Back to the Future of Human Resource Information Systems?

"A survey towards the role of country differences regarding adoption and deployment outcomes of e-HRM"

Master Thesis

General Information

Project Title

The affect of country differences on the adoption and deployment outcomes for e-HRM

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Preface

E-HRM and the related term Human Resource Information Systems are topics that are becoming popular in scientific research. Despite the increasing recognition for e-HRM, there remain several mysteries and realms to be investigated regarding e-HRM adoption and deployment. This thesis aims to support the ongoing investigations for e-HRM, by relating country characteristics in the socio-cultural, political, and economic environment to e-HRM adoption and deployment outcomes. With the viewpoint of you reading this preface and me putting on the finishing touches, a challenging process is nearly to an end. Although my week was not complete with 20 questions regarding the status of my thesis and at a certain point you are wondering if the process is becoming a never-ending story, still the genuine interest by people for the process endured me to develop and finalize this thesis. Therefore I would like to thank all people involved in this process. The list of people is endless and too long to capture in a few sentences (in aggregate family, supervisors, friends, respondents, fellow students (special thanks to Rob Tuinte and Peter van de Top, soon to become successful entrepreneurs instead of "spare time" thesis writers), colleagues, and teammates). Hence I rather refer to the help they offered which they should cherish and spread around to other people who could use these beloved characteristics. The activities performed to assist me, vary from providing feedback to small talk distracting me from the thesis. In essence, the people were willing to listen, provide input, read and/or talk about the thesis or me as a person and I am very grateful for these characteristics.

Additionally I would like to encourage all the present and future researchers determined to complete their queries and quests. I sincerely hope that these researchers do not avert or preclude their studies but rather encourage fellow researchers and themselves to publicize and write about their studies. Although you may not always get the recognition for your hard work, there are always people there to support you, even though you may not recognize them.

Yorrick Bakker

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Summary

E-HRM is becoming one of the most promising technologies which for example, enable companies to work more efficiently and could assist companies in realizing the strategic value of HR. The former expectation is however not (yet) fully achieved by companies and moreover the investments for e-HRM differ per country. These country differences could assist in understanding if and why these differences could help in decaying the "realms" surrounding the "underachievement" of e-HRM promises. Hence research could assist by making a reliable international overview regarding country differences and their affect in the adoption and deployment outcomes of HRIS/e-HRM. This thesis aims to support the ongoing investigations for e-HRM, by relating country characteristics in socio-cultural, political, and economic variety to e-HRM adoption and deployment outcomes.

Before the research framework was developed, the context of country differences and e-HRM adoption and deployment outcomes had to be explored. The term e-HRM is for that purpose distinguished in angles which facilitates the recognition of probable country differences interfering with the e-HRM adoption and deployment outcomes. The angles and subsequent variables contained four constructs; corporate governance, organizational force, e-HRM technology and outcomes. This preliminary angle framework guided the literature study and is subsequently used to identify variables measured by the research methodology. The identified angles and components are collected and measured via a questionnaire. The questionnaire was applied in a communication platform for industry experts who for example, can provide answers or advice to queries and research. Hence special groups - e.g., e-HRM, HRIS, HR change group members - have been selected for participation in the questionnaire. After the closing data for the questionnaire, the thesis was confronted with a low response. Hence it was decided to divert the research methodology into a pilot study; thereby the aim is to strengthen the questionnaire and provide preliminary insights for the affect of country differences on the adoption and deployment outcomes for e-HRM. Although the initial research framework could not be applied, still some interesting findings were retrieved which could assist for eventual main research and future research towards e-HRM and country differences.

The interviews and questionnaire did not confirm the expectations that country differences affect the adoption and deployment outcomes for e-HRM. Quite on the contrary, respondents suggested that e-HRM is not achieving the goal to increase the strategic impact of HR. Rather respondents suggested that country differences are more likely to be retrieved via investigation towards the feature of HR processes in the e-HRM application. Especially the feature of "acquiring HR" in an e-HRM application was suggested to be explained by country differences. Hence it was decided to revise the questionnaire.

The revised questionnaire is recommended to develop new and more focused findings for the initial research framework. Additionally the original adoption and deployment outcomes(i.e., as stated in the theoretical framework and research methodology) for e-HRM are suggested to have a higher likelihood for retrieving significant data, by applying a longitudinal study which features purposeful sampling of heterogeneous units. The longitudinal study is less sensitive to the time factor and bias of respondents. Also the preliminary findings by this thesis could be confirmed with more reliability and validity and fewer limitations will be faced for the time factor and bias of respondents.

Contents

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Abbreviations

CME	Coordinated Market Economy
LME	Liberal Market Economy
E-HRM	Electronic Human Resource Management
ESS	Employee Self Service
IT	Information Technology
HR	Human Resource
HRIS	Human Resource Information Systems
HRM	Human Resource Management
MIS	Management Information System
MSS	Management Self Service
SSC	Shared Service Center
U.A.E.	United Arab Emirates
U.K.	United Kingdom
U.S.A.	United States of America
UTOS	Unit of analysis, Treatment, Outcome and Setting
VTTI	Vitol Tanks Terminal International

1. Introduction

During the last decades the concept "innovative business directions" (e.g., electronic commerce, electronic business, electronic marketing, electronic Human Resource Management henceforth referred to as e-commerce, e-business, e-marketing and e-HRM) have an increasing importance on businesses and corporate governance. The foundation for the new implication of "innovative business directions" is believed to be mainly contributed by changing and increasing customer demands, greater competitive intensity, less expensive and widely available communications, information, transaction and product technologies and an increased complexity in production technology and coordination (St. John, Cannon and Pouder, 2001). Hence the changing factors, believed to shape the demand for "innovative business directions", are assumed to initiate an increasing uncertainty and a greater complexity in business formulating strategies and implementation. Rapid change within the market of a business is assumed to be affected by the change factors - occurring from the demand for "innovative business directions" - which results in constantly changing demand and preference of suppliers, employees, customers, government, laws, competitors, communities, and so on (St, John et al., 2001). Businesses are thus ever-increasingly in need of new directions and therefore businesses are searching for new paths in their original business setting. One of the areas - with a growing interest for "innovative business directions" - is human resource management as advocated in many journals. Increasingly researchers found several new and innovative ways of deploying human resource management (henceforth referred to as HRM) and terms as e-HRM, HR intranet, web-based HR, computer-based HRM systems, virtual HR (M) and HR portals popped "out of the ground". Subsequently businesses around the world began to realize that the deployment of e-HRM and the like could result in a competitive advantage e.g., businesses can reduce the cycle times for HR, create service portals for employees and managers, and increase efficiency and effectiveness (Bondarouk and Ruël, 2009). With all the prospects of e-HRM, the increasing complexity and uncertainty deriving from "innovative business directions" and the preceding change factors identified in the business directions field, it seems the separate developments entangle with each other. Before colluding the issues into a research setting, it is more meaningful to introduce the "birth and maturation" of human resource information systems (henceforth referred to as HRIS).

