices, and the vertical alignment score.

Table 13. Adhocratic HRM configuration

	Cooperative	Adhocratic	Market	Mechanistic
Strategy	*0*	*100*	*0*	*0*
The most important characteristic of job design is that employees need to solve complex problems. (n=52)	24	44	24	11
The recruitment of new employees is focused on the extent to which the potential hires can come up with innovative solutions. (n=52)	17	55	23	7
Employees' performance is assessed based on innovativeness. (n=52)	12	62	22	5
New employees are hired due to their ability to come up with innovative solutions. (N=49)	16	58	21	6
Employees are rewarded based on their innovativeness. (n=50)	15	60	21	5
Employee development is focused on increasing employees' ability to come up with innovative solutions. (n=36)	11	63	23	49
HRM configuration score (averages of the individual HRM-practices)	16	57	22	14
Vertical alignment scores per quadrant	(0-16) 16	(100-57) 43	(0-22) 22	(0-14) 14
Vertical alignment score	16 + 43 + 22 + 14 = **95**			

Furthermore, based on these individual HRM-practice scores the simulation model calculates the standard deviations of the HRM-practices that make up the HRM configuration. This standard deviation is presented as the horizontal alignment score as it is a proxy of the extent to which the individual HRM-practices are aligned amongst each other. Table 14 presents the same six HRM-practices that make up the adhocratic HRM configuration, but now includes the vertical alignment score.

Table 14. Adhocratic HRM configuration including vertical alignment score

	Cooperative	Adhocratic	Market	Mechanistic
The most important characteristic of job design is that employees need to solve complex problems. (n=52)	24	44	24	11
The recruitment of new employees is focused on the extent to which the potential hires can come up with innovative solutions. (n=52)	17	55	23	7
Employees' performance is assessed based on innovativeness. (n=52)	12	62	22	5
New employees are hired due to their ability to come up with innovative solutions. (N=49)	16	58	21	6
Employees are rewarded based on their innovativeness. (n=50)	15	60	21	5
Employee development is focused on increasing employees' ability to come up with innovative solutions. (n=36)	11	63	23	49
Horizontal alignment scores Standard deviation per quadrant	4,2	6,4	1,1	15,9

These scores enable us to illustrate the focus of the current HRM configuration, and the current vertical and horizontal alignment scores. However, after being presented with the strategy and current HRM configuration, HRM professionals are invited to select a new set of HRM-practices out of the predefined set of 72 HRM-practices. To enable the simulation model to calculate the effects of this HR-intervention on the current HRM configuration, a score needs to be assigned that represents the HRM professionals' choices. The HR-intervention score is calculated similarly to how the HRM configuration score is calculated; by averaging the scores of the individual HRM-practices that make up the HR-intervention. While

theoretically an HRM configuration ought to consist of all HRM-practice categories, we deliberately allow users of the simulation model to select the HRM-practices based on their own preferences. We do not want to force (but do allow) HRM professionals to select HRM-practices out of every category; using their decisions we can assess the extent to which they actually do design an HRM configuration that consists of all HRM-practice categories. We could have assigned a score to non- selection of an HRM-practice category as well and then calculate the average HRM configuration score. That would however stimulate HRM professionals to select HRM-practices out of every category and thereby limit our ability to assess if they actually do select an HRM-practice out of every category, all by themselves. The selection of HRM-practices (and its score) is labeled the HR-intervention. Table 15 shows an example; HRM-practices are combined in an HR-intervention (scores of these HRM-practices are illustrated here but are not shown to the HRM professionals using the simulation model).

Table 15. Example of an HRM configuration score

HRM-practice	Cooperative	Adhocratic	Market	Mechanistic
The most important characteristic of job design is that employees are able to determine their own pace of work.	33	32	24	13
The recruitment of new employees is focused on accuracy of potential hires.	23	11	16	52
Employees' performance is assessed based on accuracy.	25	7	9	61
New employees are hired due to their accuracy.	21	13	11	57
Employees are rewarded based on their accuracy.	28	10	10	53
Employee development is focused on increasing professional knowledge.	34	37	12	17
HR-intervention score	27	18	14	42

Using the strategy score, the HRM configuration score and the HR-intervention score, the model calculates how the HRM configuration changes, and recalculates the vertical and horizontal alignment. As argued

above, changes in the HRM configuration score are made based on the change process suggested by Cameron and Quinn (2006) in which change occurs through neighboring quadrants that share one competing value. Specifically, the simulation model calculates the extent to which every HRM configuration quadrant needs to change based on the opposing quadrants HR-intervention score; if the HR-intervention scores high on the cooperation quadrant, the model first calculates a small decrease in the market quadrant. Subsequently, the model calculates a larger decrease of the neighboring quadrants and adds those scores to the HR-intervention quadrant; the cooperation quadrant takes in a large chunk of both the adhocratic and mechanistic HRM configuration quadrants.

Building the model: numeric relationships

The assumptions and defined variables, expressed in the form of logical or mathematical relationships, constitute a model (Tsjernikova, 2009). The steps taken when using the model are presented in figure 14.

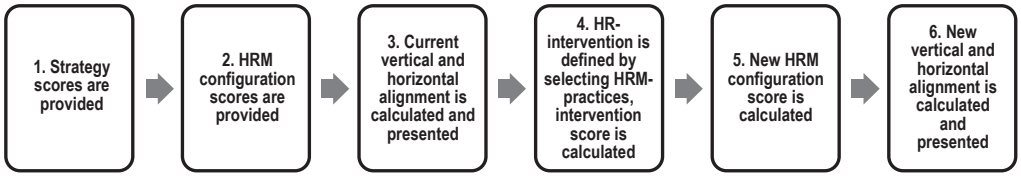


Figure 14. Process steps in simulation model

Above, we have elaborated upon steps 1, 2, 3 and 4. These first four steps revolve around manually providing input, or the independent variables (step 1, 2, 4) and calculating absolute differences between scores to provide the output of vertical, and horizontal, alignment (step 3), or the dependent variables. Step 6 is very similar to 3; new vertical and horizontal scores are calculated and presented. Now, we present how the simulation model calculates a new HRM configuration score (5) using an example. The current HRM configuration score used in this example is 25 on each quadrant (i.e. cooperative, adhocratic, mechanistic, market), the HR-intervention score is 100 on the cooperative quadrant and 0 on the other three quadrants.

1. Changing the HRM configuration from current to new is done by first calculating the decrease in the HR-interventions' **competing** quadrant. As the HR-intervention score in this example only provides a score on the cooperative quadrant (100), the simulation model starts by calculating the decline in the **competing** market quadrant. This decrease is small to account for the competing values; the cooperative quadrant has an internal flexibility focus, the market quadrant an external stability focus. A cooperative HR-intervention in a market focused organization forces employees to alter their behavior drastically; from flexibility to stability and from an internal focus to an external focus. This switch in behavior will be relatively slow compared to moving to neighboring quadrants when one competing value remains relevant. The following formula is used:
    a. Decline competing quadrant = (HR-intervention score on quadrant / 10) * (current competing quadrant score / 100)
    b. In this example:
        i. Decline of market quadrant = (HR-intervention score cooperative quadrant / 10) * (current market quadrant / 100)
    c. Hence, decline of market quadrant = (100 / 10) * (25 / 100), and thus decline of market quadrant = 2.5

2. Subsequently, as organizational changes occur via the competing values, the neighboring quadrants 'take in' the decline of the market quadrant. The following formulas are used:
    a. Neighboring Quadrant1 = Current Neighboring Quadrant1 + (Decline of opposing Quadrant /2). Neighboring Quadrant2 = Current Neighboring Quadrant2 + (Decline of opposing Quadrant /2).
    b. In this example:
        i. Adhocratic Quadrant = Adhocratic Quadrant + (Decline of market quadrant /2). Mechanistic Quadrant = Mechanistic Quadrant + (Decline of market quadrant /2).
    c. Hence,
        i. Adhocratic Quadrant = 25 + (2.5 /2).
        ii. Mechanistic Quadrant = 25 + (2.5 /2).
    d. Both the adhocratic and mechanistic quadrants now equal 26.25 (see 15a).

3. In the final step the highest scoring HR-intervention quadrant is increased. This increase (in the example the cooperative quadrant) is done by bisecting the neighboring quadrants and adding those scores to the HR-intervention quadrant. The following formula is used:
    a. HR-intervention Quadrant = Current HR-intervention Quadrant + (Neighboring Quadrant1 /2) + (Neighboring Quadrant 2 /2)
    b. In this example:
        i. Cooperative quadrant = Cooperative quadrant + (Adhocratic Quadrant/2) + (Mechanistic Quadrant/2)
    c. Hence, Cooperative quadrant = 25 + (26.25/2) + (26.25/2)
    d. The cooperative quadrant now equals 51.25 (see figure 15b)

While the actual scores with which the model performs the calculations (for example dividing the HR-intervention score with 100 in step 1a) are arbitrary, the purpose of these calculations is to reflect the directions of the change process inherent to the competing values model.

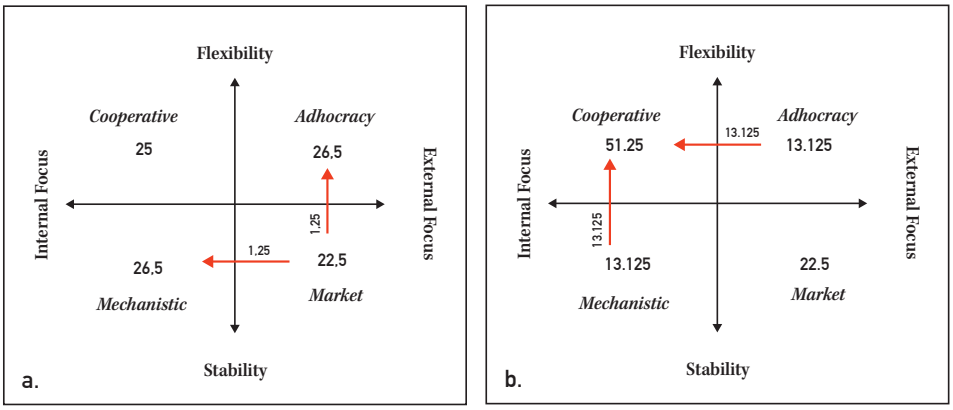


Figure 15. Organizational change via neighboring quadrants, step 1 (a) and 2 (b)

In this example, the HR-intervention provides a score for the cooperative quadrant only. However, HR-intervention scores always provide scores on all four quadrants (Collou et al., 2019). Due to the interdependency of the calculations, (a score on the cooperative quadrant affects all other quadrants) the starting point of calculating affects the outcomes of the model. The outcomes are different if, for example, the simulation model starts its calculations in the cooperative quadrant or in the adhocratic quadrant;

starting in the cooperative quadrants affects the scores in the adhocratic quadrants, this altered score will subsequently be used for the adhocratic quadrant calculations while if the simulation model starts in the adhocratic quadrant these adhocratic scores are in their 'original' state. To filter out this bias of starting order the model calculates the final outcomes of all possible orders of calculations (Q1, Q2, Q3, Q4 - Q1, Q3, Q2, Q4 - Q1, Q4, Q2, Q3, etc.) and takes the average to be the final outcome of the model.

Using the model: simulated runs

In order to test the simulation model, trial runs were done. The goal of these trial runs was to assess if the direction of organizational change as suggested by the competing values model was reflected in the simulation model over multiple years. To infer if the model does reflect this direction of change we first tested how the scores of an HRM configuration changes based on a HR-intervention score that stays the same throughout the years. In table 16 we present the input and outcomes of trial run A which simulated the effects of a cooperative HR-intervention on a current HRM configuration that is equally distributed over the four quadrants. We expect the cooperative HRM configuration score to gradually increase via the adhocratic and mechanistic quadrants, but showing diminishing returns.

Table 16. Trial runs (A) without changing HR-intervention

Trial	Year 1		Year 2		Year 3		Year 4	
A	*HR-intervention*		*HR-intervention*		*HR-intervention*		*HR-intervention*	
	Cooperation 75	**Adhocratic** 10	**Cooperation** 75	**Adhocratic** 10	**Cooperation** 75	**Adhocratic** 10	**Cooperation** -	**Adhocratic** -
	Mechanistic 10	**Market** 5	**Mechanistic** 10	**Market** 5	**Mechanistic** 10	**Market** 5	**Mechanistic** -	**Market** -
	HRM configuration		*HRM configuration*		*HRM configuration*			
	Cooperation 25	**Adhocratic** 25	**Cooperation** 42.2	**Adhocratic** 18.1	**Cooperation** 53.8	**Adhocratic** 14.3	**Cooperation** 62.3	**Adhocratic** 12.2
	Mechanistic 25	**Market** 25	**Mechanistic** 18.1	**Market** 21.6	**Mechanistic** 14.3	**Market** 17.6	**Mechanistic** 12.2	**Market** 13.4

The simulation model does reflect the organizational change process suggested by the competing values model; an HR-intervention scoring high on cooperation does increase the cooperation quadrant incrementally; from 25 to 42.2 to 53.8 to 62.3 in four years. The change moves through neighboring quadrants as these neighboring quadrants decrease more rapidly compared

to the opposing quadrant; the adhocratic quadrant for example going from 25 to 12.2 in four years compared to the market quadrants going from 25 to 13.4 in four years. Furthermore, the increase in the cooperation quadrant, does reflect the concept of diminishing returns as the increase in year 1 is larger (25 to 42.2) than the increase in year 2 (42.2 to 53.8) and the increase in year 2 is larger than the increase in year 3 (53.8 to 62.).

To assess if the model successfully calculates new scores if the HR-intervention changes throughout the years we performed another test in which we start with a cooperative HR-intervention but change that to a more mechanistic intervention for year two and an adhocratic and market intervention in year 3. See table 17.

Table 17. Trial runs with changing HR-intervention

Trial	Year 1		Year 2		Year 3		Year 4	
B	*HR-intervention*		*HR-intervention*		*HR-intervention*		*HR-intervention*	
	Cooperation 75	**Adhocratic** 10	**Cooperation** 10	**Adhocratic** 5	**Cooperation** 10	**Adhocratic** 40	**Cooperation** -	**Adhocratic** -
	Mechanistic 10	**Market** 5	**Mechanistic** 80	**Market** 5	**Mechanistic** 10	**Market** 40	**Mechanistic** -	**Market** -
	HRM configuration		*HRM configuration*		*HRM configuration*			
	Cooperation 25	**Adhocratic** 25	**Cooperation** 42.2	**Adhocratic** 18.1	**Cooperation** 31.5	**Adhocratic** 16.3	**Cooperation** 28.1	**Adhocratic** 18.8
	Mechanistic 25	**Market** 25	**Mechanistic** 18.1	**Market** 21.6	**Mechanistic** 42.6	**Market** 9.6	**Mechanistic** 17	**Market** 36.1

Outcomes of trial B also reflect the organizational change process suggested by the competing values model as those quadrants that have a high HR-intervention score increase incrementally and via neighboring quadrants. At the start of year 2 the HRM configuration scores high on the cooperative quadrant as the HR-intervention of year 1 was focused towards that cooperative quadrant. In year 2 however the HR-intervention has a mechanistic focus resulting in an HRM configuration at the start of year three dominated by a mechanistic focus, but also scoring high on the cooperative quadrant as a result of the first HR-intervention. In year three the focus of the HR-intervention switched to a more adhocratic and market focus resulting in a somewhat evenly distributed HRM configuration at the start of year 4 which can be explained by the prior HR-interventions that increased the scores on the cooperative and mechanistic quadrants that are now declined by the intervention in year 3.

