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## 18. The intersection between information technology and human resource management from a cross-national perspective: towards a research model

*Huub J.M. Ruël and Tanya Bondarouk*

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### INTRODUCTION

The intersection between information technology (IT) and human resource management (HRM) has resulted in a stream of research starting in the 1990s. Research on this intersection, in this chapter referred to as electronic HRM (e-HRM), has addressed questions regarding the implementation of e-HRM, the adoption of e-HRM, and the outcomes of e-HRM use. Organisations all around the world have invested in e-HRM in one way or another, be it in the use of online recruitment practices or e-recruitment, the automation of HRM administrative processes, or the implementation of a competence management-based package as a way to link HRM policies and practices with strategic goals. Annual surveys conducted by international consultancy firms (e.g., CedarCrestone's annual surveys) have shown a growth in e-HRM adoption and use year after year since the 1990s. e-HRM as a research field, as Strohmeier (2007) puts it, is relatively new and intriguing and is an innovative, lasting, and substantial development in HRM resulting in new phenomena and major changes. Scholars have worked hard to understand the phenomenon of e-HRM and its multilevel implications within and across organisations. One sign of this are the five special issues on e-HRM in international academic journals between 2004 and 2010 (*Human Resource Management*, 2004, 2008; *Journal of Managerial Psychology*, 2009; *International Journal of Human Resource Management*, 2009; *International Journal of Technology and Human Interaction*, 2010). This field has been changing so fast that, since 2011, five further special issues appeared in international journals (*German Journal of Research in Human Resource Management*, 2012; *Human Resource Management Review*, 2013; *Journal of Strategic Information Systems*, 2013; *European Journal of International Management*, 2013; and *Employee Relations*, 2014).

However, the field faces a number of major challenges, as Bondarouk (2014) highlights. The current state of the e-HRM field is characterised by its predominantly non-theoretical character and positivistic research philosophy; a broad range of different qualitative and quantitative approaches; lack of specification of levels of analysis; and patchiness of the topics covered. Strohmeier (2007) brings up an additional characteristic of the current state of the field, namely a lack of international comparative studies. This characteristic is the main stimulus for this chapter: e-HRM research needs 'to go international' in order to contribute to a full and comprehensive understanding of the phenomenon.

The goal of this chapter is to develop a model for comparative e-HRM research in an international context. In order to do so, we review the existing literature on e-HRM with the intention of presenting a picture of what exactly is known about e-HRM in different national contexts. The conclusions drawn from this review are linked to the convergence/

divergence debate in international management and business studies. From there we will start to construct a model that can help to describe, understand, and explain the differences and similarities in e-HRM between national contexts, which could be a starting point to improve our understanding of these differences and similarities.

## E-HRM RESEARCH AND THE CROSS-NATIONAL FOCUS: A LITERATURE REVIEW

We depart from our earlier definition of e-HRM (Bondarouk & Ruël, 2009), but put forward a new definition, and view it as an integration of the IT and HRM fields of scholarly inquiry that focuses on all HRM content shared via IT, with the intention of making HRM processes distinctive and consistent, more efficient, and higher in quality, and which create long-term opportunities within and across organisations for targeted users.

Since the first edition of this edited volume in 2012 there has been increased attention to the history of e-HRM and human resource information systems, or HRIS (Bondarouk & Furtmueller, 2012; Marler & Fisher, 2013; van Geffen et al., 2013; Ruël & Bondarouk, 2014). Therefore, in this edition we turn immediately to the cross-cultural focus of e-HRM and refer the reader to the first edition (Ruël & Bondarouk, 2012) to know more about the e-HRM research history.

Our main questions for the literature review were: how many studies on comparative e-HRM have been published in academic journals, books, and conference proceedings? What do these studies tell us? Where are the data gathered that are used for studies on e-HRM, and what is the overall picture that emerges from these studies when it comes to convergence and divergence of e-HRM practices?

Since this literature review was part of larger project conducted in 2011, only research publications to 2010 were included in the initial analysis. In 2016 we conducted an additional 'quick scan' to investigate how many more new research publications addressing any reference to an international perspective (such as country name in the title or the abstract) were published in the period 2011–16. The results of this additional analysis is presented after the initial literature analysis.

Studies concerning e-HRM were found using three online databases (Scopus, Picarta, Web of Science) as well as scholar.google.com, and covering a large variety of disciplines, from the social sciences to engineering. Fifteen different search terms were used, including general terms such as 'e-HRM' and 'HRIS' and related terms such as 'e-recruiting' and 'virtual teams'. Citations of articles found through the databases were also utilised in order to find older literature, as suggested by Torraco (2005). Only papers in the English language were considered, as it is the largest and dominant academic language area. We applied a certain hierarchy to the publications: first, papers published in academic journals were taken into consideration, then book chapters, and finally conference papers in officially published proceedings. An overview was made of the various papers, based on the concept matrix as outlined by Webster and Watson (2002). The matrix criteria included, among other things, the main topic of the paper, the findings, the level of analysis, and the countries in which the research was performed.

Analysis of the publications allowed us to distinguish four groups related to research into e-HRM in a cross-national context: e-HRM studies with a cross-continental focus;

e-HRM studies with a cross-national focus but limited to one continent; e-HRM studies with a cross-national focus but within one company; and e-HRM studies within a specifically mentioned national context.