From the 1980s human resources (henceforth referred to as HR) shifted from the focus on low level routine tasks - e.g., recruiting, record keeping, rewards and wages - to a more integrated focus on helpful management activities as human resource planning and human resource policies e.g., internal career paths, training systems, performance appraisals, profit sharing plans and employment security (Kavanaugh, Hall and Tannenbaum, 1990). The HR in an organization did thus become part of strategic management hence HRM shifted their focus from task orientated to people orientated (Zhang & Yuan, 2007). As the HR position evolved towards a more advanced orientation - i.e., people instead of tasks - and thereby requiring more detailed information of employees, the need for simple record-keeping information systems decreased. The HR department needs to serve as service provider to managers and people, while at the same time the HR department is responsible for effective use of the human capital, becoming more strategic and providing of programs, policies, practices and services for the organization. Hence simple data-tracking became insufficient and HR began to evolve their activities to e.g., recruitment and selection of personnel, organizational change process, strategic knowledge management and training of personnel (Lepak and Snell, 1998). Around

the 1990's information technologies tremendously changed and cracked into business operations, due to the growing ability of information technologies to fit in the evolving needs of businesses (Zhang & Yuan, 2007). As time moved on the information systems became more directed to the human resource department and moved to a new era where in practically all HR processes can be supported by information systems, or information technologies as it is interchangeably referred to since the 1990's (Ruël, Bondarouk and Looise, 2004).

The entangling of information technologies, businesses and the direction of those entangled technologies to HR departments, initiated the "birth" of e-HRM (derived from Ruël et al., 2004; Bondarouk and Ruël, 2009). For this thesis it is assumed that e-HRM does have the purpose to support the HR department with the execution of their activities by means of information technologies. The "birth" of e-HRM is indentified by many authors with possible similar terminology as e-HR, virtual HR, human resource information systems, web-based HR, HR intranet and HR portals (Ruël et al., 2004). Consequently like every "baby" the e-HRM framework matured and a more solid foundation was developed and slightly businesses tried to adopt e-HRM concepts. As time moved on the "baby" grew up but never reached out to the stage of "adolescent" i.e., businesses still find it difficult to implement e-HRM or HRIS in an effective and successful way. Illustrative for the relative "baby steps" of e-HRM are for example, the wide variety of definitions available on e-HRM and the wide availability of practice-based articles on e-HRM compared to a small database of scientific literature available on e-HRM (e.g., Ruël et al., 2004; Bondarouk, Van Der Velde and Ruël, 2005; Bell, Lee and Yeung, 2006; Strohmeier, 2009).

When a business considers adoption and deployment of e-HRM, the current discovered and acknowledged advantages could provide significant premises for implementation of e-HRM in an organization. Put bluntly, the implementation of e-HRM does have the potential to affect efficiency and effectiveness in the key HR processes (Lengnick-Hall and Moritz, 2003). The cycle times of HR processes can be reduced since less paperwork is required, data accuracy is increased and this in turn could reduce the necessity for the HR department, hence the efficiency of the processes is affected. The increased data accuracy and less paperwork could also provide the HR department with more time to develop their skills and strategically contribute to the management level. In other words e-HRM enables the HR department with the opportunity to create new paths for contributing to the organizational effectiveness. Hence the HR staff is enabled to make more timely decisions and to make more impact and contribution to strategic decisions at management level (Lengnick-Hall and Moritz, 2003). Another study by Bell et al. (2006) provides even more premises for the suggestions that e-HRM enables a shift of the HR function towards a more strategic position. Bell et al. (2006) identified that the HR staff sensed that e-HRM implementation increased the importance of the competence *"knowledge of the businesses"* for the HR department. Subsequently more contribution from the HR position to strategic management level was favored by the various businesses investigated (Bell et al., 2006).

While e-HRM was increasingly assumed to affect the strategic domain of the HR function, the national domain of many businesses evolved to international domains (Dowling, Schuler and Welch, 1994; Harris, 2008). In essence, the progress of developing economies on high-tech products, the less expensive and more widely available communications, information, transaction and production technologies and the rejection of state-controlled central planning around the world (e.g., China, India and many East-European countries have opened up their borders) have led to an operational

field in a multicultural global world for many businesses (St. John et al., 2001). A culturally and ethnically diverse workforce is generated which is becoming more mobile due to the fewer international border restrictions. As indicated at the beginning of this chapter, "innovative business directions" are investigated which could potentially result in a source for competitive advantage. One of these business directions highlighted is the development of existing HR in a business (Kavanaugh et al., 1990). A bunch of complex settings, restrictions and opportunities is then integrated within the traditional HR practices by orientating in an international business operating field. E.g., how are employees selected, trained and compensated in the bigger operation field of the business, which newly acquired tasks embody strategic knowledge or skills that can not be outsourced, which present skills might best be used as competitive advantage and moreover how can a business - operating in a new market - find new ways to increase their efficiency and effectiveness (Dowling et al., 1994). Considering the currently known advantages of e-HRM (e.g., businesses around the world can reduce the cycle times, create service portals for employees and managers, structurally and carefully implement their HRM policies as payroll automation hence increasing efficiency and effectiveness; Bondarouk and Ruël, 2009), the advantages of e-HRM seems to fit and even complete the complex puzzle of international HRM. Hence e-HRM is regarded and predicted as one of the most promising directions towards competitive advantage. Not only can e-HRM serve as a global service portal thus enabling a corporate identity and image of the business, in addition e-HRM enables businesses to integrate domestic and global HRM activities and thereby withdraws possible overlapping HR practices and activities, enables better access to communicate and attract talents from abroad and provides better insights in cost reductions of potentially outsourced HRM practices (Dowling et al., 1994; Harris, 2008).

Despite all the hopeful advantages of interrelating e-HRM with the booming field of international business, several issues remain concerning this interrelation. One of those issues is that businesses do not (yet) fully adopt the concept of e-HRM (Keebler and Rhodes, 2002; Bondarouk and Ruël, 2009). Various authors have investigated why businesses do not fully adopt or unsuccessfully adopt e-HRM. Research by Smale and Heikkilä (2009) indicated the importance of country differences within the adoption process of e-HRM. The businesses being studied in the research by Smale and Heikkilä (2009) illustrates that the plant which adopted e-HRM the most to their socio-political setting, was the plant that is the most successful in the adoption and deployment phase of e-HRM. However the Smale and Heikkilä (2009) study only investigated the affect of socio-political differences on the adoption and deployment outcomes of e-HRM. Nevertheless the socio-political differences between countries did provide sufficient data to solve the complex puzzle of differences within countries/businesses regarding their adoption and deployment outcomes of e-HRM. The study by Smale and Heikkilä (2009) is one of the scarce journals available on the affect of country differences on the adoption and deployment outcomes for e-HRM. Many questions and assumptions in the international context of e-HRM are therefore not justified nor falsified. E.g., mindsets in the former sentence concern themes as does a solid foundation in information systems increase the likelihood of adoption for e-HRM in a country, is an e-HRM technology uniform across all businesses locations (multiple countries) or is e-HRM tailored to each specific situation (per country), do the HR practices transformed in the e-HRM technology differ per country and/or business, do businesses consider e-HRM as solution to best design a corporate pay-for-performance system and create other corporate functions according to e-HRM, is e-HRM currently too much Western orientated and should an Asian, African or other continental perspective be considered, and so on.