Based on these trials runs we assess the simulation model to reflect the organizational change process suggested by the competing values model. We now elaborate upon how this simulation model enables to specify configurational HRM.

Conclusion & discussion: specifying configurational HRM using a simulation

In this chapter we presented our HRM simulation model. The simulation model was made using the competing values framework, related HRM configurations, and by making explicit the organizational change process suggested by Cameron and Quinn (2006).

By specifying configurational HRM into a simulation model using the solidified practical knowledge of HRM professionals we strive to create a method that enables us to explore configurational HRM with an unprecedent level of detail. Now that we have this model, we can assess the changes in an HRM configuration and HRM alignment based on an HR-intervention consisting of multiple HRM-practices, and over multiple years. Any combination of HRM-practices out of the ideal type HRM configurations can be used as input for the simulation model. In addition, any (hybrid) strategy can be selected for the HRM configuration to be aligned to. The HRM and strategy content used in the simulation model is fine grained and specific, mirroring the complexity of real life HRM design, and allows us to explore configurational HRM with detail. Specifically, the outcomes generated by the simulation model provide input for future research; specific hypothesis can be generated based on configurational reasoning. We now present some examples of specific research questions that can be addressed.

Using the simulation model, we can assess how a selection of HRM-practices affects alignment over multiple years. We can, for example, assess how a selection of cooperative HRM-practices change the alignment between strategy and HRM. Our model predicts that if the current HRM configuration is focused equally on all four quadrants, and an HR-intervention that has a strong cooperative focus is implemented, the HRM configuration will move towards a cooperative focus through the neighboring quadrants (see figure 15). Consequently, the alignment between the HRM configuration and the cooperative organizational strategy will increase. More specifically, if the start position of the HRM configuration in a firm is equally distributed over all four quadrants, and the HRM-practices job are designed

so that employees are able to determine their own pace of work, recruitment of new employees is focused on accuracy of potential hires and employee performance is assessed based on accuracy are combined and implemented, the cooperative focus in the HRM configuration will increase from 25 to 27 in year 1 (scale from 0-100). We can compare the effects of this combination of HRM-practices to any other combination of HRM-practices. In addition to assessing vertical alignment, our model assesses how horizontal alignment changes with similar detail. Hence, our simulation model enables us to formulate specific and detailed hypothesis based on configurational reasoning:

- Combining [HRM-practices] to be implemented in a [current HRM configuration] given a [organizational strategy] will increase the focus of the HRM configuration to [outcome score] and hence [improve/ decline] vertical and horizontal alignment.

Furthermore, the simulation model enables us to explore the effects of a combination of HRM-practices in a dynamic manner. In addition to a wide range of potential hypothesis similar to the one mentioned above, the specific outcomes generated using the simulation model provide us with the opportunity to ask more detailed questions considering configurational HRM. Some examples are: what is the optimal number of HRM-practices in an HRM configuration? What is the optimal combination of HRM-practices given a specific organizational strategy? And, how does the alignment change over (multiple) years?

However, the simulation model described in this chapter is a theoretical model. The practical validity of the model was increased by using the empirically explored ideal types (chapter three) and the solidified practical knowledge of 178 HRM professionals on the extent to which specific HRM-practices shape specific employee behavior. However, up until this point in our research, no HRM professionals have been presented with or used the simulation model in real life.

To assess the simulation model, it will need to be used by HRM professionals. We want to do so in a way that does not force us to explain all the intricacies and mathematical details of the simulation model; HRM professionals ought to design HRM configurations and be presented with the outcomes without being bothered by all the underlying mechanics. Applying the simulation model in this manner provides the potential to

increase the quality of the simulation model based on the experience of HRM professionals. Their experiences can be assessed and based on that, updates to further specify the model can be made. Furthermore, the simulation model provides insight into the quality of HRM decision making. HRM professionals can experiment with HRM-practice selection, and gauge the outcomes before implementing them in real life. So, presenting the simulation model to HRM professionals does not only provide us with an assessment and improvement opportunity, it also enables HRM professionals to gain insight in their decision-making quality. Lastly, if HRM professionals use the simulation model, they select HRM-practices given a specific organizational strategy. If applied, the simulation model provides us with a method to systematically address these decisions made by HRM professionals given an organizational strategy. This systematic assessment in turn enables us to specify configurational HRM and formulate specific research questions.

Applying the simulation model in a manner that enables us to assess and improve it, provide insight into the quality of HRM decision making to HRM professionals, and allows us to systematically study this decision making, is done by implementing it in the serious game InLine. In chapter five we will elaborate upon the serious game InLine. We detail how it uses the simulation model presented here, elaborate upon the outcomes of playing InLine with HRM professionals and how those outcomes lead to more specific configurational HRM questions.

References

References can be found on page 139.

Chapter 5

InLine: a serious game for strategic HRM

You can discover more about a person in an hour of play than in a year of conversation

— Plato

After its creation, we set out to use the simulation model. We did so by implementing the simulation model in a serious game entitled InLine. In this chapter we elaborate upon our choice to use a serious game for the application of the simulation model. Subsequently we present the serious game created, its functionalities, actual application, outcomes and potential for both research and practice.

This chapter is based on a conference paper entitled: "InLine: a serious game for configurational human resource management" presented at the European conference for game-based learning (Collou & Bruinsma, 2017). In addition, the serious game InLine was used for the professional development workshop "the use of serious games in HRM Research, Teaching, and Practice" at the annual academy of management conference 2019.

Introduction

We aspire to make HRM alignment decisions explicit and explore how HRM professionals select HRM-practices to achieve a given strategy. After creating the simulation model and performing trail runs (chapter four), we need HRM professionals to use the simulation model. Only if HRM professionals use the simulation model will it enable us to see emerging HRM configurations as built by HRM professionals themselves and assess the functionalities of the simulation model. We presented the simulation model to HRM professionals using the serious game InLine. In this chapter, the design, application and results of InLine are presented. First, as a reminder, we briefly recap the challenges inherent to the construction of firm specific HRM that were discussed in detail in chapter two and three. Secondly, we link these challenges to the opportunities that a serious game provides. Finally, we present the game and exemplify the HRM research and practice implications of InLine using a sample of the outcomes we generated during play sessions. The goal of this chapter is to present InLine (its specifications and characteristics), to demonstrate its use, and present the first outcomes of using InLine.

Adhering to a need for firm specific HRM, configurational theory was assumed to postulate that HRM should deviate from its ideal-type exactly proportional to the extent to which the organizations' strategy deviates from the ideal-type strategy (Delery & Doty, 1996). In addition, the individual HRM-practices ought to be consistent to live up to that assumption (Delery & Doty, 1996; Saridakis et al, 2017). An HRM configuration increases the desired employee behavior if vertical alignment is achieved, it does so consistently if horizontal alignment is achieved (see chapter two). However, designing a firm specific HRM configuration is complex; there is interdependence between the HRM configuration and the organizational strategy, organizational strategies and HRM configurations are hybrid systems taking in elements from different ideal types, the number of HRM-practice design options is large, and these HRM-practices affect employee behavior in a non-linear fashion. HRM professionals are challenged to reason strategically, but we argue that configurational theory has not provided them with enough specifics to aid their decision making (see chapter two). The game InLine (which includes the simulation model) fills this void and enables exploration of configurational HRM.

Games can be employed for gaining perspective on complex circumstances (Duke, 1974); a serious game enables us to create an abstract representation of the reality of HRM design. The use of a serious game has several advantages. Using it, we can make HRM professionals aware of the importance of alignment, confront them with the large number of options they have to select from, challenge them to design a multiyear HRM configuration, and provide them with the results of their decisions. Furthermore, a serious game provides a way to present the simulation model and its outcomes to professionals without triggering the need for elaborating upon all the specifics and innerworkings of the simulation model. A serious game furthermore allows to add game mechanics like competition that increase the motivation of professionals to engage with the simulation model. In addition, a serious game provides the opportunity to challenge HRM professionals to make HRM decisions explicit in a playful but systematic way. Motivating HRM professionals to use a systematic approach, and providing insight in the outcomes of their decisions potentially increases the quality of their HRM decision making. Also, we can improve both the simulation model and serious game by playing the game; experiences with and feedback on both the game and the simulation model collected during play sessions can be used to improve both. Finally, studying the decisions of HRM professionals in their search for optimal HRM can be a valuable endeavor to specify configurational HRM. However, doing so is challenging as these decisions are rarely explicated. A serious game enables us to study and analyze configurational HRM by making explicit the decisions made by HRM professionals. Hence, by implementing the simulation model (see chapter four) in the serious game InLine (Collou & Bruinsma, 2017) we have created an applicable game-based research tool; by playing the game with respondents we can conduct research on configurational HRM.

InLine game design

InLine was designed to include the use of the simulation model presented in chapter four. Hence, we used the competing values model, the ideal and hybrid type strategies, the corresponding ideal and hybrid type HRM configurations, the individual HRM-practices and their scores, and how changes in alignment occur according to the simulation model. For detailed elaboration of these items we refer back to chapters three and four.

We strive to make the decisions of HRM professionals explicit on a detailed HRM-practice level, and present to them the outcomes of their decisions. By doing so we can aid HRM decision making; we can make HRM professionals aware of the importance of alignment and confront them with the complexity of firm specific HRM design which potentially enables them to make better decisions in practice. Hence, we created InLine in such a way that it makes explicit those choices HRM professionals make when designing firm specific HRM.

To safeguard that the challenge of firm specific HRM is sufficiently mirrored we designed InLine to exhibit similarity between the training situation (InLine) and the operational situation at hand (HRM configuration design), defined as functional fidelity (Hays & Singer, 1989). Specifically, we focus on the functional characteristics of firm specific HRM design. InLine aims to be a valid presentation of the reality of firm specific HRM design by presenting to the players the fundamental choices, configurational reasoning and resulting complexity. As such, InLine enables the players to experience the outcomes of their actions in terms of HRM alignment which enables them to make inferences about the operational situation in reality (Peters, Vissers, & Heijne, 1998). We created the sequential steps that a group of players goes through (flow of the game) in a way that forces them to be explicit and considerate of their HRM decisions. InLine consists of a game board, game cards, game forms, and the simulation model. All serve the goal of making explicit the principle of alignment and how this alignment is affected by HRM decisions. The simulation model, which is a pivotal part of InLine, was presented in chapter four and will be briefly discussed here only in terms of its application for InLine. Now, to elaborate upon how and why the game was created, we presented the specifics of InLine: the flow of the game and the game design.

InLine game design: flow of the game

When playing InLine, players go through several steps. These steps were designed to cater to our research goal: specifying configurational HRM and making explicit the choices of HRM professionals. During this research we hosted 30 InLine play sessions. While InLine can be played as a stand-alone game, we hosted and supervised these 30 sessions so we could emphasize our intentions, reflect upon the design and flow of the game, collect data, and experience the outcomes and process of the players playing InLine. The sequential steps of InLine are presented in figure 16.

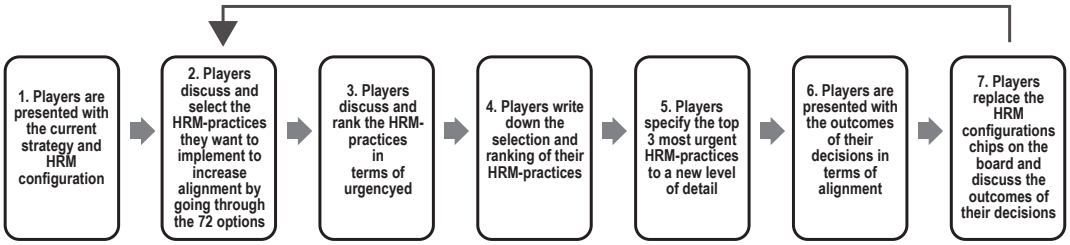


Figure 16. Sequential steps of InLine

At the start of an InLine play session, players are introduced to the organization for which they will design an HRM configuration.

In step 1, we present the players with the current organizations' strategy and HRM configuration scores in terms of the competing values model using chips and a game board. The scores can be either fictional or based on the filled-out surveys, which were created in this research (see chapter three).

In step 2, players are challenged to go through all 72 HRM-practice design options using HRM-practice cards. These cards represent the 72 HRM-practices defined in the ideal type HRM configuration presented in chapter three. Each individual HRM-practice (card) has scores on the four strategies that represent the extent to which that specific HRM-practice aligns to the four strategies. These scores are based on the solidified practical knowledge of HRM professionals (see chapter four). During this second step, the players discuss which HRM-practice design options will increase alignment and select those in a configuration of HRM-practices. By enabling HRM professionals to discuss their options, we stimulate HRM professionals to explicitly reason and argue in favor or against specific HRM-practice design decisions. These facilitated discussions are a pivotal part of the design of the game: InLine triggers discussion concerning HRM alignment, and it forces the HRM professionals to be detailed and specific as the decisions that these players will have to make are at a detailed level. In addition, while a holistic perspective on HRM suggests the need to have at least one HRM-practice out of every cluster -every HRM-practice ought to contribute to the system at large- we do not constrain the HRM professionals in their decision making. This enables us to gauge if HRM professionals do indeed select HRM-practices out of every category.

In step 3, the players rank the selected HRM-practices in terms of urgency. Again, through discussing the content of the HRM-practices players are challenged to come up with a ranking.

In step 4, the players write down their ranked selection using the HRM-practices selection form.

In step 5, players specify the top 3 most urgent HRM-practices out of their selected HRM configuration using an HRM manual form. This is, once again, done through discussion and sharing expertise and knowledge on how these HRM-practices can be designed.

In step 6, players are presented with the outcomes of their decisions using the annual report.

In step 7, players relocate the chips on the game board and discuss the outcomes provided to them via the HRM annual report. After step 7, one round (year) of InLine is done. Based on the outcomes, players get the opportunity to reselect HRM-practices out of the 72 HRM-practices cards to be implemented in year 2. Depending on the time allocated for a play session we go through 1, 2 or 3 rounds (years).

These sequential steps were created to make explicit the decisions HRM professionals make and motivate them to discuss their considerations. With that same goal in mind we created the game board, game cards, and game forms.

InLine game design: game board, game cards and game forms

The goal of creating the game board was to make explicit HRM decisions and outcomes in terms of the alignment between the strategy and the HRM configuration given the competing values model. Hence, the InLine game board created is a physical, graphical representation of the competing values model. By graphically displaying the competing values model, players are explicitly reminded of the framework of reference for alignment used in the game. All the HRM decisions that the players make ought to be considerate of alignment between the organizational strategy and the HRM configuration in terms of the competing values model. During this research three board game design iterations have taken place. Each one was created with the goal of making (alignment in terms of) the competing values model (more) explicit for the players. The final version is presented in figure 17 and 18.