### **e-HRM Studies with a Cross-Continental Focus**

The number of research publications on cross-cultural or cross-continental e-HRM is limited. Let us first briefly describe their main findings. Beulen (2008) and Rao (2009a) focused on e-HRM activities in emerging economies. The researchers were interested in the role of internet recruitment methods in companies in emerging economies in Asia, South America, and Europe. The case study performed by Beulen (2008) at global organisations' branches in Argentina, Brazil, China, India, Latvia, and Slovakia explores 'how IT supports HR work and how it contributes to their efforts in the global war for talent' (Beulen, 2008: 215). Overall, organisations were standardising their HRIS in the 'war for talent'; however, some cultural factors influenced a particular division to divert from this standardisation. This was especially true for the outsourcing division in India, which deals with large numbers of résumés. The study suggests that strategic decision-making at the corporate level will deal with the discrepancy between the need for standardisation and local needs.

Rao (2009a, 2009b) addressed in a conceptual paper the challenges of e-recruitment in the emerging economies of India and Mexico. The predominant challenges of e-recruitment in both India and Mexico are the poor telecommunication infrastructure and the importance of personal interaction because of the collectivist culture. An additional challenge in India is the large number of recruiters, while in Mexico employees fear a loss of confidentiality in submitting their details on the internet.

Williams et al. (2009) conducted a case study with project teams working in multinational corporations (MNCs). The team members originated from the United Kingdom (UK), the United States of America (USA), Germany, and Canada. The purpose was to identify the HRIS skills and knowledge in global projects. The authors presented a framework based on human capital theory. The framework included guidelines for the collection of employee details, personal attributes, employees' skills, and firm-specific attributes.

Puck et al. (2006, 2009) focused on internet recruitment and included emerging as well as developed economies. Fourteen different countries from three different continents were included in their study of the role of national culture on corporate website recruitment. In particular, they analysed the use of pre-selection and selection methods, and the use of the information function of corporate websites. Based on Hofstede's model of national culture, seven hypotheses were formulated and tested. Results showed that national cultures do affect the use of the internet in corporate website recruitment, with several implications for the companies and the job applicants as well as for the companies developing corporate website recruitment software. Power distance and individualism were negatively related to the comprehensiveness of information in corporate website recruiting. Additionally, firms in a culture with a high level of uncertainty avoidance made less integrative use of corporate website recruiting.

A study by Marler and Parry (2008) included a large number of countries, representing many regions. Based on the Cranet survey in which HRM professionals from 29 countries

participated, they investigated the strategic role of e-HRM. There does not appear to be a direct linking mechanism between HRM strategy and elevating the HRM function into a strategic business partner. However, the relationship between e-HRM and strategic HRM operates indirectly through the company's HRM strategy. The study did not include cultural or national context as a control variable.

Harris et al. (2003) included the USA and Belgium in their research investigating privacy and attitudes towards internet-based selection systems. By means of a survey, four hypotheses were tested. The results showed some commonalities between the two countries as well as some cross-cultural differences; however, the relation with the cultural factors of the countries was not explored. In both countries the same amount of reluctance to submit employment-related data over the internet was observed, and higher self-rated knowledge of the internet led to less concern about employment-related data falling into the wrong hands. A main difference is that in Belgium there is a stronger belief among knowledge workers that companies have to get approval before releasing information about a candidate, while in the USA the dominant belief is the opposite.

Olivas-Luján and Florkowski (2009) investigated the diffusion of HRIS technologies across English-speaking countries. They found that diffusion is stimulated more by internal influences from the information system of potential adopters than by external influences, except for integrated HRM suites and HRM intranets. The analysis showed no differences in diffusion between countries.

AbuZaineh and Ruël (2008) explored and compared the use of e-HRM tools in SMEs in Kuwait and the Netherlands and found that the main objective in both countries was to reduce costs and time. The cultural context, especially the higher uncertainty avoidance tendency in Kuwait compared with the Netherlands, could help to explain the lag in adoption of e-HRM in Kuwaiti small and medium-sized enterprises (SMEs) compared with the Netherlands.

Overall, the number of studies with a cross-continental focus is very limited, especially those focused on finding differences and similarities between countries (Table 18.1), and is clearly skewed towards the USA and Europe. Studies with a cross-continental focus do not go beyond concluding that culture seems to be important and a possible explanatory factor for the differences between continents and countries.