1.1 Research Objective

Summarizing the introduction, it becomes obvious that relatively more is known and proven about the topic e-HRM than any random myth or folklore. However many issues still remain unidentified, unexplained, uninvestigated or simply put unproven in the field of e-HRM. The main problem surrounding the "realms" of HRIS/e-HRM is a solid foundation on the concept of HRIS/e-HRM in an international context. I.e., it is difficult to identify what is exactly meant and operationalized with the adoption of e-HRM, HRIS, virtual HRM and the like, thus resulting in a blurred view for the deployment of HRIS/e-HRM in an international context. As indicated by Strohmeier (2007) the current body of empirical research in e-HRM is scattered in various journals targeted at several job disciplines connected to HR and elements embodying the concept of e-HRM. The results of the theory for e-HRM is directed at one function type or one variable, immobilizing suggestions on elements encompassing "the realms" of country differences in HRM e.g., e-HRM, HRIS, virtual HR, and so on (Strohmeier, 2007). In essence, various journals are dedicated to sampling elements and the changing impact of their roles or their relation to adoption and deployment outcomes of e-HRM, HRIS, virtual HR and the like (Strohmeier, 2007).

However only a few studies (Ruta, 2005; Smale and Heikkilä, 2009) have assessed and tested the affect of country differences on the adoption and deployment outcomes for e-HRM, the majority of studies on e-HRM only limited their study to country differences in their finalizing section or omits the affect of country differences on the adoption and deployment outcomes for e-HRM. This results in "a tunnel vision" in current scientific journals covering e-HRM, which should consider and possibly expand its view in a global perspective. Hence the chances of e-HRM reaching the phase of "adolescent" are slender in the international research field as well as the international practitioner field. This is assumed due to an absence of a decent framework identifying and conceptualizing the country differences associated with e-HRM, which have not yet been thoroughly tested. Therefore this thesis is dedicated to the development of a reliable international overview regarding the affect of country differences on the adoption and deployment outcomes for e-HRM. This overview shall provide more insights for the affect of country differences on the adoption and deployment outcomes for e-HRM which is absent in current research. The overview can enable monitoring of developments for the affect of country differences on the adoption and deployment outcomes for e-HRM. Additionally this overview can provide insights on differences between national and multinational companies regarding the affect on the adoption and deployment outcomes for e-HRM.

The mindset created so far results in the following research objective:

The main objective of this thesis is to investigate and indentify to what extent country differences are affecting the adoption and deployment outcomes of e-HRM.

From this objective a key question is formulated:

To what extent are country differences in businesses around the world influencing the adoption and deployment outcomes of human resource information systems?

In order to address and justify the setting of the main research question and research objective, the following sub questions were formulated:

- *What is the concept of human resource information systems?*
- *Which significant elements are part of the adoption and deployment process of information systems in HRM configuration?*
- *Why - if any country differences are notable - do e-HRM adoption and deployment outcomes differ from country to country?*
- *What are the consequences of country differences - regarding e-HRM adoption and deployment outcomes - for business around the world?*

It should be noted that the questions in this preliminary phase are targeted at businesses (i.e., in national and global context) as units of analysis. Additionally it should be noted that it is not the purpose of this thesis to assume or describe so called "best practices". The term "best practices" assume a set of practices that apply in virtually all circumstances (Harris, 2008). Although it could be argued that homogenization is going on worldwide e.g., a technology as Internet is connecting the "western culture" with the world and is thereby affecting other styles and cultures, this thesis shall rather explore if country differences are apparent for e-HRM adoption and deployment outcomes since this is not (yet) widely tested in journals, books, articles, and so on.

1.2 Operationalization Terminology

In the key question and sub questions terminology has been formulated derived from a wide variety of thoughts and meanings. Therefore a preliminary operationalization of the terminology used in the key question and sub questions shall be provided in figure 1. In chapter 2 (i.e., theoretical framework) the terminology shall be verified and investigated in more depth by making use of literature which explores the concept of e-HRM and the significant elements assumed to be part of the e-HRM concept. Hence chapter 2 should provide a general understanding regarding the role of country differences potentially affecting the adoption and deployment outcomes of e-HRM, thereby resulting in a final operationalization for the terminology and variables used within this thesis.

Human Resource: *All those activities associated with the management of employment relationships in a business. The purpose is to ensure that employees of a given business, i.e., its human resources, are used in such a way that the employer obtains the greatest possible benefit from their abilities and the employees obtain both material and psychological rewards from their work (Dowling et al., 1994).*

Information Systems: *A set of interrelated components that collect, retrieve, process, store and/or distribute information to support decision making and control in an organization (Laudon and Laudon, 2006).*

Country Differences: *Different perceptions, values and norms towards aspects as national institutional structure, standardization type, innovation type, corporate governance type (Hall and Soskice, 2001), labour regulation and formation of the skills for human capital (Estevez-Abe, Iversen and Soskice, 2001) and social capital i.e., trust in national law, regulations and interpersonal networks (Redding and Witt, 2007).*

Adoption of e-HRM/HRIS: *Accept or act in accordance to the organizational goals of e-HRM/HRIS.*

Deployment of e-HRM/HRIS: *Appropriately move to a position of readiness for using e-HRM/HRIS.*

Outcomes of adoption and deployment for e-HRM/HRIS: *Observable and noticeable indicators of change for e-HRM adoption and deployment such as services provided by HR department and HRM competencies (derived from Hendrickson, 2003; Strohmeier, 2007).*

Figure 1 definition of terminology used for research objective, key question and sub questions

1.3 Research Plan

In order to meet up with the research objective, the key question and the sub questions, this thesis shall require a research plan describing how the necessary data is retrieved. As a first source for the research plan, this thesis will be split into two body parts, the *literature body part* which sets the direction and methodology used for the *field research body part* which actually addresses the sub questions, key question and research objective. The literature body part is intended to provide a solid foundation for the actual research conducted. Hence the abstract and vague terms used thus far, shall be operationalized in order to understand and imply the constructs of the terminology. Moreover a general understanding should be provided for the affect of country differences on the adoption and deployment outcomes for e-HRM. The literature study conducted shall provide the following results:

- A clear definition of the concept e-HRM/HRIS.
- A conceptual theoretical framework which identifies the different angles involved within the process of adoption and deployment for e-HRM/HRIS.

Subsequently the methodology will be chosen which shall be used to obtain the data necessary for the key question and sub questions to be answered. Additionally the literature studied shall be leading for the choice of the methodology, as the literature indicates the boundaries and direction for the thesis scope and thus indirectly limits the possibilities for the research strategy. Hence a decision will be made and the UTOS (i.e., unit of analysis, treatment, outcome, and setting) as well as the research methodology shall be operationalized in chapter 3.

The literature being studied shall be obtained by searching in the databases of Google Scholar, Scopus, Picarta and the Web of Science database. The following activities shall be conducted to find qualitative and relevant literature for e-HRM:

- Inclusion and exclusion of articles on selected keywords.
- Keywords; e-HR(M), innovation, (inter)national business(es), angles, organizational change, human resource (management), information systems, adoption, national culture, deployment, types, goals, socio-cultural forces, organizational settings, country differences, socio-economic forces, outcomes, socio-political forces.
- The relevance of the articles based on their titles, abstracts, journal of publication (preferably in the Financial Times journal top 40, depicted in appendix 1) and publication date (preferably 2000-present).
- Selection of the articles based on full text.