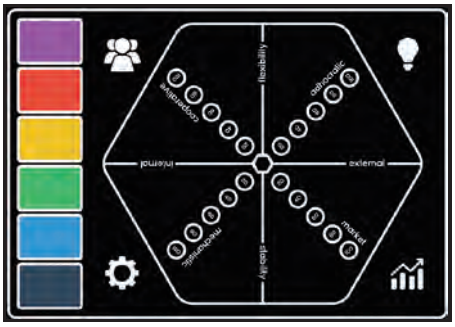


Figure 17. Board version three

Figure 18. Board version three

The game board presents the four ideal type strategies (cooperative, adhocratic, market, mechanistic) including the actual competing values (flexibility versus stability, internal focus versus external focus). The chips used to illustrate the strategy and HRM configuration scores have specific locations assigned to them on the board allowing the players to (re)locate the chips based on their decision outcomes and alignment scores. In addition, the HRM-practice cards -72 in total representing the HRM-practice design options- are laid out on the board based on their category (job design, recruitment, selection, performance appraisal, rewards, and training and development) stimulating the interaction between these cards (HRM-practices design options) and the game board (competing values model). We placed the game board at the center of a group of players playing InLine. Placing it at the center reminds players of the competing

value framework and it provides a location for the chips and game cards. To illustrate that the board does indeed provide a central place for players playing InLine figure 19 presents the final version used during the academy of management conference 2019 in Boston.

Figure 19. Groups playing InLine with the board game (version 3) at their center

In addition to the game board we have created HRM-practice cards. These HRM-practice cards represent the 72 HRM-practice design options that players can choose from when designing an HRM configuration. The number and the content of the cards reflect the number of options presented in the ideal type HRM configurations (chapter three). The level of detail of these HRM-practice cards is important; we strive to specify HRM-practices to a level of detail at which HRM professionals select and design HRM-practices in their day to day business. We therefore did not stop specifying HRM-practices at the category level. HRM professionals need more precise information. We made the HRM-practices more specific, defining them at a focus level. For example: jobs in this organization are designed to ensure that employees are part of project teams. We have a very precise measure of the extent to which these HRM-practice (cards) relate to the four organizational strategies. As explained in detail in chapter four, 178 HRM professionals scored these HRM-practices on the extent to which they align with the four respective strategies. These scores are used in the simulation model and hence, during InLine. By making a large number of physical cards that players need to go through we aim to emphasize the challenge at hand and increase the awareness of HRM professionals in making HRM-practice design choices. Similar to the game board, the game cards created for InLine have been through three design versions. A sample of the latest version is presented in figure 20.

Figure 20. Subset of playing card related to performance appraisal

By creating physical cards, we force players to distribute HRM-practices, rank them and trade them during discussions within their team. To illustrate how these HRM-practice cards change hands and are used, figure 21 presents the use of these cards during play sessions InLine.

Figure 21. HRM-practice cards used during play sessions

In addition to the game board and game cards, three game annotation forms are created: an (1) HRM-practice selection form, an (2) HRM manual form and an (3) HRM annual report. Using the HRM-practice selection form (1) and the HRM manual form (2), players have to explicitly note down, communicate, and specify their decisions. These two annotation forms force the players to be explicit about their choices. The HRM annual report provides the players with the results of their selection of HRM-practices in terms of alignment.

In the HRM-practice selection form, players note down which HRM-practices they want to implement in the year at hand (see figure 22). Remember, players are presented with the current HRM configuration score and the desired organizational strategy. Based on both, players will select a set of HRM-practices that they think will alter the current HRM configuration to be aligned to the strategy. This selection of HRM-practices is noted down in the HRM-practice selection form. After making that selection, they add a ranking of the selected HRM-practices based on their urgency. If, for example a specific job design practice is the most urgent practice to be implemented, they note that down in the HRM-practice selection form. By asking groups (InLine is played in teams of 3-6) to prioritize the HRM-practices we challenge them to add a component of (explicit) urgency given the organizational strategy. See figure 22 in which a group of players selected 7 HRM-practices (4, 31, 55, 59, 65, 66, 67) including their priority (4 being the most urgent, 67 the least urgent).

Year 1

List the HR practices you selected in order of urgency. If you, for example, selected card number 10 as the most urgent practice, place a 1 behind number 10. List all the practices

Number on the card	**Urgency**	*Number on the card*	**Urgency**	*Number on the card*	**Urgency**	*Number on the card*	**Urgency**
Card 1		Card 22		Card 43		Card 64	
Card 2		Card 23		Card 44		Card 65	5
Card 3		Card 24		Card 45		Card 66	6
Card 4	1	Card 25		Card 46		Card 67	7
Card 5		Card 26		Card 47		Card 68	
Card 6		Card 27		Card 48		Card 69	
Card 7		Card 28		Card 49		Card 70	
Card 8		Card 29		Card 50		Card 71	
Card 9		Card 30		Card 51		Card 72	
Card 10		Card 31	2	Card 52		Card 73	
Card 11		Card 32		Card 53			
Card 12		Card 33		Card 54			
Card 13		Card 34		Card 55	3		
Card 14		Card 35		Card 56			
Card 15		Card 36		Card 57			
Card 16		Card 37		Card 58			
Card 17		Card 38		Card 59	4		
Card 18		Card 39		Card 60			
Card 19		Card 40		Card 61			
Card 20		Card 41		Card 62			
Card 21		Card 42		Card 63			

Figure 22. HRM-practice selection form

In addition to this HRM-practice selection form, we created an HRM manual form in which we ask the group of players to specify the top three most urgent HRM-practices. Again, in doing so we ask HRM professionals to make explicit the decisions made. Here, we also adhere to our goal to specify configurational HRM as we gain information on how the HRM-practices get

specified. See figure 23 in which a group specified the HRM-practice “new employees are hired due to their versatility”.

Year 1

Elaborate upon the first three HR-intervention that you selected, how will you design them? What will you do?

HR-practice (nr. 1 urgency):	New employees are hired due to their versatility.
Description	We will hire employees based on a wide variety of competencies, in addition we will include current employees in the selection procedure, and assess the extent to which potential hires can transfer their current knowledge

Figure 23. HRM manual example

The goal of creating these first two game annotation forms was to make explicit the decisions HRM professionals make when designing a firm specific HRM configuration. Figure 24 illustrates of the use of the HRM manual during a play session of InLine.

Figure 24. HRM manual example during play sessions

The third HRM form created is the HRM annual report. The simulation modelCpresented in chapter four calculates how the current HRM configuration changes based on the decisions of the HRM professionals playing InLine. The results are presented to the players using the HRM annual report. This printed annual report provides HRM professionals with insight on the (theoretical) quality of their decisions in terms of their effect on vertical

and horizontal alignment. In doing so it provides input on the quality of the decisions made by players and enables them to reconsider their decisions for the next round (year). See figure 25 for an annual report example.

Jaarverslag

Groep: 1
Jaar: 1

SAXION InLine

Beste HR afdeling,

Bedankt voor jullie inspanningen het afgelopen jaar. Naar aanleiding van ons jaarlijkse onderzoek naar de huidige strategie treffen jullie bij deze de resultaten. Welke aanpassingen aan het beleid kunnen jullie or adviseren?

Mvg, de directie

	Coöperatief	Adhocratisch	Marktgericht	Mechanistisch	
Doel	40	40	10	10	
Begin jaar 1	10	10	50	30	
Eind jaar 1	11,1	15,1	45,5	28,2	
Eind-Begin	1,11	5,15	-4,5	-1,8	
Doel - Eind	28,9	24,9	-36	-18	Score: 46
Beleid	34,8	32,8	18,3	14,2	
Spreiding	13,4	10,8	7,55	4,8	

Gekozen praktijken
2 5 9 14

Figure 25. HRM manual example during play session (Dutch)

The annual report provides players with a reminder of the goal (doel), the starting scores (begin jaar 1), the outcomes of their decisions (eind jaar 1), the changes between the starting scores and the current scores of the HRM configuration (Eind-Begin), and the difference between the goal and the current scores of the HRM configuration (Doel-Eind). This enables players to see how their decisions affected the starting HRM configuration score in relation to its goal (strategy). In addition, it provides the average HRM configuration scores for all four strategies (Beleid) and the standard deviation of these scores (Spreiding). Furthermore, two graphs display the start and current score of the HRM configuration (left graph) and the current score and goal (right graph). Finally, the selected HRM-practices are presented at the bottom of the annual report (gekozen praktijken), and a (vertical alignment) score is presented (score) illustrating the extent to which vertical alignment is achieved. This score is the vertical HRM alignment score (see chapter four) normalized to a 0-100 scale where 0 equals low alignment and 100 equals perfects alignment. We normalized the vertical alignment score to ensure an intuitive interpretation and usability, 0 being low, 100 being high. This

normalization was done by dividing the original horizontal score by 2 (scale from 0-200, see chapter four) and recoding it so a high score implies high HRM alignment. The level of detail and amount of information provided in this annual report enables HRM professionals to reflect on their decisions (which HRM-practices) given a certain goal (strategy). In providing this information we adhere to our goal of making the outcomes of HRM-practice decisions explicit.

Using the simulation model during the game InLine

At step 5 during an InLine play session, players are presented with the outcomes of their HRM-practice decisions in terms of alignment. The vertical alignment is assessed by calculating the differences between the strategy score and the HRM configuration score. The horizontal alignment is calculated using the standard deviation of the scores of the individual HRM-practices that make up the HRM configuration.

The organizational strategy is provided manually based on a fictional company or filled-out survey(s). The HRM configuration is provided manually based on a fictional company or filled out surveys, but only for the start of round 1. After that, the HRM configuration score is calculated by the simulation model: it takes the starting HRM configuration scores and calculates how those scores change according to the HRM-practice decision made by the players of InLine (see chapter four). Subsequently, the output of the simulation model is presented using the HRM annual report.

To clarify how the vertical and horizontal alignment is assessed during InLine using the simulation model, an example is given here. In this example, the (fictional) organizational strategy is made up by an eighty percent focus on the cooperative strategy; a twenty percent focus on the adhocratic strategy and no focus on the mechanistic and market strategy. The (fictional) HRM configuration is made up by a 25 percent focus on all four strategies. These scores are presented to the player at the start of the play session using the game board and chips. See table 18 for these scores.

Table 18. Example organizations' strategy and HRM configuration scores at the beginning of year 1

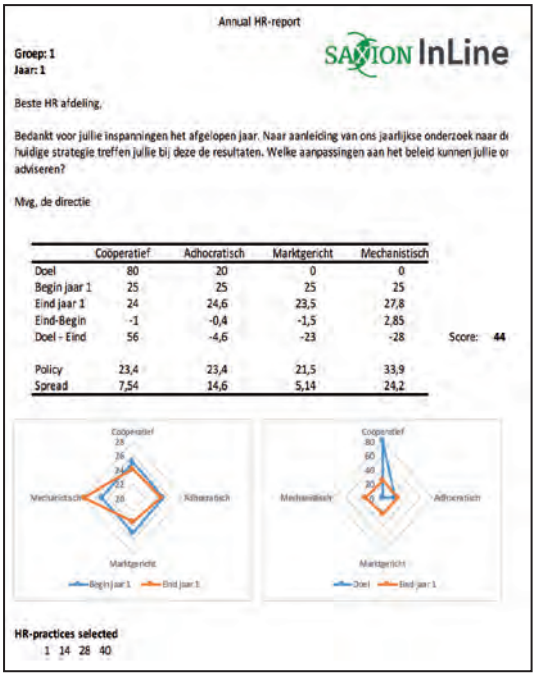
	Cooperative	Adhocratic	Market	Mechanistic
Strategic focus	80	20	0	0
HRM configuration focus	25	25	25	25

During step 2, players select HRM-practices using the game cards. The selection of HRM-practices selected by the group of players is used as input for the simulation model. The HRM professionals could, for example, select the HRM-practices illustrated in table 19. Remember, these are NOT selected by individuals, this selection is the outcome of extensive discussions and arguments among the HRM professionals playing the game. Also, the scores assigned to these HRM-practices are based on the solidified knowledge of HRM professionals.

Table 19. Example HRM-practice selection

Design option	Cooperative	Adhocratic	Market	Mechanistic
The most important characteristic of job design is that employees are able to determine their own pace of work.	33	32	24	13
The recruitment of new employees is focused on the extent to which the potential hires are the experts that the organization needs.	24	40	26	13
Employees' performance is assessed based on work pace.	15	11	22	53
New employees are hired due their ability to work efficiently.	20	11	14	56

Based on this selection, the simulation model calculates how the current HRM configuration score changes and assesses vertical and horizontal alignment. This is presented to the players using the HRM annual report, see figure 26



Annual HR-report

Groep: 1
Jaar: 1

SAXION InLine

Beste HR afdeling,

Bedankt voor jullie inspanningen het afgelopen jaar. Naar aanleiding van ons jaarlijkse onderzoek naar d
huidige strategie treffen jullie bij deze de resultaten. Welke aanpassingen aan het beleid kunnen jullie o
adviseren?

Mvg, de directie

	Coöperatief	Adhocratisch	Marktgericht	Mechanistisch	
Doel	80	20	0	0	
Begin jaar 1	25	25	25	25	
Eind jaar 1	24	24,6	23,5	27,8	
Eind-Begin	-1	-0,4	-1,5	2,85	
Doel - Eind	56	-4,6	-23	-28	Score: 44
Policy	23,4	23,4	21,5	33,9	
Spread	7,54	14,6	5,14	24,2	

HR-practices selected
1 14 28 40

Figure 26. HRM manual example during play session (Dutch).

In this chapter so far, we have briefly reflected upon the challenge to design a firm specific HRM configuration and how a serious game provides us with the opportunity to make explicit the alignment principle. Furthermore, we have presented our game InLine and elaborated upon how we created InLine to function as a tool to make explicit the principle of alignment. We conclude this chapter by presenting the application of InLine during 30 play sessions, the results, and a discussion of the implications of using InLine for HRM decision aid and specifying configurational HRM.

Application of InLine: a serious game for configurational HRM

During this research, and between 2015 and 2018, a total of 30 InLine play session have taken place (N=423) in collaboration with professional network organizations and companies. 96 groups of 3 to 6 players per group were formed during these sessions. Out of these 96 groups, 20 groups consisted of HRM bachelor students for whom sessions were hosted during their educational program. As our aim was to use the solidified practical knowledge of HRM professionals, we do not include those students only groups here. Some HRM students are included in other groups but only if those students joined their internship supervisor to one of the InLine sessions. The 76 remaining groups played for one (14 groups, 18%) two (12 groups, 14%) or three rounds (50 groups, 66%), representing years. 8 groups played a version of InLine in which they were challenged to design an HRM configuration for a cooperative strategy (11%). 6 groups were challenged to design an HRM configuration for an adhocratic strategy (8%). 8 groups were challenged to design an HRM configuration for a market strategy (11%). 8 groups were challenged to design an HRM configuration for a mechanistic strategy (11%). All remaining groups (46 groups, 59%) were challenged to design an HRM configuration for a hybrid strategy. During all these play sessions we were present and acted as the game facilitators. We introduced the game, answered questions, observed players, and controlled the flow of the game using the steps elaborated upon earlier in this chapter.