*Table 18.1 e-HRM studies including cross-continental data*

Author	Region	Topic	Type of study
AbuZaineh and Ruël (2008)	Asia (Middle East)	e-HRM usage	Qualitative
Beulen (2008)	Asia, Europe, South America	HRIS	Qualitative
Harris et al. (2003)	Europe, North America	e-selection	Quantitative
Marler and Parry (2008)	Africa, Asia, Australia, Europe, North America, South America	e-HRM	Quantitative
Olivas-Lujan and Florkowski (2009)	Europe, North America	HRIS	Quantitative
Puck et al. (2006)	Asia, Europe, North America	e-recruitment	Quantitative
Williams et al. (2009)	Europe, North America	Virtual teams	Quantitative
Rao (2009a)	Asia, South America	e-recruitment	Literature study

Table 18.2 Cross-national, one-continent e-HRM studies

Author(s)	Region	Topic	Type of study
Beamish et al. (2002)	Europe	e-learning	Qualitative
Galanaki and Panayotopoulou (2009)	Europe	e-HRM	Qualitative
Imperatori and De Marco (2009)	Europe	e-work	Qualitative
Ruël et al. (2004)	Europe	e-HRM	Qualitative
Strohmeier and Kabst (2009)	Europe	e-HRM	Qualitative

### e-HRM with a Cross-National Focus but Limited to One Continent

Another group of studies on e-HRM is cross-national in focus, though within one continent (see Table 18.2). A good example of these kinds of studies is the investigation of the adoption of e-HRM in companies in 16 different European countries performed by Galanaki and Panayotopoulou (2009). They found some links with a nation's characteristics, such as internet penetration, and the adoption of e-HRM. Their study showed a positive relationship between a company's characteristics and the level of use of e-HRM, such as company size (mostly multinationals were included), the level of the strategic orientation of the HRM function, the level of education received by employees, and the level of innovation and service quality.

Beamish et al. (2002) investigated the deployment of e-learning in the UK and European corporate organisations. The managers who participated in the study were able to identify a series of benefits from e-learning, such as cost-effectiveness, as well as barriers, usually based on cultural resistance and learner motivation. In general, managers supported the view that e-learning can have a role in strategy-led training. No attention was paid to culture as an explanatory factor. Ruël et al. (2004) explored e-HRM in large companies in the Netherlands, Luxembourg, Germany, and Belgium. They conclude that the e-HRM goals of companies are cost reduction, service quality improvement, and improving HRM's strategic focus. There is a gap between available e-HRM functionalities and its actual use; e-HRM implies a process of 'growth' in a company. Outcomes of e-HRM are a reduction of costs, an improvement of client satisfaction with HRM services, and improved quality of the communication. Cultural or national differences were not taken into account as an explanatory factor, but the study raises some interesting issues such as the role of the language of the e-HRM applications in their adoption by users in foreign subsidiaries, and the differences of communication styles between the USA and Western Europe in the case of a US-based multinational.

Imperatori and De Marco (2009) looked at the real labour transformation process related to the introduction of e-work projects in four different companies in the UK and Italy. The results confirm the alignment of the managerial discourse with organisational practices. Factors concerning the design and implementation of technology-based work systems were evaluated, such as the organisational and employer viewpoint, the organisational culture, and evaluation and monitoring phases during the project. Cultural and national differences were not included in their analysis.

Strohmeier and Kabst (2009) conducted a large-scale survey in 23 European countries and found that e-HRM is a common practice throughout Europe. Major determinants

Table 18.3 *Cross-national e-HRM research within one multinational company*

Author	Region	Topic	Type of study
Tixier (2004)	Europe	HRIS	Qualitative
Vaughan and MacVicar (2004)	Europe	e-learning	Quantitative

of e-HRM are size, work organisation, and HRM configuration, according to their study. Interestingly, they found cross-national differences in e-HRM adoption: Eastern European post-communist countries are ahead of Western European countries. The study was not able to conclude about convergence of adoption over time.

The overall picture that emerges from this overview of e-HRM studies with a cross-national focus but within the same continent is that all those studies are done in Europe. Hardly any of the studies aimed at revealing cross-national differences. Only Strohmeier and Kabst (2009) partly include a cross-national focus in their analysis. However, no clear theory is applied to explain the differences and similarities in e-HRM adoption.

### **e-HRM with a Cross-National Focus but Within One Company**

Some e-HRM studies include cross-national data, but collected within one company (see Table 18.3). Beulen (2008) and Williams et al. (2009) are examples of this type of study, but, as discussed earlier, the focus of the studies was to find cross-national differences rather than to focus on the company. Other international case studies focus on establishments in European countries. An example of this kind of research is the case study of Tixier (2004) at the Rexel group in four different European countries: Belgium, England, Portugal, and Spain. She followed the implementation of HRIS and examined the influence of the local contexts on that implementation. The study included exogenous factors, industry, and country or regional characteristics of the subsidiaries. Tixier identified two distinctive HRM practices in the different subsidiaries, which she called the management staff (with a focus on quantitative manpower and conflict resolution) and the human resource management system (with a focus on the utilisation of resources to achieve organisational goals). The author concluded that HRIS could support the harmonisation of practices in a multinational company.

Vaughan and MacVicar (2004) studied the blended approach to e-learning of a large multinational banking organisation in the UK. The pre-implementation procedure and the perceptions of employees were investigated in subsidiaries in England, Northern Ireland and Scotland. A qualitative investigation showed a low awareness of e-learning among the employees, and that the attitudes of managers were diverse, ranging from being very supportive towards learning and the development of employees, to not being supportive at all. The major barrier is the time spent on learning and development, while the major benefits of e-learning are its accessibility, relevance and user-friendliness.

The overall picture that is that cross-national e-HRM research conducted within one multinational company is Western-biased, exploratory in nature, and more importantly, not explicitly contributing to the cross-national and cross-cultural body of knowledge on e-HRM.