After the methodology has been chosen, the results shall be obtained by investigating (inter)national businesses. The treatment/event investigated in this thesis shall be the adoption and deployment outcomes of HRIS (i.e., dependent variable) and the affect of country differences on the adoption and deployment process (i.e., independent variables). The variables measured shall derive from the theory studied and the setting of the experiment, consequently presented in chapter 2 and 3.

Via the research the following results shall be achieved:

- An in-depth view on the affect of country differences on the adoption and deployment outcomes for e-HRM.
- Consequences for businesses around the world, deriving from the results of the research.

Consequently the activities mentioned so far have been split up in sequential steps and are summarized in a time schedule which can be retrieved in appendix 2.

Summarizing the introduction chapter, the research objective, key question and sub questions have been formulated and presented. In order to meet up with the key question, sub questions and research objective, this thesis shall first provide a bundling of theoretical frameworks distracted from scientific literature. Chapter 2 shall focus on the theoretical framework which will provide an overview of relevant theory on the thesis scope and shall result into a framework for analysis and design for the research topic thus operationalizing the "first steps" for the thesis content. Hence the first boundaries for the thesis topic are conducted but yet it is not sufficient to choose the methodology used for data obtainment. Chapter 3 shall therefore elaborate on the methodology being used and present a detailed design for data collection and analysis. Also the final operationalization for the setting of this thesis shall be considered. Consequently the research plan for this thesis - presented in chapters 1, 2 and 3 - shall be carried out and shall provide the thesis with results. The results of the empirical data analysis shall be presented and elaborated in chapter 4. The results of the thesis shall then be used to summarize, conclude and discuss the research objective, key question and sub questions of this thesis, which shall be presented in chapter 5.

2. Theoretical Framework

The theoretical framework will direct, view and set the subjects mentioned in the key question and sub questions. In essence, this chapter should provide a general understanding about the affect of country differences on the adoption and deployment outcomes for e-HRM. Before constructing the theoretical framework, insights will have to be provided about the mechanism and concept of information systems and HRM. Therefore paragraph 2.1 shall explore the impact of the terminology behind the many concepts of information systems regarding HRM. Subsequently the concept of information systems needs an operationalization into a design or "e-HRM angles" which will be identified in paragraph 2.2. Paragraph 2.3, 2.4, 2.5 and 2.6 shall investigate, provide and explain the possible elements affecting the adoption and deployment process of e-HRM. Each paragraph shall elaborate on a different angle identified in the e-HRM concept. Conclusively paragraph 2.7 shall bundle the concepts found - relating to information systems regarding HRM - clarify the expectations of the variables and consequently present a theoretical angle framework applicable for the preliminary boundaries regarding the data collection for this thesis.

2.1 The Concept of Information Systems Regarding HRM

As discussed previously, the central focus of this thesis shall be on HRM information systems. To make the concept of information systems more understandable, a coherent and clear definition is needed for the concept of HRIS, e-HRM and the like since the current theoretical scope on this topic is scattered through various books, papers and journals (i.e., scientific and practical) and these books, papers and journals do have different perspectives on the concept of e-HRM (Lawler and Mohrman, 2003; Ruël et al., 2004; Strohmeier, 2007). A preliminary concept of information systems has already been presented in figure 1, namely *"a set of interrelated components that collect, retrieve, process, store and/or distribute information to support decision making and control in an organization"* (Laudon and Laudon, 2006). In this view HRM processes are supported and distributed throughout the organization via the information system in use. HRM processes in this view are translated in HRM policies which are implemented as HRM practices by the HR department or other organizational members concerned with HR policies (Wright and Boswell, 2002). The distinction between HRM policies and HRM practices is essential. HRM policies refer to the organization's intangible stated intensions of its various "employee management activities" i.e., the vision of the organization's top management on HRM. HRM practices are the tangible functioning activities as experienced by the employees (Wright and Boswell, 2002). Consequently information systems should translate the HRM policies into HRM practices, fulfill and ensure the smooth operation of the HRM practices and the maximization of organizational integration, flexibility, quality of work, employee commitment, in order to improve organizational performance (Boselie, Dietz and Boon, 2005).

Considering the root of HRIS, it is noted by Kavanaugh et al. (1990) that during the last decade information technologies have stimulated the evolution within the concept of HRIS. The HR function is one of the early adopters of information technologies (Bondarouk and Ruël, 2009). In the 1980s HRIS policies and practices began to adopt and deploy information technologies, primarily for the administrative processes and payroll processing (DeSanctis, 1986). Nowadays the focus of HRIS and information technologies has shifted to more strategic applications of an organization like recruitment management and talent acquisition services, performance management, compensation management, self service technologies and HR planning alignment with the organization's planning (e.g., Lengnick-Hall ad Moritz, 2003; Bell et al., 2006; CedarCrestone, 2006; Panayotopoulou, Vakola

and Galanaki, 2007). Along the path HRIS and information technologies have paved, many definitions have been provided. Although most journals published on HRIS and information technology differ on the definition, most of the publications indicate that HRIS and information technology provide a portal or service center which enables managers, employees and HR professionals to view, extract or alter information directed at implementation of HRM policies and managing of HRM practices within the organization. However the literature is not unanimous in all aspects i.e., the methods to provide the technology and the affected groups of actors. Various authors indicate internet as exclusive venture of HRIS technology (e.g., Keebler and Rhodes, 2002; Lengnick-Hall and Moritz, 2003), others define a more broad range of venturing like web-based channels (Ruël et al., 2004). Also the affected and involved actors is directed at diverse level, i.e., the HR department (Haines and Petit, 1997; Bell et al., 2006) or the corporate organization (Lengnick-Hall and Moritz, 2003; Ruël et al., 2004; Strohmeier, 2007; Strohmeier, 2009). Since many journals are published on HRIS and information technology, one is not likely to be astonished with the wide variety of terms used to refer to the bundling of information technology and HRIS, such as e-HRM, HR intranet, web-based HR, computer-based human resource management systems, virtual HR and HR portals. The term HRIS is initially defined by DeSanctis (1986) as *"a specialized information system within the traditional functional areas of the organization, designed to support the planning, administration, decision-making and control activities of HRM"*. As indicated by various journals (Ruël et al., 2004; Strohmeier, 2007; Bondarouk and Ruël, 2009) the definition of DeSanctis (1986) narrows the scope to the HR position and neglects the adoption and deployment of the information systems in the corporate organization. As various studies indicate the adoption and deployment of an information system is crucial for successful innovation or implementation of HRM policies and practices regarding information systems (Ruël et al., 2004; Bell et al., 2006). Later definitions for HRIS by Haines and Petit (1997) gave more attendance to the adoption but remained relatively small in magnitude and reach of the results by implementation of information systems. The term e-HRM is therefore preferably used by various authors (Ruël et al., 2004; Strohmeier, 2007; Bondarouk and Ruël, 2009) since this considers a wider range in magnitude and reach of information systems. This thesis also assumes a magnitude and reach of information systems larger than merely the HR position but at the same time only measures the affect of country differences on HR perceptions for adoption and deployment outcomes of e-HRM instead of various perceptions and roles of different departments. Although this thesis shall use the term e-HRM, it shall not measure the different deployments of the various departments involved (e.g., HRM, IT, administrative, management departments). Rather it shall explore the "corporate governance" involved with the concept of e-HRM. This is argumented by the yet unexplored focus regarding e-HRM and country differences. Investigation of various and scattered departments are likely to result in a blurred vision and at this time offers a too wide scope since country differences are not (yet) assumed to play a significant role for the outcomes of e-HRM adoption and deployment.