Based on our experiences creating and applying InLine we postulate that using the simulation model and serious game is a promising endeavor for research and practice. Creating the simulation model and InLine forced us to be specific about the underlying notions of configurational HRM, contributing to our aspiration to specify the configurational mode of theorizing. Applying the simulation model and InLine provides multiple advantages for both research and practice. First, by applying the simulation model, we can generate specific outcomes enabling us to explore configurational HRM and provide input for future research (for more detail on how, see chapter four). Secondly, applying InLine enables us to systematically address and study the HRM configuration decisions made by HRM professionals. Thirdly, by using InLine we can provide insights to the HRM professionals considering the quality of their decision making. Furthermore, applying the game-based research tool enables us to improve it: based on the experiences of HRM professionals playing InLine we can improve the simulation model and the serious game.

We will now reflect upon the above-mentioned potential of the simulation model and serious game using the experiences and outcomes of the play sessions hosted. We first reflect upon the player experience during the play sessions: what are the experiences of HRM professionals playing the game and do those experiences enable us to improve the simulation model and game? And, does the game provide HRM professionals with valuable feedback on their decision making? Second, we elaborate and present the ability of InLine to capture the decisions HRM professionals make when designing an HRM configuration given a particular organizational strategy. In addition, we present how we can explore and specify configurational HRM by using the HRM decision outcomes collected during the play sessions.

Player experiences

During the 30 play sessions HRM professional emphasized that InLine is a fun and entertaining method to address HRM alignment. The interactivity, competition amongst the groups and the facilitated teamwork were commonly mentioned as valuable aspects of the game. The overall experience of playing InLine was labeled as positive by the HRM professionals in our sample. Several more specific player experiences have been noted.

First, HRM professionals stated that by playing InLine they were reminded that alignment is an important factor to consider when designing (a configuration of) HRM-practices. InLine challenges HRM professionals to make explicit decisions based on the alignment premises and with an unprecedented level of detail; HRM professionals enjoyed and valued this challenge. Second, HRM professionals stated that they were challenged by the number of HRM-practice cards presented to them during play sessions. While they recognized that in reality even more HRM-practice options present themselves, selecting a configuration out of the number of HRM-practices presented during InLine was perceived to be challenging but fun. Thirdly, HRM professionals noted that InLine stimulates them to systematically group HRM-practices together when selecting an HRM configuration that aligns to the organizational strategy. Furthermore, HRM professionals assessed that InLine facilitates a conscious and explicit process when deciding on which HRM-practices to select and how to design them given an organizational strategy. Making these decision explicit helped HRM professionals to reconsider their HRM-practice selection in relation to the organizational strategy. In addition, HRM professionals stated that the HRM-practice options are defined at a level of detail that was close to their day to day

practice, especially when we asked them to specify the HRM-practices. Also, the game facilitated content discussions amongst HRM professionals which were fruitful on the one hand while uncommon in their day to day practice on the other hand.

Based on these observations we assess InLine to be a fun and valuable method to address HRM-alignment. By reminding HRM professionals of the importance of alignment, and facilitating conscious and systematic multiyear HRM decisions, InLine can be a valuable tool. However, do these game sessions enable us to improve the simulation model and game? We conclude that they do. During these sessions HRM professionals suggested that we add HRM-practices. While no single HRM-practice category was mentioned throughout all the sessions, examples of categories that were mentioned are leadership and organizational structure. Based on these suggestions we could include additional (categories of) practices in future versions of the simulation model and game. Furthermore, no critique was articulated on the outcomes of their HRM-practice decisions. The outcomes provided by the simulation model and presented to the HRM professionals during InLine play sessions were assessed to be plausible. During the play sessions we presented the outcomes of the simulation model but no specific feedback or critique was articulated. On the contrary, HRM professionals valued the outcomes; it enables them to reflect upon and reconsider their selection of HRM-practices.

HRM professionals valued the insight gained from the simulation model outcomes, they made their HRM decisions explicit, tailored HRM configurations to a specific organizational strategy, and enjoyed playing InLine. The simulation model and serious game are valuable for practice as it reminds HRM professionals of the importance of alignment, it enables them to experiment with HRM decisions and provides insight in the quality of those decisions. In addition to this value for practice, the simulation model and serious game are valuable for research as they enable us to log and study the decisions made by HRM professionals. We now exemplify the HRM decisions that we have captured during these play sessions after which we will elaborate upon how capturing these decisions enables us to specify configurational HRM using the simulation model and InLine as a method.

Logging HRM decision making: example outcomes

Using InLine, we can log the HRM-practices selected by HRM professionals. This enables us to, for example, explore emerging HRM configurations created given a specific strategy, or assess which specific HRM-practices are selected most often. In turn, these outcomes enable us to formulate and address more detailed configurational HRM questions. Before elaborating upon the formulation of specific questions we exemplify the outcomes generated by using InLine: the logging of HRM decision making and resulting HRM configurations.

During the play sessions we challenged 76 groups of HRM professionals to design an HRM configuration given a specific strategy and for a specific year. A total of 189 HRM configurations were designed by the HRM professionals during the InLine play sessions. To exemplify the HRM configurations we logged, table 20 presents the HRM configurations of team two who were challenged to create an HRM configuration that aligns to the cooperative organizational strategy.

Table 20. HRM configurations selected for the cooperative strategy (team 2)

HRM configuration year 1	**HRM configuration year 2**
1. The most important characteristic of job design is that employees need to cover other employees' work.	1. Employee development is focused on performing different roles within a team.
2. The most important characteristic of job design is that employees need to do a variety of different tasks.	2. Employees are rewarded based on their collaboration with others.
3. Employee development is focused on improving colleague collaboration.	3. Employees' performance is assessed based on their collaboration with others.
4. Employee development is focused on performing different roles within a team.	
5. Employee development is focused on increasing professional knowledge.	
6. Employee development is focused on increasing quality, regardless of the pace.	

Team two selected six HRM-practices in their HRM configuration for year one. Two out of these six HRM-practices are job design practices (1 and 2), the other four are employee development practices. According to this team, the cooperative strategy can be achieved by implementing these HRM-practices. In year two however, changes were made. Now, the HRM configuration consist of three HRM-practices; one employee development practice, one reward practice and one appraisal practice.

The HRM configurations created by team two, for the cooperative strategy, differs from the HRM configurations created by team three that was challenged to create an HRM configurations that aligns to the market strategy. In table 21, we present the HRM configurations created by team three.

Table 21. HRM configurations selection for a market strategy (team 3)

HRM configuration year 1	HRM configuration year 2	HRM configuration year 3
1. Employee development is focused on increasing employees' ability to continue to perform assigned tasks.	1. Employees are rewarded based on their production output.	1. Employees' performance is assessed based on the extent to which they achieve targets.
2. The recruitment of new employees is focused on the extent to which potential hires have commercial skills.	2. Employees are rewarded based on the extent to which targets are achieved.	2. The most important characteristic of job design is that employees need to acquire their own assignments.
3. New employees are hired due to their commercial skills.	3.Employee development is focused on increasing individual employee results.	3. Employees are rewarded based on their commercial skills.

Team three selected an HRM configuration consisting out of three HRM-practices every year. An employee development, reward and selection HRM-practice make up the HRM configuration of year one while the HRM configuration of year two is made up by two employee reward and one employee development practice. The last HRM configuration (year three) is made up by an appraisal, job design and reward practice.

Both team two and three selected an HRM-practice out of the job design category in at least one of their HRM configurations. However, as we have specified these HRM-practices on a focus level, we do see clear differences;

job design based on covering for other employees' work aligns to the cooperative strategy while job design based on employees acquiring their own assignments aligns to the market strategy, according to these two teams.

The HRM configurations in table 20 and 21 exemplify the HRM configurations logged using InLine. We have logged a total of 189 HRM configurations made up by a total of 1490 HRM-practices. Logging these HRM configurations enables us to explore configurational HRM with a new level of detail, which is a topic we turn to next.

Exploring configurational HRM using InLine

We defined HRM-practices at a detailed level and grouped them in ideal type HRM configurations (chapter three). We assessed the extent to which these detailed HRM-practices align with the four organizational strategies (see chapter four). Subsequently, we created a simulation model using these ideal type HRM configurations (chapter four). In addition, we implemented the simulation model in the serious game InLine (chapter five) which enables us to explore emerging HRM configurations. These emerging HRM configurations facilitate us to formulate and address precise configurational HRM questions. To exemplify this, we now present several outcomes of the serious game and discuss how these outcomes result in specific insights and questions for future research. We first present general outcomes and how these can lead to more specific questions. Secondly, we present the outcomes given a specific organizational strategy and how those enable us to formulate precise HRM questions. Finally, we present outcomes related to the relationship between the selection of specific HRM-practices and how those outcomes help us define specific HRM questions.

The 189 HRM configurations logged during the play sessions were made up out of a total of 1490 HRM-practices. On average, an HRM configuration consisted of 8 HRM-practices. One specific topic that can be addressed based on these overall findings is this average number of HRM-practices that make up an HRM configuration: is 8 the optimal number of HRM-practices that make up an HRM configuration and why? Does this optimal number depend on the organizational strategy and why? And, does this optimal number change over time and why? We can partially address these questions using our outcomes; the number of HRM-practices included in an HRM configuration declined as the rounds progressed. The HRM configurations in the first year (i.e. round) were made up out of 9 HRM-practices on average,

in the second year the average number of HRM-practices included was 7 and in the third year the average number of HRM-practices was 6. These outcomes trigger future research questions: Why do HRM professionals select a declining number of HRM-practices? does the observed decline from 9 to 6 suggest that as the years progressed, HRM professionals become more selective? There is no consensus on the content of HRM systems (Boon et al., 2019). Similarly, there is no consensus on the number of HRM-practices that make up such a system (configuration). The outcomes of our play sessions enable us to ask more informed questions. InLine provides a method with which both the number and content of HRM configurations can be addressed. Using (the outcomes) of InLine we can formulate (these) specific questions.

In terms of the content of the HRM configurations, InLine enables us to assess which HRM-practices were selected most often by HRM professionals. In our sample, 305 (20%) out of the 1490 HRM-practices selected are in the training and development category. The HRM-practice categories reward and performance appraisal are the second most commonly selected HRM-practice categories with both 17% of the selected HRM-practices falling in one of those two categories. These findings enable us to specify questions related to the role of these categories in HRM configurations: do the training and development, reward, and performance appraisal HRM-practices categories need to be present in every configuration for an optimal effect, and if so why? Is training and development a particular strong category to affect employee behavior? What are the antecedents of selecting and combining HRM-practice categories?

More specifically, the HRM-practice selected most often was the training and development practice "employee development is focused on performing different roles within a team" (selected 93 times), followed up by the performance appraisal HRM-practice "employees' performance is assessed based on innovativeness" (selected 52 times) and the reward practice "employees are rewarded based on their innovativeness" (selected 52 times). Again, these outcomes enable to assess specific HRM questions:

Why is the HRM-practice "employee development is focused on performing different roles within a team "selected most often? Does this HRM-practice category align with multiple strategies or do HRM professionals perceive this to be a particular strong HRM-practice to affect employee behavior? Training and development could also be a temporary

relevant practice as the labor market limits the ability of employers to hire. What are the considerations of HRM professionals when selecting these HRM configurations? The outcomes of InLine enable us to define and address these and potentially more specific HRM questions.

The simulation model and InLine generate these types of outcomes providing input for the formulation of specific (configurational) HRM questions. However, we set out to explore HRM configurations given a specific organizational strategy; alignment is key. To exemplify the ability of InLine to capture the HRM-practice choices given a specific organizational strategy, and how these outcomes can result in specific HRM questions for future research, we now present and discuss the results gained from logging the HRM configurations given the cooperative and the market organizational strategy.

The cooperative strategy is characterized by a strategic focus on flexibility and discretion combined with an internal focus and integration. Using InLine we challenged HRM professionals to design an HRM configuration to achieve the cooperative strategy. A total of 18 HRM configurations were created by 8 teams (6 teams played for 2 round which equals 12 HRM configurations, 2 teams played for 3 rounds which equals 6 HRM configurations). A total of 145 HRM-practices were combined. The HRM-practice category training and development was most dominant, all 18 HRM configurations included at least one HRM-practice out of this category. 17 HRM configurations included at least one HRM-practice out of the category reward, and similarly, 17 HRM configurations included at least one HRM-practice out of the category performance appraisal. These specific cooperative HRM outcomes provide input for research questions: Is the training and development category the strongest category to achieve the cooperative strategy? Is the reward HRM-practices category a necessity for the cooperative strategy? Noteworthy, 9 HRM configurations did not include at least one HRM-practice from each category. Given the systemic notion of configurational theory applied to HRM this is remarkable; all elements (HRM-practice categories) of an HRM configuration are expected to be present as they ought to contribute to the system at large. The HRM-practice categories job design and selection were omitted most often (5 HRM configurations did not include an HRM-practice out of one of these categories). Again, specific questions can be formulated: do the 6 HRM-practice categories used here indeed reflect a holistic HRM configuration? The outcomes generated using InLine enable the formulation

of these type of specific configurational HRM research questions and contribute to our goal to specify configurational HRM.

For the cooperative strategy, the most often selected HRM-practice was performance appraisal: "employees' performance is assessed based on their collaboration with others" (selected 16 times) followed up by the reward HRM-practice "employees are rewarded based on their collaboration with others" and the training and development HRM-practice "employee development is focused on improving colleague collaboration" (both selected 15 times). The specific outcomes provide input for research questions similar to the HRM-practice category but at a more detailed HRM-practice level. These outcomes described above reflect the choices given a cooperative strategy. Since we played multiple sessions, we can assess the differences in the choices of HRM professionals given different strategies. What decisions do HRM professionals make given the market strategy, for example?

The market strategy is characterized by a strategic focus on stability and discretion combined with an external focus. Being the theoretical opposite of the cooperative strategy, we would expect HRM professionals to select different HRM-practices when challenged to design an HRM configuration for the market strategy. But which ones and in which year? A total of 24 HRM configurations were created by 8 teams (all teams played 3 rounds). For the market strategy, a total of 200 HRM-practices were combined. Contrary to the cooperative strategy, now, the HRM-practice category reward was most dominant with 20 out of the 24 HRM configurations including at least one HRM-practice out of this category. Two HRM-practices are selected most often. Both the job design HRM-practice: "the most important characteristic of job design is that employees need to acquire their own assignments" and the training and development HRM-practice: "employee development is focused on increasing employees' ability to continue to perform assigned tasks" were selected 13 times. Similar to the cooperative HRM configurations outcomes, we can now address specific questions. In addition, we can now add comparing questions as well: why is the HRM-practice category reward selected most often in the market strategy and not in the cooperative strategy? The outcomes generated using InLine enable the formulation of these type of research questions.