### **e-HRM Studies Within a Specific National Context**

In Europe, Majó (2006) investigated the condition of e-recruitment in Hungary by studying the internet sites of 50 different companies. International trends related to the diffusion of IT for recruitment purposes can be observed in Hungarian companies, yet to a minor extent and with lower intensity. Parry and Wilson (2006) concentrated their study on online recruitment in the UK. Factors influencing the adoption of e-recruitment were relative advantage, difficulties, and external compatibility for corporate websites; and relative advantage and compatibility for commercial websites. Fernández-Sánchez et al. (2009) explored the recruitment process in Spanish firms. They noted that HRIS are being introduced steadily in Spanish firms; however, the presence of traditional information systems is still strong.

Hausdorf and Duncan (2004) investigated internet recruiting in Canada in relation to firm size. Large companies more often have their own website and use more internet recruiters, while small firms are less aware of internet recruitment. The adoption of e-HRM in large New Zealand organisations was the focus of Lau and Hooper's (2009) study, while Olivas-Luján et al. (2006) concentrated on the same topic in Mexico. In New Zealand the popularity of e-HRM is a growing phenomenon among large companies (Lau & Hooper, 2009). Olivas-Luján et al. (2006) identified several research gaps for e-HRM in Mexico. They also found that Mexican enterprises face a bigger challenge in implementing an e-HRM system as they are mainly production-oriented and thus have difficulties in justifying the investment.

Some studies were also performed in Asia. Hooi (2006) investigated the readiness for e-HRM in Malaysian small and medium-sized companies. The author found that many organisations are still utilising traditional HRM instead of e-HRM. Financial resources and expertise seem to be the main barriers to e-HRM implementation. In Taiwan, organisational support and HRIS effectiveness were greater in the case of a higher HRIS level, as measured by their use by top managers and HRM staff (Lin, 1997). Jones (2007) studied e-HRM in Kuwait. She addressed the challenges involved in implementing a management system for training and development. She highlighted the importance of skilled senior management and HRM staff. In India, successful HRIS practices included internal job positioning, e-recruitment, learning communities, and e-learning.

Among those who explicitly mentioned a national context in the title of the publication, but did not evidence any intention of linking the results to the characteristics of that particular context, we find Bondarouk and Ruël (2006) with their investigation of e-HRM in a Dutch ministry; Koopman and Batenburg (2008) focusing on employee self-service applications in the Dutch public sector; Farndale and Paauwe (2006) investigating HRM Shared Service Centres (SSCs) in Dutch organisations; and Rahim and Singh (2007) studying B2E systems in two Australian universities. The studies in this category (see Table 18.4), we observe, hardly relate their findings to the specific characteristics of the national context in which the data were collected, although this context is included in the title of their paper.

Table 18.4 *e-HRM research with a specific national context*

Author	Region	Topic	Type of study
Majó (2006)	Europe	e-recruitment	Qualitative/website analysis
Parry and Wilson (2006)	Europe (UK)	Online recruitment	Qualitative/quantitative
Fernández-Sánchez et al. (2009)	Europe	HRIS	
Hausdorf and Duncan (2004)	North America	Internet recruiting	Quantitative
Lau and Hooper (2009)	New Zealand	e-HRM adoption	Quantitative
Olivas-Luján et al. (2006)	North America	e-HRM adoption	Quantitative
Hooi (2006)	Asia (Malaysia)	e-HRM readiness	Quantitative
Lin (1997)	Asia (Taiwan)	HRIS effectiveness	Quantitative
Jones (2007)	Asia (Kuwait)	HRIS training and development	Qualitative
Bondarouk and Ruël (2006)	Europe (Netherlands)	e-HRM implementation	Qualitative
Koopman and Batenburg (2008)	Europe (Netherlands)	Employee self-service	Quantitative
Farndale and Paauwe (2006)	Europe (Netherlands)	Shared Service Centres	Quantitative
Rahim and Sigh (2007)	Asia Pacific (Australia)	Business-to-employee systems	Qualitative

### Results from an Additional ‘Quick Scan’, 2011–16

Since the analysis above focuses on the period until 2010, it is interesting to see whether the next five years resulted in an increase in the number of publications with an international perspective. For that reason we searched for research publications in journal, books, and conference proceedings in the period 2011–16 (see Table 18.5). The key criterion for inclusion was that a geographical reference was made in the title or the abstract.

We conclude that only eight research publications with a geographical reference in the title or mentioned in the abstract were published in the 2011–16 period. This is a poor result of approximately one publication per year on average. It is our overall observation that the interest in e-HRM in general has grown since 2010, based on the number of new special issues in research journals since 2010. That makes the result of our 2011–16 ‘quick scan’ even more disappointing. The share of the latest published research on e-HRM and HRIS referring to a geographical location in relation to research coming from the USA or Europe has most likely decreased.