In essence, e-HRM is a combination of four aspects (Bondarouk and Ruël, 2009). First the content of e-HRM which implies the support of all HR practices by information technology (henceforth referred to as IT). Also it is the other way around; any type of IT can support all HR practices. Different types of IT (e.g., internet, intranet, enterprise resource planning) and HR practice (e.g., recruitment, training, compensation) should therefore not be neglected in the content of e-HRM. The second aspect is the implementation of e-HRM which embodies the process of adoption and use of e-HRM by organizational members. As identified by Lengnick-Hall and Moritz (2003) diffusion and misappropriation in the implementation of e-HRM are likely to lead to "failure" in the

implementation phase. The third aspect involved is the targeted employees and managers. As advocated by Ruël et al. (2004) e-HRM is involved in multiple layers of disciplines in the organization. Hence research results (e.g., Lengnick-Hall and Moritz, 2003; Ruël et al., 2004) supports the suggestions of e-HRM benefits notable for multiple actors involved, consequently increasing the efficiency of the organization as a whole. Research regarding e-HRM should therefore not narrow their scope exclusively to the HR position but rather widen their scope to the HR staff, employees and managers involved. The fourth and final aspect concerns the e-HRM consequences which implies that one or more actors involved in the e-HRM process are willing to exchange money for the value received from e-HRM (Lepak, Smith and Taylor, 2007; Strohmeier, 2009). As a remark Lepak et al. (2007) note that the monetary fund's exchanged must exceed the producer's costs (e.g., time, training, effort, money, meetings dedicated to e-HRM projects) in order to be a significant consequence and to increase the likelihood of e-HRM becoming adopted and deployed. The four aspects identified by Bondarouk and Ruël (2009) are displayed in figure 2.

Figure 2 four aspects of e-HRM

2.2 e-HRM Angles

The four aspects identified to be part of e-HRM (Bondarouk and Ruël, 2009) can be used to observe the actual adoption and deployment of e-HRM by businesses. However this thesis is dedicated to the outcomes of e-HRM adoption and deployment and the assumed affect by country differences. Although Bondarouk and Ruël (2009) consider the consequences, they are directed to originators of change. The view of Bondarouk and Ruël (2009) is therefore quite a contrast with the definition of outcomes for this thesis. Rather this thesis assumes outcomes as observable and noticeable measures of change for e-HRM adoption and deployment. Moreover the four aspects mainly concern the actual adoption and deployment of e-HRM whereas this thesis regards the origins of the adoption and deployment of e-HRM i.e., the assumed country differences. Hence this thesis proposes four different angles for e-HRM which shall facilitate the recognition for the affect of country differences on the adoption and deployment outcomes for e-HRM. These four angles are *corporate governance, organizational force, e-HRM technology* and *outcomes* as displayed in figure 3.

Figure 3 angles of e-HRM adoption and deployment process

The first angle, corporate governance, is assumed to provide a structure which enables identification of varieties in market mechanisms (Hall and Soskice, 2001). Hence the market mechanisms referred to are assumed to develop a mindset for the governance which potentially affects the adoption and deployment outcomes for e-HRM. The different stakeholders - involved in the business operating field - are operating from their own interests, directions, control, rights and responsibilities which could align or conflict with the interest, direction, right, control and responsibilities of other stakeholders in the business operating field. The market mechanism could identify the variety in structure through which the company's objectives, interests, direction and control is achieved and monitored. In essence, the corporate governance is assumed to define relationships between a company's management, its employees, shareholders and other stakeholders which could facilitate the recognition of country differences in market mechanism varieties.

The second angle (i.e., organizational force) involves the espousal of the HRM setting within the organization. Although it is the aim of this study to observe if country differences affect the e-HRM adoption and deployment outcomes, still it would be biased to omit closely related angles as organizational forces. The assumed balance or unsteadiness of interests, directions, rights, control and responsibilities of stakeholders in the business operating field, have to be developed to and fitted in a specific organizational force which defines among others the HRM philosophy and thereby likely to affect e-HRM adoption and deployment outcomes. Deriving from the corporate governance angle, the political economy variety and socio-cultural force can provide a preliminary indication for the importance of HRM in the business operating field. The specification of the angle organizational force is likely to provide a better insight in the different country approaches to HR e.g., the relative importance, direction, rights, control and responsibilities of HR per market mechanism variety. Hence the predictions - regarding the adoption and deployment outcomes for e-HRM - have more premises for a solid foundation framework for the e-HRM process.

The e-HRM technology angle specifies the application/type of e-HRM that is implemented in a business. Hence a preliminary indication is provided regarding the justification for the assumption that country differences have an effect on adoption and deployment outcomes of e-HRM. However the e-HRM technology applied in a business could be regarded as premise for the e-HRM expectations and hence the dependent variable - i.e., observable and noticeable measures of change for e-HRM adoption and deployment outcomes - is not yet subjected to this thesis. The outcomes

angle is therefore incorporated in the framework and is assumed to provide observable and noticeable measures of change for e-HRM adoption and deployment outcomes.

In essence, the dimensions likely to be observed in the four angles identify the background of the e-HRM user and e-HRM direction, and could therefore indicate the possible outcomes for adoption, diffusion, misuse, employment of e-HRM, as indicated by numerous studies (e.g., Keebler and Rhodes, 2002; Ruta, 2005; Bell et al., 2006; Smale and Heikkilä, 2009). The dimensions of the angles are likely to predict the mechanism of an e-HRM framework and shall be studied onwards in the following paragraphs.

2.3 Corporate Governance

The former paragraph identified four angles which embody several dimensions likely to affect the adoption and deployment outcomes of e-HRM. Consequently this paragraph shall explore the corporate governance angle. Before heading on however the term corporate governance should be operationalized, enabling a direction to explore the dimensions for the corporate governance angle. The corporate governance is assumed to discontinue the exclusive concernment of HR and management for e-HRM but also - especially regarding country differences - concerns the other stakeholders (i.e., government, suppliers, customers, competitors, and so on) in the business operating field. In essence, the corporate governance's philosophy concerning e-HRM adoption and deployment outcomes should be in accordance to the market mechanisms and thus enabling a fit between e-HRM adoption and deployment outcomes and the market mechanisms. Hence the corporate governance is expected to affect the design of the e-HRM adoption and deployment outcomes by means of values, norms and corporate mindsets which set boundaries of what direction, inclusions, exclusions and applications e-HRM should serve.