As one would expect, different HRM configurations emerge when we challenge HRM professionals to design HRM configurations given different organizational strategies. However, performance appraisal was, for example, an often selected HRM-practice category considering all strategies which could indicate that performance appraisal is regarded to be a particularly effective method to steer employee behavior (regardless of the specific behavior needed), according to the HRM professionals playing the game. The specific focus of performance appraisal does of course vary depending on the strategic context. This variation underlines the need to define HRM-practices at a focus level and explore how strategy dictates differences in HRM-practice selection and design according to the perception of HRM professionals.
For our final example of how the outcomes of InLine provide input for new research questions, we turn to the question how HRM professionals combined individual HRM-practices.

To assess the extent to which specific HRM-practices are commonly selected in conjunction with each other, we inferred correlation coefficients between the selected HRM-practices over the multiple years given the four ideal type HRM configurations. To do so, we scored the selection of a specific HRM-practice by a group of HRM professionals in a given year with a '1' in our dataset while no selection of a specific HRM-practice in a given year was labeled with '0'. Using these scores, we inferred the correlation between the selection of specific HRM-practices over multiple years. We challenged 30 teams to design an HRM configuration for a cooperative, adhocratic, market or mechanistic strategy. Here, we inferred which HRM-practices are selected together using this sample data. 24 teams played three rounds while 6 teams played two rounds.

We found, for example, that the HRM-practice "the most important characteristic of job design is that employees need to comply with the assigned tasks" and the HRM-practice: "the most important characteristic of job design is that employees have to do routine work" are often combined in an HRM configuration in the first year (r=,915 n=30, p=<,000). Another noteworthy example is the finding that the selection of the HRM-practice: "the most important characteristic of job design is that employees need to do a variety of different tasks" in year 1 is significantly associated with selection of the HRM-practice: "new employees are hired due to the fact that they are the experts that the company needs" in year 3 (r=1, n=24, p=<0,000). This suggests that in this sample, if HRM professionals selected the first

HRM-practice in year 1, they selected the second HRM-practice in year 3. This association between the selection of these two practices for year 1 and 2 was lower and not significant (r=0,356, n=30, p=0,053). Furthermore, we found that teams that selected the HRM-practice "the recruitment of new employees is focused on the versatility of potential hires" selected that same HRM-practice again in year 2 (r=1, n=30, p<,000). This level of detail enables research to, for example, address the perceptions of HRM professionals in terms of potential powerful connections or deadly combinations of specific HRM-practices (Becker, Huselid, Pickus, & Spratt, 1997): why do these specific HRM-practices get selected in conjunction with each other? What are the underlying patterns of selecting a group of HRM-practices? The outcomes generated using InLine enable formulating future research questions.

Conclusion & Discussion

In this chapter, we have presented the design and outcomes of InLine, a serious game for strategic HRM. We set out to create a tool that would enable HRM professionals to interact with the simulation model, and make explicit the HRM-practice decisions made given an organizational strategy. We conclude that InLine lives up to these promises; exploring configurational HRM using InLine is a new and we conclude valuable endeavor for both research and practice. HRM professional assessed the game to be fun and valuable; it challenged them to be aware of, and systematically consider, organizational strategy when designing HRM out of a large number of options. It provided them with a fun, engaging, and (when played with multiple groups) competitive method to select, combine and create HRM-practices in an overarching HRM configuration. Furthermore, InLine provides a way for HRM professionals to interact with our simulation model without being informed on the mathematical intricacies and it facilitated content discussions between HRM professionals. InLine provides insight on the quality of their HRM-practice selection and potentially help HRM professionals internalize HRM alignment as an important factor to consider. Furthermore, the specific outcomes exemplified in this chapter illustrate the potential of using InLine as a tool to make explicit the selection HRM professionals make and study configurational HRM. One additional feature, that has not been mentioned thus far is the opportunity to use InLine to study not only what HRM-practice decisions are made, but also how these decisions are made. During this research we focused on what decisions were made. However, as stated previously, InLine facilitates content discussions amongst HRM professionals which can be recorded and systematically studied in future research adding to the opportunities InLine provides.

However, as stated in chapter four, the simulation model and serious game have not been verified empirically. The simulation model and serious game do provide specific outcomes in terms of alignment over multiple years based on the configurational mode of theorizing and the solidified knowledge of HRM professionals. These outcomes need to be validated empirically by assessing changes in alignment in practice, based on HRM-practice design decisions. Based on this validation the simulation model can be specified. Furthermore, the actual transfer of knowledge and skills from the game and the simulation model to a real-world setting can be assessed. During the workshops HRM professionals stated to be reminded of the importance of alignment and be provided with a tool to maneuver through the complexity of HRM. The extent to which the transfer of alignment knowledge from the game to actual firms specific HRM design takes place has not be verified in this research.

Configurational theory in HRM is assumed to increase the understanding of the HRM-performance link and aid HRM professionals in the complex task of designing firm specific HRM. InLine links the challenges that arise when designing firm specific HRM to the opportunities of a serious game. Both as a research tool to study configurational HRM and as a tool for learning HRM design, the results of InLine are promising. InLine provides insights in the decision making of HRM professionals designing HRM and enables players to experiment with HRM configuration design in a specific organizational setting in a fun and interactive way.

References

References can be found on page 139.

Chapter 6

Conclusion and discussion

What we know is a drop in the ocean of what we do not know
— Plato

In this research we set out to further strategic HRM by creating a simulation model and implementing that simulation model in a serious game. Four challenge that we faced to create a simulation model were presented in chapter one. In chapters two, three, four, and five, we addressed these challenged in detail. Here, we revisit and summarize the conclusions from these chapters and by doing so present the sequential steps taken to create and apply our simulation model. Subsequently, we present the overall conclusion and discussion of our research.

This chapter is based on a conference paper titled: "Digitalization of HRM: designing a simulation model for HR decision making" presented at the Dutch HRM network conference in 2019 (Collou et al., 2019a).

Introduction

In this dissertation, we set out to create a strategic HRM simulation model that enables us to explore configurational HRM with a new level of detail and aid HRM decision making. In chapter one, we presented four challenges we had to overcome in order to create and apply such a simulation model. First, to create a simulation model we needed design principles that reflect configurational HRM. Secondly, we faced the challenge of specifying those design principles for the creation of the simulation model. Thirdly, using this detailed configurational HRM input, we had to create the simulation model. Fourthly, to assess the functionality of the simulation model, we had to apply it. These four challenges were translated into four research questions that will now be answered based on the chapters in this dissertation. After these answers, an overall conclusion will be presented. This chapter ends with a discussion and future research prospects.

Main findings: answers to research questions

Chapter 2: What are the key principles of configurational HRM that need to be included in the simulation?

To create a simulation model, we need the key principles of configurational HRM. Subsequently, these key principles need to be translated to design principles that inform the design of the simulation model.

The configurational approach has been a longstanding topic of discussion amongst HRM scholars. We posit that, whatever roots we take as prevalent, its core lies in criticism of reductionism which implies that entities as a whole can be explained by the behavior of its smaller parts. The need to include the interaction between organizational elements to fully understand and explain organizational effectiveness is not new (de Leeuw, 1974); researchers have attempted to identify the nature of relationships of groups, for example, within organizations and show these as an integrated system. Configurational theory labels systems as configurations.

However, questions remain. While intuitively appealing, studying the dynamic nature of configurations of HRM-practices is a challenge, there is no consensus on what constitutes a holistic perspective, and scattered

application of configurational elements resulted in fragmented knowledge. Based on our reflections, we argue that the time is ripe to move beyond a static fit approach to HRM, bring together the accumulated knowledge on strategic HRM, and further the field using the dynamic configurational mode of theorizing. In this dissertation we pose a way forward by the creation and use of a strategic HRM simulation model. However, to create a simulation model, design principles are needed. We identify three traditions applied in HRM research that relate to configurational theory and have translated them to design principle to be used for the simulation model.

Tradition 1: Configurational HRM stresses the need for a holistic approach. This resulted in the concept of HRM alignment. Three dimensions of alignment are often discussed: First, vertical alignment concerning the alignment between HRM and the organizational strategy. Secondly, horizontal alignment meaning distinctiveness, consistency and consensus amongst the individual HRM-practices. Thirdly, implementation alignment inferring the need to safeguard that HRM is perceived by employees as intended by management.

Design principle 1: Holistic enquiry through alignment. HRM configurations need to be considered as systems. The well-known concept of alignment provides a holistic approach and therefore should be included in the simulation model.

Tradition 2: The tradition of using ideal types to assess alignment seems to be characteristic for configurational HRM. Studying patterns of HRM-practices initiates a methodological need for a frame of reference. Once defined, one can assess deviation from this reference framework empirically and study the effects of alignment on desired employee behavior.

Design principle 2: Aligned ideal types and hybrid HRM configurations. For the simulation model to infer (changes in) alignment, there is a need for a framework in terms of organizational strategy and HRM. Based on this framework, ideal types- perfectly aligned HRM configurations- need to be designed and used in the simulation model. The framework of reference should enable hybrid HRM configurations.

Tradition 3: The configurational HRM tradition postulates the concept of equifinality: the same final state (employee behavior) may be reached from different initial conditions (employee behavior) and in different ways (combined set of HRM-practices).

Design principle 3: Define equifinality at the HRM-practice focus level. We assess, based upon the scarce application and loosely defined principle of equifinality, that there are more ways to achieve the same outcome depending upon the level of reductionism that is upheld. To further configurational HRM and aid HRM decision making, we plea for the consideration of equifinality given three levels of specificity of HRM-practices: category, focus, and operational execution. On a category level, HRM-practices are defined based on their presence. On this level equifinality might occur. On a focus level, HRM-practices are defined based on their focus towards a specific employee outcome. On this level, we pose, there is no equifinality. On an operational execution level, the actual methods with which an HRM-practice focusses on specific employee behaviors are defined. On this level equifinality might occur. The HRM-practices in the simulation model need to be defined on all three levels.

These design principles provide a framework upon which we can create a simulation model. They however do not detail the specifics of that simulation model. Therefore, we set out to provide more specific HRM input in chapter three.

Chapter 3: Which ideal type- and empirical hybrid- HRM configurations can be used as a framework of reference for the simulation model?

To create an HRM simulation model, we need precise (HRM) input. Specifically, we first need ideal type HRM configurations as a frame of reference, and secondly, we need a method to assess alignment.

We defined four ideal type HRM configurations using the competing values model (Cameron & Quinn, 2006). Each ideal type HRM configuration aligns to the characteristics of one particular ideal type strategy and thus in theory steers the employee behavior towards that strategic direction.

These ideal type HRM configurations are made up by six HRM-practices present in every organization (1. Recruitment 2. Selection, 3. Job design, 4. Training and development, 5. Performance appraisal, 6. Compensation). Every ideal type HRM configuration consists of specific designs for all these six HRM-practices that reflect the organizational strategy. We have defined three design options per HRM-practice for every ideal type strategy. We did so to capture the variety in design possibilities within one HRM-practice. This results in twelve (3 options * 4 strategies) design options per HRM-practice, and eighteen distinct HRM choices per configuration (3 options * 6 practices). This, in turn, leads to a total of 72 (3 options * 6 HRM-practices * 4 strategies) HRM-practice design options.

The ideal type strategies to which these ideal type HRM configurations are tailored are theoretical constructs. In practice, organizational strategies deviate from ideal type strategies becoming 'hybrids'. Consequently, the employee behavior needed is also a combination of the employee behaviors needed in the different ideal type strategies. Hybrid HRM configurations can still be effective in steering the needed employee behavior, but on the condition that the "HRM configuration deviates from the ideal type HRM configuration exactly proportional to the extent to which the organizations' strategy deviates from the ideal-type strategy" (Delery & Doty, 1996, p.813). This implies that our framework of reference should allow hybrid HRM configurations and also assess alignment on the premises of potential hybrids.

As we set out to both explore configurational HRM and aid HRM decision making, we need to verify that the input we use for the simulation model does not contradict the actual practice of HRM. Hence, in addition to defining, we empirically explore the HRM configurations and alignment measures. The goal of this empirical exploration is to explore the ideal type HRM configurations empirically, gauge the extent to which the ideal type HRM configurations present a useable method to assess alignment, and also assess if they enable us to distinguish organizations based on their levels of HRM alignment. We have assessed the strategy, the HRM configuration and the perception of the HRM configuration by employees in SMEs using two surveys. In addition, we have created a method of analysis that enables us to infer the three dimensions of alignment (horizontal, vertical and implementation). By exploring the ideal type HRM configurations we calibrate the framework of the simulation model empirically.

Based on our empirical exploration we conclude that the ideal type HRM configurations, method of analysis and alignment measures can be used as input for the simulation model. All increase the precision with which the simulation model specifies configurational HRM and aids HRM professionals in their firm specific design challenge. In addition to providing input for the simulation model, the surveys used to explore these HRM configurations provide organizations with a tool to get a first proxy of their HRM alignment levels and specifies the directions for improvement.

Now that we have a general framework (design principles) and specific input (ideal type HRM configurations and alignment assessment) we need to assess how alignment changes over time and create our simulation model.

Chapter 4: How does HRM alignment change over time and how can we create a simulation model so that it captures these changes in HRM alignment?

The simulation model sets out to be a tool with which multiyear configurational HRM can be explored and HRM decision making can be aided. Both the dynamic nature of configurational HRM as well as the strategic multiyear aspect of designing HRM trigger the need for a multiyear perspective. For the simulation model to provide it, we need to infer how changes in alignment occur. The process of organizational change proposed by Cameron and Quinn (2006) suggests a gradual shift from one quadrant in their model to (a) neighboring quadrant(s). Organizational change is an incremental process, when changing 'sideways' as opposed to 'diagonally', the organization can retain one competing value, which enables incremental change.

To create the simulation model, one additional step needs to be taken. We need specific information concerning the extent to which the HRM-practices that make up the HRM configurations align to the four ideal type strategies. Scoring these 72 individual HRM-practices was done using the solidified practical knowledge of practitioners via a quantitative survey. We asked these HRM professionals to distribute 100 points based on the extent to which the individual HRM-practices shape the employee behavior needed in one specific strategic quadrant. In doing so we grounded the simulation model empirically.

Using the key principles of configurational HRM, the empirically grounded ideal type HRM configurations, the method of assessing HRM alignment, the rationale on how alignment changes over time, and the specified HRM-practices, we created our simulation model. In order to test the simulation model, trial runs were done. Based on these trial runs we conclude that we can assess how a selection of HRM-practices affects alignment over multiple years using the simulation model. Hence, the simulation model provides us with a tool to explore configurational HRM. Specifically, it allows us to formulate more specific configurational HRM questions. In addition, the tool allows us to aid HRM decision making as HRM professionals can now experience the effects of their HRM decisions on alignment over multiple years.

Now that we have created the simulation model and performed trail runs, we need professionals to use the simulation model. Only if HRM professionals use the simulation model will we be able to assess its functionality and see emerging HRM configurations as built by HRM professionals themselves. Hence, we set out to apply the simulation model.

Chapter 5: What are the outcomes, and theoretical and practical implications when using the simulation in a serious game?