### Summarizing Cross-National e-HRM Studies

Truly international comparative e-HRM research is scarce, something that clearly emerges from this literature review. The comparative studies available are basically atheoretical and

Table 18.5 Results additional analysis 2011–16 HRIS publications with geographical reference

Author	Region	Topic	Type of study
Troshani et al. (2011)	Australia	HRIS adoption	Quantitative
Normalini et al. (2012)	Asia (Malaysia)	Antecedents and outcomes of HRIS use	Quantitative
Spero et al. (2011)	Africa	HRIS for health workforce	Quantitative
Razali and Vrontis (2010)	Asia (Malaysia)	Employee reactions towards HRIS implementation	Quantitative
Kundu and Kadian (2012)	Asia (India)	HRIS application in India	Quantitative
Troshani et al. (2010)	Australia	HRIS adoption	Qualitative
Kabir et al. (2013)	Asia (Bangladesh)	HRIS practices in universities	Quantitative
Iwu and Benedict (2013)	Africa	HRIS investment and economic recession	Quantitative

do not refer to cultural or national contextual aspects as an explanatory factor. Most of the e-HRM research originates from the USA and from Europe, and MNCs are the units of analysis. Small and medium-sized enterprises are underrepresented. As such, this picture can lead us to the following conclusion, however cautiously: Western-based multinationals lead the way in e-HRM adoption and use, but MNCs from non-Western regions are quickly following suit. SMEs in Western countries are lagging behind but adopting e-HRM as well. All the studies on e-HRM so far have not been suitable to conclude whether e-HRM in Western countries and non-Western countries looks similar or is developing similarly or not. In other words, no study to date has clearly addressed the basic issue underlying international comparative research, which is the convergence/divergence debate.

## MANAGEMENT PRACTICES IN A COMPARATIVE PERSPECTIVE: THE CONVERGENCE/DIVERGENCE DEBATE

The main purpose of international comparative research is to identify and explain differences and similarities. This issue is referred to as the convergence/divergence debate; a debate that has been keeping researchers busy since the beginning of the twentieth century. Around that time the current debate took up Veblen's statement that developing countries have an advantage by adapting technologies that had been developed by the more mature countries (Elmslie, 1995). Nowadays, the debate on convergence/divergence is widespread in all kinds of research areas, for instance Baumol (1986) who initiated the debate on economic convergence.

Today's convergence/divergence debate in the area of organisation and management practices started in the mid-1980s, with the increase in globalisation. Economies have become more and more integrated. This integration has led to a spreading of global management structures and the adoption of similar operating techniques. Hence it can be argued that global organisations are converging (McGaughey & De Cieri, 1999). The following circumstances led to this convergence: the rise of the internet, which simplified

the global communication process and data exchange; increased travelling; and the deregulation of economic activities by governments (Levitt, 2006; Doz & Prahalad, 1991). However, opponents of the convergence hypothesis state that despite the structural and technological convergence, cultural differences remain.

The debate on convergence/divergence was extended in 1993 with the 'crossvergence' perspective (Ralston et al., 1993). The results of that study showed that the managerial values of a country are often influenced by both culture and the business environment. Therefore, they suggested a third perspective, a combination of convergence and divergence: crossvergence. In 1997, Ralston et al. broadened the definition of crossvergence: 'crossvergence advocates that the combination of socio-cultural influences and business ideology influences is the driving force that precipitates the development of new and unique values systems among individuals in a society due to the dynamic interaction of these influences' (Ralston et al., 1997: 183).

McGaughey and De Cieri (1999) developed a conceptual framework based on micro-, macro-, and meso-level organisational variables and processes, which offers four different types of convergence/divergence: assimilation, integration, separation, and novelty. Assimilation takes place when an entity loses a part of its own characteristics by adopting norms from another entity. Integration is a combination of characteristics of two or more entities. Separation purposefully avoids integration of the characteristics of the other entity. Novelty does not maintain its own characteristics, nor those from the other entity. In addition to convergence and divergence, McGaughey and De Cieri (1999) introduced 'maintenance' as a third option: keeping the level of similarity or dissimilarity as a possible direction.

In 2006, Spicer offered a new view on the debate. Instead of arguing that organisational logics are converging into one model or diverging into national types, he suggested that organisational logics are transforming (Spicer, 2006). This means that when organisation logics move across space, they undergo a process of transformation. A remarkable aspect of the convergence/divergence debate is that the researchers did not try to extend each other's work; instead, it seems that they more or less ignored it.

### **Convergence/Divergence in HRM**

In the field of IHRM, Brewster et al. (2008) examined whether there was similarity, isomorphism, or duality in the HRM policies and practices in host countries of MNCs, based on three schools of thought: global homogeneity or ethnocentricity, local isomorphism, and duality theories. They found evidence for common global practices, but the duality theories provided the best explanation.

Wöcke et al. (2007) examined the differences between HRM practices of parent MNCs and affiliates. They concluded that there are several factors that influence the need for standardisation or localisation: variation in the business model, the need to accommodate national culture, and the type and role of organisational culture in the MNC. Additionally, the evolution of a MNC leads to a higher level of standardisation of HRM practices.

## **Standardisation/Localisation**

Linked to the convergence/divergence debate, the standardisation/localisation debate plays a role in the area of organisation and management practices (Prahalad & Doz, 1987). This debate is concentrated on the company or meso level, while convergence/divergence is more focused on the macro level (Pudelko & Harzing, 2007). Rosenzweig and Nohria (1994) defined standardisation/localisation as: the extent to which subsidiaries of multinational companies are behaving as local firms (localisation) versus the extent to which their practices are similar to those of the headquarters (standardisation). HRM plays an important role in this debate because it deals with the management of people and is therefore seen as least likely to converge across countries. MNCs are more likely to localise practices than to export country-of-origin practices (Leat & El-Kot, 2007).