Additionally the following paragraphs frequently refer to "basic" and "advanced" e-HRM direction. In this context a "basic" e-HRM direction implies the support for routine day to day practices, mainly retrieved in the administrative area. HR practices referred to are collecting organizational employee information, payroll and personnel data administration. Contradictory an "advanced" e-HRM direction concerns the long-term decision making support for HR practices. This direction concerns the planning and forecasting of HR practices such as knowledge transfer, organizational change processes, strategic re-orientation of HRM, strategic competence management and HR planning (derived from Lepak and Snell, 1998; Lengnick-Hall and Moritz, 2003).

2.3.1 Political Economy Varieties

Regarding the political economy variety variable, it is assumed that the presence of different natures of economic systems - from the businesses perspective - relates to the different mechanisms observed in the wider corporate governance angle (Hall and Soskice, 2001). If the nature of an economic system reflects the institutional structure of a business and it is assumed that different national structures (i.e., political economy variety) exist, than different institutional structures are expected for businesses operating from various types of political economy systems (derived from Hall and Soskice, 2001). Hence these different institutional structures are expected to facilitate recognition of differences in attitude, behavior and mindset regarding the type of coordination for exchange of products and/or services and social preferences for the corporate governance. Consequently the different institutional structures are assumed to indicate and affect the mindset towards e-HRM e.g., the importance of e-HRM within the corporate strategy by the business,

corporate goal alignment with e-HRM, aligning the mindset of the corporate strategy with e-HRM, and so on, thus likely to result in different adoption and deployment predictions for businesses regarding the e-HRM direction. Variables believed to affect the political economy variety are numerous (Hall and Soskice, 2001). Hence this thesis selects variables likely to result in observable and measurable variables, and in addition the variables selected are also ideal types of the spectrum. Selection around the ideal type of the spectrum facilitates the recognition and observation of the variables and thereby the indication of country differences. The variables selected are nature of economy and the social preferences for vocational training, educational systems and corporate governance (Hall and Soskice, 2001). The nature of economy is selected since this is the most likely factor which will identify country differences. According to recent findings of Estevez-Abe (2009), the differences between the natures of economy become more apparent and moreover the gap is increasing, between the outer sides of the natures of economy. The variable *social preferences for vocational training, educational systems and corporate governance*, is selected due to its resemblance for the HRM philosophy. Although it is recognized that vocational training and development is one of the many aspects of HR, still it does provide an adequate indication for the "system" of HRM practices (Gooderham, Nordhaug, and RIngdal (1999).

Hall and Soskice (2001) indicate two natures of economic systems *liberal market economies* (henceforth referred to as LME) and *coordinated market economies* (henceforth referred to as CME). LME´s are regarded as neoclassical economies (Hall and Soskice, 2001). Hence it is expected that LME's are coordinated through competitive market arrangements, and as a result the outcome of business behavior is provided by demand and supply condition in competitive markets. Market relationships are described by arm's-length contracting of goods and/or services in a context of competition and formal contracting (Hall and Soskice, 2001). Examples of LME's are U.S.A., U.K. and Australia (Hall and Soskice, 2001). In essence, LME's feature short-term relationships which tend to invest more extensively in switchable assets whose value can be realized if diverted to other purposes. Hence LME's trust on the competitive market as mechanism and therefore emphasize less on achievement of (long-term) competitive advantage via e.g., vocational training and education systems which enables development of labor skills. Rather businesses in LME expect that competitive advantage could be achieved by controlling, interfering and managing an effective and efficient production of products and services (Hall and Soskice, 2001). Contradictory businesses in CME are regarded as mutual cooperation's among multiple actors (Hall and Soskice, 2001). Hence CME's are assumed to be coordinated by non-market and collaborative relationships. Consequently the outcomes of a business in CME are provided by the strategic interaction with other stakeholders. The strategic interaction is generally the follow-up of extensive relational contracting, network monitoring based on the exchange of private information inside networks and more reliance on collaborative relationships to build the competencies of the business. Hence these preferences for coordination are in sharp contrast of the competitive, market-conform and equal position of all stakeholders directed and controlled by the management board (i.e., every employee can be "replaced" by any other employee, just like suppliers, clients, standardization rules, and so on), recognized as features of LME's. Examples of CME's are Sweden, Japan and Germany (Hall and Soskice, 2001). Hence it should be recognized that businesses in CME generally rely on long-term relationships, which tend to invest more extensively in relational contracting with stakeholders, in order to realize the incomplete contract to a complete contract. In the view of CME's complete contracting is too costly or impossible thus parties settle for relational agreements which frame their

long-term relationship. Hence CME's are assumed to invest and emphasize heavily for the development of the employee skill level. Also the development of the employee skill level is expected to lead towards a competitive advantage for businesses e.g., the combination of firm-specific labor skills and industry-specific labor skills is not likely to be framed by competitors due to the unique employee skills (Hall and Soskice, 2001). Hence CME generally disregards the competitive advantage of an effective and efficient market mechanism for managing and regulating products, since this will increase competition, and thereby will disrupt the development of the employee skill level (Hall and Soskice, 2001). Hall and Soskice (2001) note that the two types of economic systems identified (i.e., CME and LME) are ideal types at the poles of a spectrum. In other words, there is a wide variety within the characteristics of CME's and LME's, hence only the characteristics are provided which could explain certain mechanisms within the corporate governance angle. An illustration of the small differences around the spectrum is for example, Germany who is assumed to prefer an industry-based coordination, while Japan is expected to favor a group-based coordination. However according to Hall and Soskice (2001) both economies can be characterized as a coordinated market economy.

The social preference for vocational training of employees and educational systems is also assumed to affect the political economy variety (Hall and Soskice, 2001). Put bluntly, the vocational training and educational system for employees provides an indication for the investment in additional skills of human capital which relates to specific firm skills or industry skills. Although both natures of economy (i.e., LME and CME) are determined to invest in vocational training and educational system, the expectations for the realization of the development differ. As merely mentioned, LME's tend to invest in assets whose value can be realized in the short-term. Moreover the assets invested in LME are preferred to realize her value if diverted to other purposes. Hence it is expected that businesses in LME formally evaluate the vocational training and educational system immediately or some months (i.e., short-term) after the training. The latter assumption is a preliminary indication of calculative HRM practices as identified by Gooderham et al. (1999). Gooderham et al (1999) distinguished two "systems" of HRM practices:

- *Calculative HRM practices* → concerns HRM practices which view employees as means in the achievement of goals. Hence calculative HRM practices emphasize on efficiency at the individual level by direct application and evaluation of individual appraisals and reward systems.
- *Collaborative HRM practices* → concerns HRM practices which regard employees as participants in the achievement of goals. Hence collaborative HRM practices emphasize on commitment, communication and partnership of the collective by communicating written and formal briefings, statements and mission of the business.