To apply the simulation model, we implemented it in a serious game entitled InLine. Using InLine, we challenge HRM professionals to decide which HRM-practices to combine given a particular strategy, over multiple years. While the simulation model in and of itself enables us to formulate more specific configurational HRM questions, the serious game InLine adds another layer of potential research; we can see which HRM-practice decisions HRM professionals make and can formulate questions based on these findings. Furthermore, InLine has the potential to aid HRM professionals in the design of actual firm specific HRM configurations; during play sessions we challenge HRM professionals to design an HRM configuration by selecting HRM-practices out of the set of seventy-two HRM-practices. Based on their selection, the simulation model calculates the (changing) vertical and horizontal alignment scores. This enable HRM professionals to experience the effects of their HRM-practice decisions. This in turn creates the opportunity for them to reflect upon their HRM design. Additionally, we challenge HRM

professionals to specify the chosen HRM-practices during these play sessions. These specifications provide them with input for the HRM configuration for their own organization.

During this research, a total of 30 InLine play session have taken place. Based on our experiences creating and applying InLine we postulate that using the simulation model and serious game is a promising endeavor for research and practice. HRM professionals assessed the game to be valuable; it challenged them to systematically consider organizational strategy when designing HRM, provided them with a fun and engaging method to select and combine HRM-practices and facilitated content discussions between HRM professionals. Furthermore, the emerging HRM configurations illustrate the potential of using InLine as a tool to make explicit the decisions of HRM professionals and study configurational HRM.

Exploring configurational HRM & aiding HRM professionals using a simulation model and serious game

This research started from the proposition that the time is ripe to combine the accumulated HRM knowledge and further the field of strategic HRM using the configurational mode of theorizing. Aspiring to move beyond the desire to demonstrate the importance of HRM for organizational performance (Delery & Doty, 1996) we have created and applied a simulation model. We have taken the abstract and complex configurational theory -as applied to HRM- and specified it to a level of detail that allowed us to create and apply a simulation model and serious game. Now, we conclude our research by presenting the overall conclusions and discussion.

Conclusions

While HRM professionals have been striving to optimize human capital to increase organizational performance, the scholarly HRM community focused on explaining if and how HRM can affect business outcomes. Countless HRM studies start from the argument that HRM constitutes an effective method to steer employees to contribute to the performance of a firm, and HRM professionals do indeed focus on designing HRM in such a way that it motivates employees to contribute to organizational strategy. We now seem to be at a point in time where the scholarly community agrees -enough empirical evidence has been build up- on the intuitive notion that there is a relationship between HRM and business performance. Nevertheless, creating effective HRM proves to be challenging. Conceptual, theoretical and methodological challenges have limited the practical output of research that

focused on explaining how and why HRM affects employee behavior leaving HRM professionals empty handed. Unclear and ever-changing organizational strategy, indecisiveness amongst the HRM team, and poor coordination between HRM and the board of directors, are some examples of additional factors that further increase the difficulty of designing effective HRM in any firm. This dissertation is our response to the difficulties both in research and practice. We did not only, for the first time since its introduction to the HRM field in 1996, revisit configurational theory as the promising and intuitive theoretical lens trough which HRM can be studied, we made this complex and abstract mode of theorizing specific to a new level of detail that allows us to assess HRM in a new way. We used an unorthodox but well-suited method -a simulation model and serious game- that enables studying configurational HRM while at the same time aid HRM professional in their quest to design firm specific and workable HRM configurations.

A prerequisite for the creation of our simulation model and serious game InLine, was that we specified configurational HRM and thereby made HRM configurations measurable, up to the operational execution level of individual HRM-practices. This prerequisite forced us to uphold a high level of precision and explication of individual HRM-practices and their effects on human work behavior, in relation to company strategy. Now, for the first time in configurational HRM research, we have an explicit, theoretically and empirically grounded, fully operational model that can empirically asses both the inner workings and effects of configurational HRM.

Because this precise model and the corresponding serious game are now available, we have the possibility to use tools that echo the complexity of firm specific HRM design and are geared towards the logic of configurational thinking. The simulation model and serious game presented here enable testing clear predictions of configurational HRM, one by one, systematic, empirically. One can think of predictions regarding the precise HRM-practices chosen and their effects on employee behavior to support specific strategic goals: If we build our configuration according to the rules specified, employee behavior should change in one particular direction. Selecting a different configuration will have different and predictable results. This opens a new line of very precise empirical research and hypotheses testing. The tools furthermore allow for a longitudinal design, the method itself can be a combination of qualitative and quantitative research. Qualitative methods such as observations of participants and feedback

in multiple iterative cycles, allowing for discussion amongst participants resembling the Delphi method, are possible. But quantitative analyses of choices within the model are feasible as well: e.g. frequencies of practices chosen per strategic goal, rankings of practices, comparisons between HRM-practice combinations within one configuration, or even between configurations, and over time, and changes in configuration composition year by year. Detailing and matching specific practices not only within but also between the six different HRM-practices identified in this simulation, allows designing and studying aligned HRM configurations matching hybrid strategic orientations with a level of 'within practice' detail that is unprecedented in configurational HRM to date. Quantitative analyses of effect sizes are possible too when configurations are indeed designed and put into practice, a pre- and post-intervention test is feasible, to research and possibly explain variance in outcome variables, since the model predicts what changes should occur and provides the exact configuration used in the intervention.

The accuracy and level of detail of the model allows furthermore to study the actual choices that HRM professionals make when designing HRM configurations, which they do (at least implicitly) every day. The game InLine makes the choices, and the arguments of professionals, explicit. As the effect of their choices can be empirically tested, the process of improving the model and its underlying assumptions can now be systematic and evidence based. Furthermore, as the call for a more holistic view on HRM configurations continues (Hauff, 2019) and the traditional linear regression studies are complemented with studies using alternative methods, this specific simulation model adds to the methodological toolbox of the HR scholar. We hope to inspire HRM researchers to use simulation models in their enquiry. Simulations are powerful tools to explore complex open systems (Gilbert & Troitzsch, 2005) and HRM configurations possess open systemic characteristics (Collou et al., 2019).

The simulation model and serious game specify the general concept of alignment to a level at which HRM professionals can start selecting, designing and implementing HRM-practices. Since both were created using an operational execution level (what HRM-practices to use and how to execute them exactly), and because we developed a serious game based on that model that HRM professionals like to play, find valid, recognizable and innovative, we can indeed help practitioners to build well aligned HRM configurations.

HRM professionals can design different configurations and their effects on human behavior can be assessed over time. The outcomes of the simulation model presented during the serious game should help avoid serious mistakes by HRM professionals in terms of their HRM-practice selection and execution. Furthermore, players (HRM professionals) are more aware of the complexity of the task at hand; they are confronted with HRM configurations and the many options available within them. Literally thousands of combinations are possible: all 6 categories of HRM-practice presented in this study are at play and should be used in unison. Their combined effects can be tracked in several iterations through time and clear output as to which combinations resulted in which outcomes is provided by the simulation model during the game. As such, the simulation model and serious game provide HRM professionals with a method to grasp and maneuver through the complexity of firm specific HRM design. Also, as the model specifies changes in alignment over time. Strategic HRM is concerned with the design of a long-term set of HRM-practices that align with the organizational strategy, the simulation model and game provide a tool to do just that.

The game is fun to play and players can discuss their professional expertise with others in a competitive setting, which they like, value and is difficult to organize by themselves. We have observed their engagement and enthusiasm for arguably the most challenging, complex and frankly quite cumbersome task in their daily work. The level of sustained focus and attention to configuration design was quite amazing. Players learn, just by playing the game and discussing their considerations with peers, and become acutely aware of the intricacies of designing a coherent HRM system that should direct employee behavior in line with the overall strategic orientation of their organization. The game actually helps to make theoretical knowledge actionable and produces results that can be put into action. As a bonus it helps practitioners to convey and argue their actions better, which should enhance the power and relevance of their professional opinion.

Discussion

While the tools presented here provide a new and promising method to explore configurational HRM and aid HRM professionals, improvements can be made. One example is adding (HRM) variables to the model and game; during this project, HRM professionals noted for example that leadership is an important factor to consider and HRM-practices like employee involvement, provision of information, and equal opportunities are mentioned

in literature (for example see Guest, Conway, and Dewe, 2004). These, and potentially other HRM-practices are not included in the simulation model. In addition, the dynamics with which alignment changes in the simulation model can be specified and empirically grounded, and the effects of multiple organizational layers can be added. As these factors exemplify, the simulation model and serious game do not capture HRM design in its full complexity and nuance. Our goal was not that they do; on the one hand one could argue that the number of variables that needed to be included would be too large, on the other hand we argue that we do not need to reflect all the nuances to be helpful in both exploring configurational HRM and aiding HRM decisions. Given our goal we included the key features (Garris, Ahlers, & Driskell, 2002) of designing HRM configurations.

The ideal type HRM configurations presented here build on current strategic HRM knowledge. They do so by acknowledging that HRM affects organizational performance by steering employee behavior, and by including items based on prior strategic HRM research (Bowen & Ostroff, 2004; Gratton & Truss, 2003; Huselid, Jackson, & Schuler, 1997; Knol, 2013; Macduffie, 1995; Rauf, 2015). The label "ideal" refers to ideally aligned, meaning that the HRM configuration is optimally designed to motivate employees to contribute to strategic goals. This does not imply ideal in other terms, such as for example employee well-being. Strategy enhancing employee behavior increases the likelihood of organizational performance. However, while organizational performance has been shown to be congruent with employee happiness and relationship outcomes, it might negatively affect employee health (Van De Voorde, Paauwe, & Van Veldhoven, 2012). This could imply that the ideal type HRM configurations used in this dissertation decrease health related employee well-being and as a consequence one could question how 'ideal' these HRM configurations are. To capture this nuance, we have explicitly addressed what an ideal HRM configuration constitutes in this dissertation. Moving away from using the label 'ideal' could prevent the potential confusion and discussion around the concept of ideal type HRM configurations.

Furthermore, we defined ideal type employee behavior based on the ideal type strategy. Presenting those employee behaviors to be aligned to one organizational strategy could suggest a clear-cut difference between what employee behavior is needed in what firm. However, some behaviors might not only align to one specific organizational strategy solely. Entrepreneurial employee behavior which is aligned to the market strategy, for example,

is (partly) characterized by: employees make decisions that will increase the likelihood of organization goal achievement. One could argue that decisions that increase the likelihood of goal achievement are relevant to the cooperative quadrant, or all quadrants for that matter. We acknowledge this nuance; employee behavior linked to the cooperative quadrant might be beneficial for the adhocratic quadrant as well. This overlap in needed employee behavior seems especially the case for quadrants that share a competing value. The cooperative and mechanistic quadrants, for example, share an internal and integration focus. Hence, some overlap between ideal typical employee behavior is not surprising. We argue that this does not decrease the value of our model: we did not set out to define strategically aligned employee behaviors that by definition are very distinct from one another, we aspired to define that behavior that is most relevant for one strategic quadrant. Furthermore, the distinction between these ideal typical employee behaviors gets more complicated as organizations uphold hybrid strategies. Our ideal type strategies and HRM configurations serve the purpose of defining the combination of ideal typical strategies and related employee behavior.

Configurational HRM presents a mode of theorizing characterized by complexity (Delery & Doty, 1996). This complexity poses a challenge for traditional survey-based methods which triggered us to develop a simulation model. Yet, to provide input for our simulation model, we used two surveys in our empirical exploration. However, we did not set out to empirically verify the underlying assumptions of configurational HRM, or suggested relationship between HRM and performance using configurational reasoning. Earlier research tried to test the relationships between HRM and performance using configurational reasoning and the results have been mixed (Delery & Gupta, 2016; Hauff, 2019; Knol, 2013; Rauf, 2015). We set out to provide precise input for our simulation model; without an empirical exploration of the factors at hand the simulation model could have been limited in its scope of detail. This does not mean that we did not face the challenges of capturing the complexity of configurational HRM using two surveys. We did, but took on a functional approach; can we explore the ideal type HRM configurations empirically, and create a method of analysis that provide us with input for the simulation model? We conclude that we succeeded from this functional perspective. No assessment of the psychometric properties of the surveys used in this empirical exploration has taken place. Future research could focus on collecting a larger sample of data allowing that assessment. While we

acknowledge its importance for future research, here we focused on providing input for the simulation model.

Furthermore, we asked HRM professionals to use their solidified practical knowledge and select and design HRM-practices over multiple years. Their selection of HRM-practices could however be affected by a large number of factors. Do HRM professionals truly use their experiences during InLine? Or, do we assess the extent to which these HRM professionals have been trained in aligning an HRM configuration to an organizational strategy? If HRM professionals have had extensive training on the importance of aligning HRM to organizational strategy they could set aside their practical experiences and make the decisions that reflect their training. This might not matter if the training does indeed reflect practice which in turn prompts the question if it does, and consequently what it is exactly is that we are assessing using InLine; theoretical knowledge or practical experience? Furthermore, do the outcomes of the simulation model motivate HRM professionals to select those HRM-practices that theoretically make sense but contradict their practical experience? We created the simulation model using a theoretical framework and the solidified knowledge of HRM professionals but the outcomes might still incentivize HRM professionals to make specific selections. In addition, there are other potential factors we have not controlled for, one for example being culture: do HRM professionals select different HRM-practices if they have different cultural backgrounds? Furthermore, one specific application that emerged during the play sessions is the differentiation of HRM-practices for different groups of employees. When we challenged HRM professionals to select and specify HRM-practices for an organization they realized different employee groups could have different needs. One group of employees might need a specific design of an HRM-practice to contribute to the organizational goals while a different employee group would not benefit from that same HRM-practice. Hence, different HRM-practices should be applied to different groups of employees (Lepak & Snell, 2008). While not part of this research, the simulation model and serious game enable us to study a wide range of additional factors, one being the emerging differentiated HRM configurations; instead of tailoring the configuration to the organizational strategy at large we could challenge HRM professionals to design an HRM configuration for specific employee groups.

Configurational HRM is inherently dynamic, this research proved to be dynamic too. By creating an HRM simulation model and implementing it in a serious game we did not only address the field of strategic HRM but also the fields of simulation and serious gaming. We have taken a functional approach; our departure point is configurational HRM. Applying concepts/techniques from simulation modelling and serious gaming served the goal to explore configurational HRM and aid HRM decision making. This study proved to be a novel, promising, but challenging combination of research fields. Creating the simulation model based on the empirical exploration and design principles, designing a game that reflects the framework of reference, using the solidified knowledge of HRM professionals, all these steps were done during this research in an iterative manner. Being a multidisciplinary study, we aspired to write this dissertation bearing in mind the different (scientific) backgrounds of its readers; an expert in HRM or simulation or serious gaming ought to be able to read and understand this dissertation, and capture the potential of using a simulation and serious game for HRM.