Over the years numerous studies have examined cross-cultural comparisons of HRM. Some studies examined the transfer of HRM practices, while others focused on which HRM practices and issues are relevant for a certain country (Myloni et al., 2004). Laurent (1986) argued that HRM practices represent the values of national culture, and because of this an HRM system that is successful in one culture may not be successful in another. Rosenzweig and Nahria (1994) examined what the influence of national culture is on HRM policies and practices. Schuler et al. (1993) addressed the tension between integration and differentiation between inter-unit linkages, and how to operate effectively in the local environment. Lu and Björkman (1997) examined the tension between standardisation and localisation in joint China–Western ventures using five ‘classical’ HRM practices.

Pudelko and Harzing (2008) extended the debate. In their study, they examined whether MNCs from different countries (Germany, Japan, and the USA) put different emphases on the extent of standardisation versus localisation of the HRM practices of their foreign subsidiaries. Based on an international survey (mostly completed by highly placed HRM managers), they concluded that the debate on standardisation and localisation needs a major extension. Their results showed that standardisation not only takes place towards the headquarters but can also take place towards global best practices, wherever they originate from. Based on these findings, they stated that in today’s globalised corporate environment, ethnocentric approaches to management are no longer sustainable.

There are several factors that determine the degree of standardisation. Parry et al. (2008) mentions four reasons why companies are likely to standardise their processes: HRM practices are more likely to be transferred from the headquarters if they are regarded as superior; HRM policies and practices can be standardised in order to support their wider business strategy; ethical issues such as minimum rights and precluding child labour can lead to international standardisation of practices; and finally, knowledge transfer, quality standards, and creating an international network can lead to the standardisation of HRM practices and policies. There are numerous factors that determine the degree of standardisation, such as the relationship between the headquarters and the subsidiary, organisational culture, authority structures, market characteristics, work norms, and so on (Parry et al., 2008). Local factors that have an influence are unions, labour market, and legal and political context (Ngo et al., 1998; Brewster, 1995).

## TOWARDS A MODEL FOR CROSS-NATIONAL E-HRM RESEARCH

The study of the role of technology in organisations has a long tradition. Over the years, different views on technology have developed in parallel with theoretical perspectives on organisations: Orlikowski (2008) mentions, for example: contingency theory, strategic choice models, Marxist studies, symbolic interactionist approaches, transaction-cost economics, network analyses, practice theories, and structurational models. Nowadays, technology and organisations undergo rapid and radical changes in form and function. Therefore, researchers on technology are also using the ideas of innovation, learning, and improvisation for a better understanding of the implications of new technologies on organisations (Orlikowski, 2008).

In an attempt to overcome the limitations of contingency theory in linking technology and organisational forms, a number of scholars in the mid-1980s started to use Giddens's (1984) theory of structuration (Schuessler, 2006). Barley (1986) was one of the first researchers to use structuration theory in order to study the relation between technology and organisational structure. Based on this theory, he argued that technology can be constraining and enabling. Technology was considered to be social in nature rather than a physical object. Most interestingly, and opposing a deterministic view on technology, Barley's study showed that the organisations responded differently to the implementation of the same sort of technology. He concluded that 'technologies do influence organisational structures in orderly ways, but their influence depends on the specific historical process in which they are embedded' (Barley, 1986: 107).

DeSanctis and Poole (1994) adapted structuration theory to study the interaction of groups and organisations with advanced information technologies (AITs), such as group decision support systems (GDSSs). They developed the adaptive structuration theory (AST). 'The AST examines the process from two positions: the type of structures that are provided by advanced technologies and the structures that actually emerge in human action as people interact with these technologies' (DeSanctis & Poole, 1994: 121). Or, formulated differently, AST is focused on the rules and resources of advanced technologies and how users in small groups adapt to the rules and use the resources. The adaption can lead to different outcomes even in the same context because users can act differently when utilising the same technology.

An important aspect of the AST is spirit: 'The spirit is the "official line" which the technology presents to people regarding how to act when using the system, how to interpret its features, and how to fill in gaps in procedure which are not explicitly specified' (DeSanctis & Poole, 1994: 126). Another central aspect of the AST is the concept of appropriation. Appropriation in the context of information systems in organisations refers to the process of actively selecting 'structural features' of a given system or application and incorporating them in their daily work activities. From a large set of potentially applicable features, individuals actively choose the ones they judge as most useful and easy to use, though in the way individuals interpret those features. This implies that a similar set of structural features of an information system can be used in different ways and therefore have different expected or unexpected consequences.

As mentioned earlier, the rapid and radical changes in technologies and organisations have called for new concepts, such as improvisation and emergence, for studying and

understanding the use of technology in practice. With similar intentions, Orlikowski (2008) extended her view on technology as being an emergent structure, a process of enactment (to constitute or perform). This view focuses on how humans enact structures that shape their emergent and situated use of the technology during the interaction with that technology in their daily life. This means that structures are not embedded in technology, but enacted by users. There are three types of enactment: inertia – technology used to maintain the status quo; application – technology used to modify and improve (work) processes; and change – technology used to change the status quo considerably.