Croucher, Gooderham and Parry (2006) cross linked country differences for the nature of economy to the "systems" of HRM practices. Hence Croucher et al. (2006) stated that calculative HRM practices are more likely to become observed in LME, whereas collaborative HRM practices are more likely to become observed in CME. Following the logic of Hall and Soskice (2001), regarding the distinction in nature of economy, the findings by Croucher et al. (2006) should be common sense e.g., collaborative HRM practices indicates several forms of relational contracting by committing and participating employees in their HRM practices and thus the interrelation between calculative HRM practices and LME should be noted. Moreover Hall and Soskice (2001) argue that labor unions are weakly present in LME's due to the overall preference in LME to arrange employee HRM policies at

the individual level. Consequently businesses in LME are enabled to control the basic pay and other labor regulations at an efficient level which is suitable for the preferences of the business manager or CEO (Hall and Soskice, 2001). In CME a business tends to adopt national/industry-wide collective bargaining and is thereby spreading the "cost of control" for vocational training and the educational system. Hall and Soskice (2001) indicate that the preference for long-term development of the labor force skills, consequently results in a higher skill level which implies a higher level of labor costs, as a token of gratitude by the businesses for the investment of the employee in their skill level. The higher labor costs for businesses in CME are preferred to be arranged at a universalistic level, in order to ensure that the development of higher skills by businesses does not result in poaching of her employees by businesses which face low labor costs. Hence the business with low labor costs can free-ride from the investment by other businesses in the labor skills. In order to prevent the possible free-ride/poaching of employees, businesses in CME generally prefer arrangement of the basic pay and other labor regulations at a universalistic level (Hall and Soskice, 2001).

When considering the affect of the *nature of economy* and *social preference for vocational training and educational systems*, for the prediction of the e-HRM direction, it is assumed that a "basic" e-HRM direction focuses on the short-term HRM practices, which is expected to be more prevalent for businesses in LME, rather than long-term decision making support for HRM practices i.e., "advanced" e-HRM direction. Moreover the general favoring in LME for the evaluation of the labor skill development immediately after the training is not likely to facilitate the long-term decisions for HRM such as knowledge transfer and strategic re-orientation of HRM. An "advanced" e-HRM direction is more likely to be implemented by businesses located in CME, due to the presence of inter-corporate networks favoring relational contracting. Generally businesses in CME prefer a skilled workforce, and the businesses thereby regard employees as partners in the achievement of goals. Contradictory businesses in LME regard their employees as means for the goals achievement. The focus on long-term decision making support for HRM practices - i.e., "advanced" e-HRM direction - is more likely to be recognized and appreciated in an environment which is coordinated by collaborative relationships valuing and exchanging information in order to satisfy most of the directions, rights, responsibilities and control of the involved stakeholders. In essence, it is expected that *"an "advanced" e-HRM direction has a greater likelihood to be adopted and deployed by a country characterized as CME, and thereby assumed to favor collaborative HRM practices"*. Contradictory it is also expected that *"a "basic" e-HRM direction has a greater likelihood to be adopted and deployed by a country characterized as LME, and thereby assumed to favor calculative HRM practices"*.

2.3.2 Socio-Cultural Force

Many books and journals have researched and justified the view that socio-cultural variables as human capital, social capital and national culture can significantly affect the HRM setting (e.g., Hofstede, 1984; Ruta, 2005; Smale and Heikkilä, 2009). Derived from these findings, the socio-cultural force is expected to predict the attitude towards the e-HRM direction and the e-HRM adoption and deployment outcomes, since differences in the socio-cultural force are believed to result in different mindsets and emphasize regarding the HRM philosophy. Variables assumed to affect the socio-cultural force are human capital (Hall and Soskice, 2001), social capital (Redding and Witt, 2007) and national culture (Hofstede, 1984).

The variable human capital refers to tacit and explicit knowledge which provides individuals with increases in their "natural" abilities and talent, leading to more productive and efficient potential

activity of the individuals i.e., employees (Hall and Soskice, 2001). Hence new profitable opportunities are better perceived by employees who are characterized as high human capital. Employees characterized by high capital subsequently are assumed to better deploy e-HRM and thereby overcome the illiteracy the employee potentially can have with e-HRM. Further the investment made in human capital can affect business choices in various ways (Davidsson and Honig, 2002). For example, over-investment potentially leading to high values for human capital could decrease the need for re-organizing the human capital in new innovative ways, such as e-HRM, while under-investment may persuade the process of e-HRM. Although the former predictions are a logic consequence from the understanding of human capital, the roots of human capital remain neglected by the former assumptions. The roots for the preference for a low or high value of human capital are still ambiguous. Hence characteristics as circumstances on the labor market and dedication to invest in human capital are - for the purpose of this thesis - more interesting to regard as the variables for human capital.

As Hall and Soskice (2001) noted, the need for a high or low value of human capital could be explained by the political economic variety (i.e., subparagraph 2.3.1). Additionally Hall and Soskice (2001) state that businesses in CME regard their labor force as essential i.e., businesses in CME expect that their human capital is capable of facilitating the achievement of competitive advantage. Businesses in CME therefore prefer a high general skill level for their labor force. Hence transferring of these labor skills to competitors is not likely to be warranted due to the high investment made in human capital. A high transfer rate of the human capital implies that other businesses profit from the time, effort and costs from the business developing the human capital, without making any costs (Hall and Soskice, 2001). In order to block competitors from poaching/free riding of her employees, businesses in CME are likely to prefer stable labor relations and a low transfer rate of human capital. In order to ensure the stable labor regulations, a high social protection and social investment in labor skills is desired, wherein the labor skills formation is tightly coupled to the labor market (Estevez-Abe, Iversen and Soskice, 2001). On the contrary, businesses in LME generally have a preference for transferable skills of their human capital. Hence a low labor skill level is preferred which facilitates the poaching and leaving of employees, and buying and integrating of other businesses. As a consequence, a high transfer rate of the human capital should be facilitated. Therefore it is assumed that businesses in LME are more likely to develop generic labor skills. If a business in LME develops specific labor skills, it is not likely to become a sustainable competitive advantage due to the coordination by arm's-length contracts in a competitive context. If the employees - enabled with a specific labor skill level - are poached, the time, effort and costs of the business developing the specific labor skills shall diminish, hence deteriorating the investment made, which shall eventually weaken the competitive position of the business developing specific labor skills (Hall and Soskice, 2001). In essence, the setting of generic or low labor skills facilitates businesses in LME to work as efficient as possible (Hall and Soskice, 2001). Businesses located in LME therefore prefer low labor regulation likely to result in an unstable labor relation, where a high labor rotation is enabled (Estevez-Abe et al., 2001). Businesses in LME are therefore more likely to adopt a weak social protection and weak private skills investments for their human capital. Consequently the skills formation system is weakly coupled to the labor market (Estevez-Abe et al., 2001). The work by Estevez-Abe et al. (2001) is presented in figure 4, whereas the following dimensions are recognized:

- *Unemployment protection* → Determines the speed of job rotation on the labor market i.e., is the employee willing to risk unemployment thus are the skills of the employee applicable in other businesses and is the employer looking for a stable or loose labor force relation.
- *Employment protection* → Determines the dedication to invest in firm specific skills by the employee/employer.

Unemployment protection → Employment protection ↓	High	Low
High	**Industry specific firm specific skill mix** E.g., Germany → CME.	**Firm specific skills** E.g., Japan → CME.
Low	**Industry specific skill mix** E.g., Denmark → CME although the nature of economy also indicates "typical" LME characteristics.	**General skills** E.g., U.S.A. → LME.