Future research

The research presented in this dissertation provides a wide range of new avenues for research. Additional to priory mentioned options, the next step in the validation process of the simulation model must be to verify the outcomes of the simulation model by tracking the HRM driven change process within organizations over time. The change process defined in the simulation model, based on this empirical verification, could then be specified with even more detail. For example, the development of the effects of a combination of HRM-practices over time can be adjusted for. As the simulation model provides multi-year outcomes, a longitudinal methodology is well-suited to verify and specify the outcomes and fidelity of the simulation model. By specifying with a new level of detail the hypothesized outcomes of a combination of HRM-practices, the simulation model offers a new tool for empirical research on configurational HRM. Additionally, as the competing values model does not limit itself to HRM driven organizational change, the input of the model can be altered to represent other domain (IT, leadership, finance, etc.) initiatives that aim for organizational change.

Furthermore, the simulation model and serious games provided HRM professionals and also students with a tool to learn about the concept of alignment in a specified manner. In doing so, the simulation model and serious game opens up avenues for professional learning research. Do HRM

professionals (or students for that matter) learn about the application of HRM alignment in a more effective manner when using a game? To what extent does the knowledge gained by playing InLine transfer to the real world of designing a firm specific HRM configuration? These and additional questions can be addressed.

Motivated by the positive reactions of HRM practitioners, scholars and students we strive to continuously improve and use the simulation model in the practice and teaching of strategic HRM.

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Appendices

Appendix A - Executive director survey (chapter 3)

Appendix B - Employee survey (chapter 3)

Appendix C - HRM-practice scores (chapter 4)

Appendix A - Executive director survey

- *The questions in this survey were originally in Dutch.*
- *"the organization" was replaced by the actual company name.*

- General company questions -

The first questions will be related to the organization, your position within the organization, and general information concerning the employees of the organization.

1. in what year was the organization **founded?**

_____

2. What is the core business of the organization?

_____

3. What is the legal form of the organization?

- ❍ Private company
- ❍ General partnership
- ❍ Sole proprietorship
- ❍ Limited partnership
- ❍ Different, namely _____

4. Is the organization **a family owned company?**

- ❍ Yes
- ❍ No

5. Is there a collective labor agreement that applies to the organization?

- ❍ Yes, a collective labor agreement, namely _____
- ❍ Yes, industry regulations, namely _____
- ❍ No

6. How many employees does the organization **employ?**

_____

7. How many full-time equivalents does the organization **employ?**

_____

8. How many percent (%) of the core business employees at the organization **have the following educational level?**

_____% Lower vocational education or lower
_____ % Secondary vocational education
_____% University for applied sciences degree
_____% University degree

9. Who is responsible for human resource management?

❍ Director/owner
❍ HR-professional
❍ Different, namely _____

10. Who is responsible for executing human resource policies and practices?

❍ Director/owner
❍ HR-professional
❍ Different, namely _____

11. Are there any line managers within the organization?

❍ Yes
❍ No

- Strategy questions -

Please distribute 100 points amongst the four statements. Assign the most points to those statement that are most relevant for Organization X The sum of the points of the four statements should be 100.

12. Dominant characteristics		
A	**This organization** is a very personal place. People seem to share a lot of themselves.	
B	**This organization** is a very dynamic and entrepreneurial place. People are willing to take risks.	
C	**This organization** is very result oriented. A major concern is getting the job done.	
D	**This organization** is a very controlled and structured place. Formal procedures govern what people do.	
Total score		100

13. Organizational leadership		
A	The leadership in **the organization** is considered to exemplify mentoring, facilitating, and/or nurturing.	
B	The leadership in **the organization** is considered to exemplify entrepreneurship, innovation and/or risk taking.	
C	The leadership in **the organization** is considered to exemplify a no nonsense, aggressive, results-oriented focus.	
D	The leadership in **the organization** is considered to exemplify coordinating, organizing, and/or smooth-running efficiency.	
Total score		100

14. Management style		
A	The management style in **the organization** is characterized by teamwork, consensus, and participation.	
B	The management style in **the organization** is characterized by individual risk taking, innovation, freedom, and uniqueness.	
C	The management style in **the organization** is characterized by hard-driving competitiveness, high demands, and achievement.	
D	The management style in **the organization** is characterized by security of employment, conformity, predictability, and stability in relationships.	
Total score		100

15. Organizational glue		
A	The glue that holds **the organization** together is loyalty and mutual trust. Commitment to **this organization** runs high.	
B	The glue that holds **the organization** together is commitment to innovation and development. There is an emphasis on being on the cutting edge.	
C	The glue that holds **the organization** together is the emphasis on achievement and goal accomplishment.	
D	The glue that holds **the organization** together is formal rules and policies. Maintaining a smoot-running organization is important.	
Total score		100

16. Strategic emphasis		
A	**The organization** emphasizes human development. High trust, openness, and participation persist.	
B	**The organization** emphasized acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.	
C	**The organization** emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.	
D	**The organization** emphasizes permanence and stability. Efficiency, control, and smooth operations are important.	
Total score		100

17. Criteria of success		
A	**The organization** defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people.	
B	**The organization** defines success on the basis of having the most unique or newest products. It is a product leader and innovator.	
C	**The organization** defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key.	
D	**The organization** defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical.	
Total score		100

- HRM questions -

18. What are the most important characteristics for the jobs at the organization?

Place the number 1 at the reason that you consider to be the most important. Place the number 2 at the reason that you consider a little less important. Finally, place the number 3 at the reason that you consider important but less important than those with the number 1 or 2. Do not place any numbers at any of the other reasons (!).

The most important characteristics for the jobs at the organization are:
__Pace of work determined by employees themselves
__Employees cover other employees' work
__Quality enhancement over speed
__Complex problem solving
__Employees are part of (multiple) project teams
__Employees create unique products/service for customers
__Employees work on individual basis
__Employees acquire own assignments
__Employees determine their own way to get the job done
__Compliance with assigned tasks
__Clear instructions
__Routine work

19. What are the most important reasons to hire new employees at the organization?

Place the number 1 at the reason that you consider to be the most important. Place the number 2 at the reason that you consider a little less important. Finally, place the number 3 at the reason that you consider important but less important than those with the number 1 or 2. Do not place any numbers at any of the other reasons (!).

Employees are hired because they:
__Are accurate
__Are versatile
__Have craftsmanship
__Have specific expertise
__Are able to solve complex problems
__Are able to come up with new solutions to complex problems
__Are Able to attract new customers
__Are Result oriented
__Have Commercial drive
__Are Efficient
__Are Able to quickly start at the job
__Are able to quickly start producing

20. Which three statements are most closely related to the personnel development opportunities at the organization?

Place the number 1 at the statement that you consider to be the most closely related. Place the number 2 at the reason that you consider a little less closely related. Finally, place the number 3 at the statement that you consider related but less related than those with the number 1 or 2. Do not place any numbers at the other statements (!).

Personnel development at this organization is mainly targeted towards:
__Increasing job specific knowledge
__Increasing collaboration amongst colleagues
__Quality enhancement
__Deepening expertise
__Learning how to operate in project teams
__Finding new solutions
__Getting better at things employees are already good at
__Increasing personal results
__Increasing commercial skills
__Increasing job execution speed
__Increasing efficiency
__Sustainable job execution

21. Your performance assessment of employees is based on which of the following criteria?

Place the number 1 at the criteria that you consider to be the most important. Place the number 2 at the criteria that you consider a little less important. Finally, place the number 3 at the criteria that you consider important but less important than those with the number 1 or 2. Do not place any numbers at the other criteria (!).

I assess the performance of my employees based on:

__Accuracy
__Collaboration
__Craftsmanship
__Ability to innovate
__Specific capacities
__Contribution to (multiple) project teams
__Commercial skills
__Personal targets
__Autonomy
__Speed in job execution
__Productivity
__Getting the job done on time

22. The reward/compensation for employees within the organization is based on which of the following criteria?

Place the number 1 at the criteria that you consider to be the most important. Place the number 2 at the criteria that you consider a little less important. Finally, place the number 3 at the criteria that you consider important but less important than those with the number 1 or 2. Do not place any numbers at the other criteria (!).

I reward/compensate the employees based on:

__Accuracy
__Collaboration
__Craftsmanship
__Ability to innovate
__Specific capacities
__Contribution to (multiple) project teams
__Commercial skills
__Personal targets
__Autonomy
__Speed in job execution
__Productivity
__Getting the job done on time

Appendix B - Employee survey

- *The questions in this survey were originally in Dutch.*
- *"the organization" was replaced by the actual company name.*

- General employee questions -

1. **How long have you been working at** the organization **(in years)?**

_____

2. **What is your function/job?**

_____

3. **In what team/department do you work?**

_____

4. **What is your employment status?**
- Internship
- Contract via third parties (employment agency for example)
- Temporary contract
- Indefinite contract

5. **What is your highest level of completed education?**
- No education
- Lower vocational education
- Secondary vocational education
- University for applied sciences degree
- University degree

- HRM questions -

6. What are the most important characteristics or your job?

Place the number 1 at the characteristic that you consider to be the most important. Place the number 2 at the characteristic that you consider a little less important. Finally, place the number 3 at the characteristic that you consider important but less important than those with the number 1 or 2. Do not place any numbers at the other characteristic (!).

The most important characteristics of my job in the organization are:

__Pace of work determined by myself
__I cover other employees' work
__Quality enhancement over speed
__Complex problem solving
__I am part of (multiple) project teams
__I create unique products/service for customers
__I work on individual basis
__I acquire own assignments
__I determine my own way to get the job done
__Compliance with assigned tasks
__Clear instructions
__Routine work

7. What were the most important reasons for hiring you at the organization?

Place the number 1 at the reason that you consider to be the most important. Place the number 2 at the reason that you consider a little less important. Finally, place the number 3 at the reason that you consider important but less important than those with the number 1 or 2. Do not place any numbers at the other reason (!).

I was hired due to:

__My accuracy
__My versatility
__My craftsmanship
__My Specific expertise
__My ability to solve complex problems
__My ability to come up with new solutions to complex problems
__My ability to attract new customers
__My result orientation
__My commercial drive
__My efficiency
__My ability to quickly start at the job
__My ability to quickly start producing

8. Which three statements are most closely related to your employee development opportunities at the organization?

Place the number 1 at the statement that you consider to be the most closely related. Place the number 2 at the reason that you consider a little less closely related. Finally, place the number 3 at the statement that you consider related but less related than those with the number 1 or 2. Do not place any numbers at the other statements (!).

My personnel development at this organization is mainly targeted towards:

__Increasing job specific knowledge
__Increasing collaboration amongst colleagues
__Quality enhancement
__Deepening expertise
__Learning how to operate in project teams
__Finding new solutions
__Getting better at thing employees are already good at
__Increasing personal results
__Increasing commercial skills
__Increasing job execution speed
__Increasing efficiency
__Sustainably job execution

9. The assessment of your performance is based on which of the following criteria?

Place the number 1 at the criteria that you consider to be the most important. Place the number 2 at the criteria that you consider a little less important. Finally, place the number 3 at the criteria that you consider important but less important than those with the number 1 or 2. Do not place any numbers at the other criteria (!).

My performance is based on:
__Accuracy
__Collaboration
__Craftsmanship
__Ability to innovate
__Specific capacities
__Contribution to (multiple) project teams
__Commercial skills
__Personal targets
__Autonomy
__Speed in job execution
__Productivity
__Getting the job done on time

19. Your reward/compensation within the organization is based on which of the following criteria?

Place the number 1 at the criteria that you consider to be the most important. Place the number 2 at the criteria that you consider a little less important. Finally, place the number 3 at the criteria that you consider important but less important than those with the number 1 or 2. Do not place any numbers at the other criteria (!).

My reward/compensation is based on:
__Accuracy
__Collaboration
__Craftsmanship
__Ability to innovate
__Specific capacities
__Contribution to (multiple) project teams
__Commercial skills
__Personal targets
__Autonomy
__Speed in job execution
__Productivity
__Getting the job done on time

Appendix C - HRM-practice scores

Number	HRM-practice	Clan	Adhocracy	Market	Hierarchy	N
1	The most important characteristic of job design is that employees are able to determine their own pace of work.	33	32	24	13	*52*
2	The most important characteristic of job design is that employees need to solve complex problems.	24	44	24	11	*52*
3	The most important characteristic of job design is that employees work individually.	17	35	31	19	*52*
4	The most important characteristic of job design is that employees need to comply with the assigned tasks.	15	7	13	68	*49*
5	The most important characteristic of job design is that employees need to cover other employees' work.	53	19	9	20	*49*
6	The most important characteristic of job design is that employees are part of project team(s).	34	36	17	16	*49*
7	The most important characteristic of job design is that employees need to acquire their own assignments.	11	21	62	9	*48*

Number	HRM-practice	Clan	Adhocracy	Market	Hierarchy	N
8	The most important characteristic of job design is that employees have to do clearly arranged work.	18	7	8	69	*49*
9	The most important characteristic of job design is that employees need to do a variety of different tasks.	39	31	18	15	*53*
10	The most important characteristic of job design is that employees create unique products/services for customers.	27	31	33	11	*53*
11	The most important characteristic of job design is that employees determine their own way of getting the tasks done.	31	40	23	8	*53*
12	The most important characteristic of job design is that employees have to do routine work.	16	10	12	65	*53*
13	The recruitment of new employees is focused on accuracy of potential hires.	23	11	16	52	*50*
14	The recruitment of new employees is focused on the extent to which the potential hires are the experts that the organization needs.	24	40	26	13	*49*

Number	HRM-practice	Clan	Adhocracy	Market	Hierarchy	N
15	The recruitment of new employees is focused on the extent to which potential hires are able to attract new customers.	15	19	61	7	*50*
16	The recruitment of new employees is focused on the extent to which potential hires work efficiently.	23	13	15	51	*50*
17	The recruitment of new employees is focused on the versatility of potential hires.	36	32	22	11	*52*
18	The recruitment of new employees is focused on the extent to which potential hires are able to solve complex problems.	23	48	23	8	*52*
19	The recruitment of new employees is focused on the extent to which potential hires are results orientated.	19	21	43	19	*52*
20	The recruitment of new employees is focused on the time it takes for the potential hires to start working, the sooner the better.	17	22	27	36	*52*
21	The recruitment of new employees is focused on the extent to which the potential hires can deliver craftmanship.	41	22	19	20	*52*

Number	HRM-practice	Clan	Adhocracy	Market	Hierarchy	N
22	The recruitment of new employees is focused on the extent to which the potential hires can come up with innovative solutions.	17	55	23	7	*52*
23	The recruitment of new employees is focused on the extent to which potential hires have commercial skills.	13	21	60	8	*52*
24	The recruitment of new employees is focused on the extent to which new hires can be onboarded and start working quickly.	24	12	16	51	*51*
25	Employees' performance is assessed based on accuracy.	25	7	9	61	*52*
26	Employees' performance is assessed based on innovativeness.	12	62	22	5	*52*
27	Employees' performance is assessed based on commercial skills.	15	19	62	7	*52*
28	Employees' performance is assessed based on work pace.	15	11	22	53	*52*
29	Employees' performance is assessed based on craftmanship.	36	26	18	22	*51*
30	Employees' performance is assessed based on the extent to which they perform roles in one or multiple project teams.	38	35	16	14	*51*