As the foundation of a research model, the framework of Ruël et al. (2004) was adopted in the first edition of this book (Brewster & Mayrhofer, 2012). In this chapter, we briefly outline this and then explain its convergence/divergence dimension. The basic framework (Ruël et al., 2004) distinguishes four ‘phases’ in e-HRM adoption in organisations. In the middle of the model are the internal agents who determine and influence the four phases. Ongoing maintenance by human action sustains the technology, and it is constituted through use. On its own, technology plays no role. Therefore, it seems legitimate to place internal agents in the middle of the model (see Figure 18.1).

The internal agents and the four phases are situated in a context. The model distinguishes six factors that play a role: competition, technological development, the state of HRM, the labour market, societal developments, and government regulation. These factors can also be referred to as conditions and consequences (Orlikowski, 2008). Conditions are subdivided into: interpretive conditions (the way that members of a community share

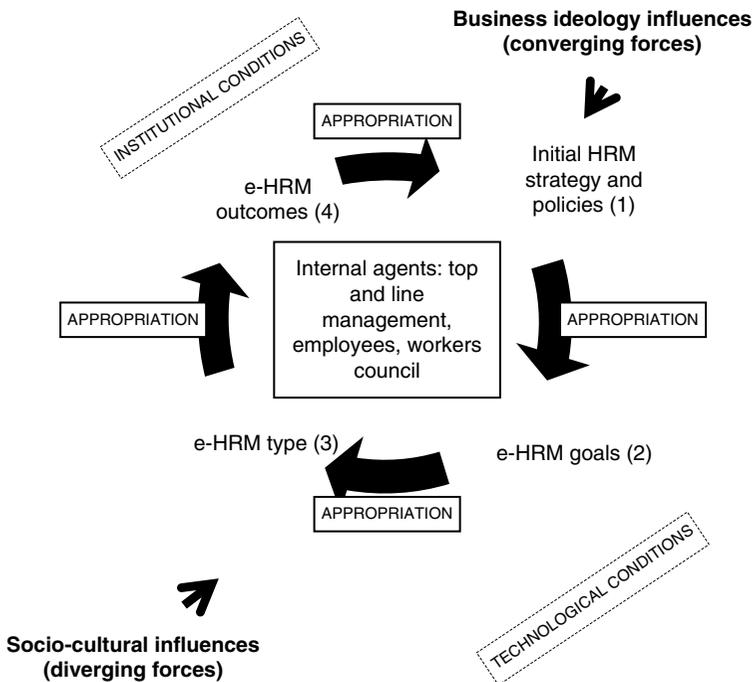


Figure 18.1 *The research model*

meanings and understandings to make sense about their world, including the technology they use), technological conditions (tools and data available), and institutional conditions (social structures that form part of the larger social system within which users work). Consequences are subdivided into: process consequences (execution and outcomes of users' work practices), technology consequences (technological prosperity available to users), and structure consequences (structures that users enact as part of the larger social system in which they are participating) (Orlikowski, 2008).

The first phase of the model, initial HRM strategy and policy, refers to the state of HRM in an organisation. When companies start with or invest further in e-HRM, there will be certain implicit or explicit HRM policy assumptions and practices already in use. Based on the classic work of Beer et al. (1985), three types of policies can be distinguished: bureaucratic policies, found in organisations that operate in a stable environment; market policies, found in organisations that have to respond rapidly to changes in the environment; and clan policies, found in organisations that rely heavily on delivering quality and innovation.

The second phase refers to the goals of e-HRM. Goals are selected by internal agents within the existing HRM policy context (or internal institutional properties) in which they act, but intermediated by external institutional properties such as competition and technological developments. In terms of the work of Giddens's, Orlikowski's, and DeSanctis and Poole's AST, the existing HRM policy is a set of 'structures' interpreted and applied by internal agents, in AST terms referred to as 'appropriation'. The e-HRM goals selected, whether implicitly or explicitly, are outcomes of that appropriation process.

From the e-HRM goals selected, as a third phase, an e-HRM type emerges as an outcome of deliberations by internal agents interpreting and applying e-HRM goals in day-to-day organisational practices. e-HRM types refer to a combination of selected technologies and their appropriation by internal agents. Therefore, it is not a static context with a technological application deployed in a technical sense. Rather, e-HRM types are a dynamic context, in which at a certain point in time there can be a huge gap between available technological functionalities and real use of these functionalities by internal agents. Analytically, three types of e-HRM can be distinguished: operational e-HRM, meaning that the dominant use consists of more traditional administrative services such as salary administration and record-keeping; relational e-HRM, meaning that the dominant use consists of executing HRM processes, such as recruitment, compensation, and training and development; and transformational e-HRM, meaning that the dominant use has a strategic character, such as knowledge management, strategic competence management, and organisational change. From the appropriation of e-HRM applications, e-HRM outcomes emerge, intended and unintended ones.