Number	HRM-practice	Clan	Adhocracy	Market	Hierarchy	N
31	Employees' performance is assessed based on the extent to which they achieve targets.	18	16	47	21	*51*
32	Employees' performance is assessed based on their production output.	17	14	28	43	*51*
33	Employees' performance is assessed based on their collaboration with others.	50	22	15	14	*51*
34	Employees' performance is assessed based on their specific knowledge and capacities.	22	35	27	18	*51*
35	Employees' performance is assessed based on their ability to work independently.	18	34	34	16	*51*
36	Employees' performance is assessed based on performing assigned task timely.	20	9	19	54	*51*
37	New employees are hired due to their accuracy.	21	13	11	57	*49*
38	New employees are hired due to the fact that they are the experts that the company needs.	22	44	21	15	*49*
39	New employees are hired due to their ability to attract new customers.	15	13	66	8	*49*
40	New employees are hired due their ability to work efficiently.	20	11	14	56	*49*
41	New employees are hired due to their versatility.	46	25	19	12	*48*

Number	HRM-practice	Clan	Adhocracy	Market	Hierarchy	N
42	New employees are hired due to their ability to solve complex problems.	20	54	19	8	*48*
43	New employees are hired due the fact that they are results oriented.	22	18	44	18	*48*
44	New employees are hired due to the fact that they can start working soon.	23	25	24	30	*48*
45	New employees are hired due to their ability to deliver craftmanship.	36	23	15	28	*49*
46	New employees are hired due to their ability to come up with innovative solutions.	16	58	21	6	*49*
47	New employees are hired due to their commercial skills.	13	19	63	6	*49*
48	New employees are hired due to the fact that they can be onboarded quickly.	22	15	16	49	*49*
49	Employees are rewarded based on their accuracy.	28	10	10	53	*50*
50	Employees are rewarded based on their innovativeness.	15	60	21	5	*50*
51	Employees are rewarded based on their commercial skills.	12	18	65	8	*50*
52	Employees are rewarded based on their work pace.	17	9	24	52	*50*
53	Employees are rewarded based on their craftmanship.	31	27	19	25	*47*

Number	HRM-practice	Clan	Adhocracy	Market	Hierarchy	N
54	Employees are rewarded based on the extent to which they perform in one ofr multiple project teams.	38	35	17	12	*47*
55	Employees are rewarded based on the extent to which targets are achieved.	11	18	55	18	*47*
56	Employees are rewarded based on their production output.	12	7	27	57	*47*
57	Employees are rewarded based on their collaboration with others.	56	22	12	12	*49*
58	Employees are rewarded based on their specific knowledge and capacities.	22	38	20	22	*49*
59	Employees are rewarded based on their ability to work independently.	19	33	35	15	*49*
60	Employees are rewarded based on the extent to which they perform assigned tasks timely.	22	12	14	54	*49*
61	Employee development is focused on increasing professional knowledge.	34	37	12	17	*36*
62	Employee development is focused on deepening expertise.	24	51	15	12	*36*
63	Employee development is focused on increasing those skills employees already possess.	28	33	14	26	*36*

Number	HRM-practice	Clan	Adhocracy	Market	Hierarchy	N
64	Employee development is focused on increasing pace of work.	15	17	20	49	*36*
65	Employee development is focused on improving colleague collaboration.	56	24	8	13	*38*
66	Employee development is focused on performing different roles within a team.	46	28	13	14	*38*
67	Employee development is focused on increasing individual employee results.	15	29	42	15	*38*
68	Employee development is focused on increasing employee efficiency.	18	13	18	53	*38*
69	Employee development is focused on increasing quality, regardless of the pace.	37	30	19	16	*36*
70	Employee development is focused on increasing commercial skills.	16	18	60	8	*36*
71	Employee development is focused on increasing employees' ability to continue to perform assigned tasks.	21	7	11	63	*36*
72	Employee development is focused on increasing employees' ability to come up with innovative solutions.	11	63	23	49	*36*

Summary

The research goal of this dissertation is to make configurational HRM usable for science and practice by developing a simulation model and serious game. These tools offer HRM professionals the opportunity to design a multiyear HRM configuration that shapes employee behaviour, while enabling HRM research to get access to a level of detail that was not achieved earlier, contributing to the current state of the art knowledge on strategic HRM.

To shape employee behavior in such a way that it contributes to overarching organizational goals, organizations often deploy a set of human resource management (HRM) practices. If the set of individual HRM-practices is designed correctly, they amplify each other in shaping the desired behavior. However, while there is wide agreement on the importance of combining HRM-practices in a configuration that reflects the organizational strategy, we notice a lack of consensus on which HRM-practices need to be combined given a specific strategic goal and organizational starting point. Furthermore, we did not find an agreement on how to design HRM configurations that shape the desired employee behavior within organizations in multiple years. As a result, HRM professionals that design HRM configurations are left empty handed.

While the configurational approach has the potential to provide new insight on how HRM shapes employees' behavior, applying the configurational mode of theorizing to HRM remains challenging. We explain this challenge by the level of theoretical and practical detail that is needed, by the application of the holistic principle when studying HRM configurations, and due to methodological issues. Traditional methods do not align to the dynamic assumptions and the large number of variables included in configurational HRM.

In this dissertation we pose that the time is ripe to unlock the deserved value of configurational HRM for theory and practice. We do so by specifying the underlying assumptions and dynamic implications of the configurational mode of theorizing in HRM, and by defining and adding the needed level of detail. In the current research, configurational HRM is made applicable with the use of a simulation model and serious game.

Five sequential steps are taken to make configurational HRM applicable. Firstly, key principles of configurational HRM are identified. Secondly, to ground the simulation we look at the manifestation of ideal type HRM configurations in theory and practice. Thirdly, we collect the solidified practical knowledge of HRM professionals on the alignment of HRM-practices. Fourthly, an initial simulation model is created and tested. And finally, we solidified the simulation model for practice and research by implementing it in a serious game for HRM professionals.

Taking these five steps, we have specified configurational HRM to an unprecedented level of detail that allows us to address its complexity empirically and theoretically. We claim that with the results of this research we have opened the scientific and empirical "black box" of configurational HRM. Furthermore, the simulation model and serious game provides HRM professionals with a tool to design firm specific HRM configurations in an interactive and fun way. While prior studies did already acknowledge the importance of alignment when designing HRM, the simulation model and serious game specify the general concept of alignment to a level at which HRM professionals and researchers can start selecting, designing, implementing and researching HRM configurations. The tools provide HRM professionals with a method to grasp, maneuver through the complexity of, and explore the implementation of multi-year firm specific HRM.

Samenvatting

Het doel van deze studie is om de configurationele benadering van HRM toepasbaar te maken middels een simulatiemodel en serious game. Met deze tools kunnen professionals een bedrijfsspecifieke HRM configuratie ontwerpen die specifiek medewerkersgedrag stimuleert, en kan HRM onderzoek vormgegeven worden op een nieuw niveau van detail dat bijdraagt aan de huidige state of the art kennis betreffende strategisch HRM.

Bedrijven ontwerpen en implementeren HRM beleid om medewerkersgedrag te stimuleren dat bijdraagt aan het behalen van organisatiedoelstellingen. Mits goed ontworpen leidt dat tot een set van individuele HRM-praktijken die elkaar versterken in hun effect op medewerkersgedrag. Er is consensus over het belang van het combineren van HRM-praktijken tot een 'configuratie' die de organisatiestrategie weerspiegelt. Het is echter onduidelijk welke HRM-praktijken gecombineerd moeten worden gegeven een specifieke strategie. Ook is er geen eenduidigheid betreffende de inrichting van een meerjarige HRM configuratie die het gewenste medewerkersgedrag realiseert. Als gevolg is het voor HRM professionals onduidelijk hoe ze een HRM configuratie moeten ontwerpen.

De configurationele benadering van HRM kan inzicht bieden in hoe HRM het gedrag van medewerkers stimuleert, op een manier die aansluit bij de dynamische HRM werkelijkheid ervaren door professionals en onderzoekers. Echter is de daadwerkelijke toepassing van configurationeel HRM uitdagend. Deze uitdaging komt volgens ons voort uit de voorwaarde om HRM holistisch te bestuderen. Een holistische benadering blijkt complex: het benodigde detailleringsniveau is hoog en traditionele onderzoeksmethoden sluiten niet aan bij de dynamische aard en het grote aantal variabelen veronderstelt door configurationeel HRM. In deze dissertatie stellen wij dat de tijd rijp is om de meerwaarde van configurationeel HRM voor zowel de praktijk als het onderzoek te ontgrendelen. Dit doen wij door de onderliggende aannames en dynamische implicaties van de configurationele benadering van HRM expliciet te maken, en vervolgens een nieuw niveau van detail te definiëren en toe te voegen. Op basis van dit niveau van detail hebben wij vervolgens een simulatiemodel en serious game gemaakt en gebruikt tijdens dit onderzoek.

Er zijn vijf opeenvolgende stappen gezet om de configurationele benadering van HRM toepasbaar te maken. Allereest zijn de fundamentele principes van configurationeel HRM geïdentificeerd. Vervolgens, om

het simulatiemodel zowel theoretisch als empirisch te ijken hebben wij ideaaltypische HRM configuraties gedefinieerd en geëxploreerd binnen MKB-bedrijven. In stap drie hebben wij de gestolde praktijk kennis van HRM professionals betreffende de effecten van HRM-praktijken op medewerkersgedrag opgehaald. In stap vier hebben wij de eerste versie van het simulatiemodel gemaakt op basis van de uitkomsten van stap twee en drie, en vervolgens getest. En tot slot, in stap vijf, hebben wij het simulatiemodel geïmplementeerd in een serious game voor (HRM) professionals.

Door middel van deze vijf stappen hebben wij de abstracte en complexe configurationele benadering van HRM expliciet gemaakt op een ongekend niveau van detail. Dit hebben wij gedaan door gebruik te maken van onorthodoxe maar goed passende tools: een simulatiemodel en serious game. Met het simulatiemodel kunnen wij, voor het eerst, de theoretische en praktische implicaties van de configurationele benadering van HRM adresseren. Ook bieden het simulatiemodel en de serious game HRM professionals een tool om een organisatie specifieke, meerjarige HRM configuratie te ontwerpen op een interactieve en leuke manier. Daar waar eerdere studies het belang van het uitlijnen van HRM op de organisatiestrategie erkennen, specifiëren het simulatiemodel en de serious game het concept van uitlijning tot een niveau van detail waarop HRM professionals en onderzoekers daadwerkelijk HRM-praktijken selecteren, ontwerpen en onderzoeken.

Author contribution

The content of the manuscripts included in this dissertation were agreed upon by all co-authors. All co-authors agreed upon including these manuscripts, in this dissertation.

Chapter	Author Contribution
1: Introduction	Luuk Collou outlined and wrote the introduction chapter. Based on several feedback iterations including Prof. dr. Tanya Bondarouk, dr. Maarten van Riemsdijk and dr. Guido Bruinsma, the final version was made up by Luuk Collou.
2: Configurational HRM: design principles for a simulation model	Luuk Collou outlined, initiated and drafted the second chapter. The paper included in this chapter was written by Luuk Collou (lead author), prof. dr. Tanya Bondarouk (second author), and dr. Guido Bruinsma (third author), Luuk led the writing process and altered the paper manuscript based on feedback from the co-authors. The chapter was written by Luuk based on the paper and included feedback from Prof. dr. Tanya Bondarouk, dr. Maarten van Riemsdijk and dr. Guido Bruinsma.
3: Configurational HRM in practice: input for the simulation model	Luuk Collou outlined, initiated and drafted the third chapter. Luuk sampled respondents, engaged with the organizations, and analyzed the data. The paper included in this chapter was written by Luuk Collou (lead author), dr. Maarten van Riemsdijk (second author), and dr. Guido Bruinsma (third author), Luuk led the writing process and altered the paper manuscript based on feedback from the co-authors. The chapter was written by Luuk based on this paper and included feedback from Prof. dr. Tanya Bondarouk, dr. Maarten van Riemsdijk and dr. Guido Bruinsma.
4. A Strategic HRM alignment simulation model	Luuk Collou outlined, initiated and drafted the fourth chapter. Luuk sampled respondents, engaged with the organizations, and analyzed the data. The papers included in this chapter were written by Luuk Collou (lead author), dr. Maarten van Riemsdijk (second/third author), and dr. Guido Bruinsma (second/third author), Luuk led the writing process and altered the papers manuscripts based on feedback from the co-authors. The chapter was written by Luuk based on these papers and included feedback from Prof. dr. Tanya Bondarouk, dr. Maarten van Riemsdijk and dr. Guido Bruinsma.

Chapter	Author Contribution
5. InLine: a serious game for strategic HRM	Luuk Collou outlined, initiated and drafted the fifth chapter. Luuk sampled respondents, engaged with the organizations, and analyzed the data. The paper included in this chapter was written by Luuk Collou (lead author) and dr. Guido Bruinsma (second), Luuk led the writing process and altered the paper manuscript based on feedback from the co-author. The chapter was written by Luuk based on this paper and included feedback from Prof. dr. Tanya Bondarouk, dr. Maarten van Riemsdijk and dr. Guido Bruinsma.
6. Conclusion and discussion	Luuk Collou outlined, initiated and drafted chapter six. The paper included in this chapter was written by Luuk Collou (lead author), dr. Guido Bruinsma (second author), and dr. Maarten van Riemsdijk (third author). Luuk led the writing process and altered the paper manuscript based on feedback from the co-author. The chapter was written by Luuk based on this paper and included feedback from Prof. dr. Tanya Bondarouk, dr. Maarten van Riemsdijk and dr. Guido Bruinsma.

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I agree with the final versions of the manuscripts that I co-authored and that are included in this dissertation. I also support the inclusion of these manuscripts in the PhD dissertation of Luuk Collou.

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1 STRATEGIC HRM PLAYER UP

To shape employee behavior so that it contributes to overarching goals, organizations deploy a set of human resource management (HRM) practices. If the set of individual HRM-practices is designed correctly, they amplify each other in shaping the desired behavior. However, while there is wide agreement on the importance of combining HRM-practices in a configuration that reflects the organizational strategy, there is no consensus on which HRM-practices need to be combined in a multiyear HRM configuration given a specific strategic goal. The configurational approach has the potential to aid HRM professionals and scholars. However, applying the configurational mode of theorizing to HRM is challenging; the level of detail needed is large, studying HRM configurations holistically is a challenge, and methodological issues arise. In this dissertation we pose that the time is ripe to build upon prior strategic HRM research by adding a layer of detail to configurational HRM and unlock its true value for theory and practice. Hence, in this research we have specified the abstract and complex configurational mode of theorizing to an unprecedented level of detail by creating and applying a simulation model and serious game. Using the simulation model and serious game we can now open the scientific and empirical "black box" of configurational HRM. Furthermore, the simulation model and serious game provide HRM professionals with a tool to design firm specific HRM configurations. While prior studies did already acknowledge the importance of alignment when designing HRM, the simulation model (and serious game InLine) specifies the general concept of alignment to a level at which HRM professionals and researchers can start selecting, designing, implementing and researching HRM configurations. The tools provide HRM professionals with a method to grasp, maneuver through the complexity of, and explore the implementation of multi-year firm specific HRM.

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