The fourth phase comprises the e-HRM outcomes. In general terms, the outcome can be one or a combination of the following goals: to improve the strategic orientation of HRM; to reduce costs and/or increase efficiency; and to improve the quality of HRM service for management and employees. We link the goals of e-HRM to what DeSanctis and Poole (1994) refer to as the spirit of technology. The spirit is concerned with questions such as: 'What kind of goals are being promoted by this technology?' and 'What kind of values are being supported?' (DeSanctis & Poole, 1994: 127). For example, e-HRM applications can 'contain' the spirit of 'improving client services'.

The e-HRM outcomes should not be confused with the e-HRM goals described as

phase two of the model. Ruël et al. (2004) state that e-HRM is a way of carrying out HRM; it is a way of thinking about and implementing HRM strategies, policies, and practices aimed at achieving certain goals: improving the strategic role of HRM, improving the client services, and improving efficiency and administrative processes. Besides these goals, there are a number of overall HRM policy outcomes to which all e-HRM activities will be directed, implicitly or explicitly. Beer et al. (1985) distinguish the following four: (1) commitment – the trust between management and employees; (2) competence – the ability of employees to learn and perform new tasks; (3) cost effectiveness – financial competitiveness; and (4) congruence – structuring the internal organisation, the reward system, and the input–output of personnel in the interests of stakeholders. The e-HRM outcomes can be considered as interpretations by internal agents, applied and reflected in an organisation's HRM policy. The types of enactments described earlier can also be seen as types of outcomes, and are added to the fourth phase of the model.

As can be seen in Figure 18.1, revising the original Ruël et al. (2004) model, we have divided the research model into two parts. One side represents the part in which institutional conditions are the dominant influential factors (phases one and four): the e-HRM system is part of a larger social system, and the social structures of the social system will influence the way the technology is designed. For example, the type of HRM policies will be influenced by the environment of the organisation. The other side represents the part in which technological conditions are the dominant influential factors (phases two and three): agents determine the goals of the technology and the type of e-HRM which eventually provides tools and data for the users. The combination of the conditions and consequences can lead to three different types of enactments (inertia, application, and change). The full research model as explained above is visualised in Figure 18.1.

## CONCLUSIONS AND IMPLICATIONS FOR CROSS-NATIONAL E-HRM RESEARCH

In this chapter, we have proposed a research model for cross-national e-HRM research. The model is based on a constructivist view of the relationship between technology and organisation, adopting the lines of thought of Orlikowski (1992) and DeSanctis and Poole (1994). The model identifies four phases of e-HRM in organisations, assuming these phases analytically as separate and sequential, although empirically they are likely to be overlapping.

The research model can be used as a framework for cross-national comparative e-HRM research. It is suitable for this purpose due to its all-encompassing nature, including the main focus areas of e-HRM research (goals, implementation, adoption, outcomes, HRM transformation), and therefore allows comparison of these areas and variables across borders in an MNC context. However, as mentioned earlier, comparative international research as such does not serve much of a purpose on its own: it needs contextualisation.

The convergence/divergence debate is the relevant debate in which international comparative e-HRM research should be positioned, as it offers a relevant and rich explanatory ground for differences and similarities across national and cultural boundaries. The model proposed in this chapter is a stimulus for e-HRM studies that aim to contribute to

this debate. In its current form, the model hypothesises that e-HRM in different national or cultural contexts will show predominantly converging tendencies during phase one (reigning HRM policy under which e-HRM decisions are taken in organisations) and phase two (explicitly or implicitly formulated e-HRM goals that are most likely to be chosen given the spirit of the business ideology). Diverging, socio-cultural specific tendencies will most likely appear during phase three (e-HRM types, reflecting the appropriation of e-HRM by internal agents) and phase four (e-HRM outcomes, reflecting the perceptions of internal agents regarding intended and unintended consequences of e-HRM appropriation).

The proposed model can be used for quantitative as well as qualitative research approaches and can allow different additional theoretical lenses. For quantitative studies, the model triggers research questions such as: Do converging forces have a dominant impact on how e-HRM is shaped in organisations in phases one and two? Do diverging forces have a dominant impact on how e-HRM is shaped in organisations in phases three and four? Do converging and diverging influences on the phases of e-HRM in organisations differ per national or cultural context? To what extent do different internal agents perceive converging and diverging influences differently related to different phases of e-HRM?

For qualitative studies, interesting research questions include: how do internal agents appropriate business ideological and socio-cultural features in the different phases of e-HRM? How do internal agents arrive, between each other, at decisions on how to shape e-HRM in different national or cultural contexts? How are e-HRM outcomes perceived and interpreted by internal agents in different national and cultural contexts and 'translated' into the HRM policy? How do internal agents bring about change in e-HRM in different national and cultural contexts? How do converging and diverging influences 'interact' during an e-HRM change project?

In terms of additional theoretical perspectives, researchers can adopt political, behavioural, economic, as well as cultural lenses to shape and specify their research questions. Political lenses will help to understand the role of power and how power is exercised regarding e-HRM, and how it results in converging or diverging tendencies. Behavioural lenses will contribute to revealing the role of individual actions and interpersonal interactions, and economic lenses may focus on quantifying costs and benefits of converging and diverging tendencies in shaping e-HRM in organisations. Finally, cultural lenses will help to understand how the cultural backgrounds of internal agents play a role in shaping e-HRM in organisations and how this results in either converging or diverging tendencies.

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