Figure 4 social protection and predicted skill profiles

The grouping of unemployment protection and employment protection is likely to determine the skill level of the human capital in a country or business as indicated in figure 4 (Estevez-Abe et al., 2001). For this thesis it is assumed that a business with a high employment protection is more likely to adopt and deploy an "advanced" e-HRM direction, due to the emphasis on the human capital and the willingness of employers and employees to invest in industry specific skills. Hence it is assumed that e-HRM could premise the protection of the skill level, and thereby reducing the speed of job rotation. E.g., redistribution of HR practices as a consequence from the adoption and deployment of an "advanced" e-HRM direction provides the employees with more responsibilities and knowledge of the HR practices. Hence dedication towards development of (firm-specific) skills is likely to be a premise - in the setting of high employment protection - for a successful adoption and deployment outcome of the "advanced" e-HRM direction. A business characterized by a low employment protection is assumed to provide less willingness to adopt an "advanced" e-HRM direction, since the business expects less willingness of employers and employees to invest in firm-specific skills. Hence it is expected that "*employment protection will have a significant influence on the adoption and deployment outcome of an "advanced" e-HRM direction*".

Another factor identified to affect the socio-cultural force is social capital (Lin, Ensel and Vaughn, 1981; Portis, 1988). Social capital is identified to be associated with the benefits one can extract from their social networks, structures and membership (Lin et al., 1981; Portis, 1988). Hence social networks provided by extended connections with family or organizational relationships, can enhance the effects of education, experience and financial capital (Portis, 1988; Coleman, 1990). The former definition for social capital is rather broad and shall be diminished to the effects of exchange ties on the likelihood to adopt and deploy e-HRM. Exchange effects in this context vary from provision of concrete resources (e.g., providence of training to the labor force by a mother company to her daughter company) to intangible resources (e.g., information about new potential ways to captivate HRM). This thesis is interested in the relative strength or existence of the social ties and whether these social ties are meaningful and consequential (Burt, 2000). Social capital is a potentially useful resource for the enhancement of internal organizational trust through the bonding of actors, as well as by bridging external networks in order to provide resources (Redding and Witt, 2007). As noted by Redding and Witt (2007), social capital is considerably enhanced by trust of an organization/society

in their stakeholders as a result of transactions, information exchange, obligations and threat of critique. Hence the trust should identify a better understanding of rationality to the organization's capability of "catching up" to new developments such as e-HRM. Weak ties - i.e., loose relationships between individuals - could be useful in obtaining information that would otherwise be too costly to locate or unavailable (Burt, 2000). Hence "innovative business directions" are more likely to become nascent in the environment with weak ties, since the network of one is extended by linking individuals together and these linkages provide an interface for information exchange. Businesses are thus more likely to explore, learn and potentially implement innovative ways for HRM, such as e-HRM. Contradictory to the latter, an environment identified with relative strong ties - i.e., close relationships between individuals - is assumed to have a smaller likelihood of exploring, learning and potentially implementing new innovative ways for HRM such as e-HRM. As a result it is expected that "*weak ties in the social capital indicate a greater likelihood for adoption and deployment of e-HRM".*

The national culture does have a wide array of definitions. Most of the definitions - regarding national culture - usually describe a shaping process, and is for the purpose of this thesis stated as *"members of a group or society that share a distinct way of life with common values, attitudes and behaviors that are transmitted over time in a gradual, yet dynamic, process"* (Dowling et al., 1994). More explicit these members are - in the context of national culture - part of the same nationality and can be categorized in certain cultural dimensions (Hofstede, 1984). The work of Hofstede (1984) shall be used due to its explicitness in the outer scales for the dimensions identified. The journal by Hofstede (1984) explains national culture via five cultural dimensions:

- *Power distance index* → Extent to which less powerful members of the society accept and expect that power is distributed unequally among the cultural group.
- *Individualism/collectivism* → Degree to which individuals are integrated into the cultural group.
- *Masculinity/femininity* → Distribution of roles between genders in the cultural group e.g., masculinity refers to assertive and competitive characteristics whereas femininity refers to modest and caring characteristics.
- *Uncertainty avoidance index* → Society's tolerance for uncertainty and ambiguity in unstructured situations.
- *Short-term orientation/long-term orientation* → Short-term orientation concerns values as respect for tradition, fulfilling social obligations and protecting one's "face", whereas long-term orientation refers to values as thrift and perseverance.

In addition Hofstede (2007) recently suggested a sixth factor at work for a better guidance through the "labyrinth" of national culture, dependence on others. The sixth factor covers the need for guidance from parents and other authority persons, and relationships with siblings and other relevant in-group members, and is suggested to explain the score differences among respondents of Hofstede's (1984) research (Hofstede, 2007). In essence, Hofstede (2007) argues that the national background affects and constrains our ability to recognize important cultural differences, hence providing a solution for the findings by Smale and Heikkilä (2009). The journal by Smale and Heikkilä (2009) study the difference in perception and possible "misfit" between the local adoption and deployment outcome of e-HRM and the global standardization outcome of e-HRM adoption and deployment. Smale and Heikkilä (2009) argue that the (global) mother business is biased in their e-HRM adoption and deployment approach and omits the possibility to recognize global differences for sister plants. Hence the variable national culture could affect the mindset towards a "basic" or

"advanced" e-HRM direction as indicated by Smale and Heikkilä (2009). However as Hofstede (2001) notes and thereby acknowledges some of the critiques on his study, national culture can and does gradually change. The change drivers for national culture are not (yet) widely acknowledged, and obviously are very difficult to tackle due to the many variables potentially interfering and biasing the relationship between change drivers and national culture (Harris, 2008). Hence national culture could obviously interfere and result in different adoption and deployment outcomes for e-HRM as the study of Smale and Heikkilä (2009) confirmed. However if the national culture is considered as unit of analysis for a study then units should be selected that vary along the spectrum of interest (i.e., five dimensions identified by Hofstede, 1984). Based upon the findings by Estevez-Abe (2009) - i.e., indicating that the gap between LME's and CME's increases - this thesis assumes that the political economy variety is more likely to be observed and thereby interfere with the e-HRM direction. Therefore the political economy variety shall be the spectrum of interest alongside the human and social capital. This thesis shall thus neglect the affect of national culture on the adoption and deployment outcome of e-HRM.

2.4 Organizational Force

The organizational force is, as the term indicates ,directed to the organizational setting of the business. Although the organizational setting is not related to country differences, still the dimensions of organizational force could provide a better insight in the adoption and deployment outcome for e-HRM. The size and sector of a business could for example, facilitate the exploration of differences between large and small organizations, as well as the different strategic directions of businesses and the strategic position of HR in the organization. These organizational dimensions are thus expected to facilitate the understanding of the e-HRM process. Hence as predicted by several journals (e.g., Ruël et al., 2004; Strohmeier, 2007; Strohmeier and Kabst, 2009), the organizational force is capable of affecting the adoption and deployment outcomes of e-HRM. Moreover the expectations - regarding the adoption and deployment outcomes for e-HRM - have more premises for a solid foundation framework of the e-HRM process. This paragraph shall provide a more in-depth explanation for the dimensions of the organizational force.

2.4.1 Size of Organization

Strohmeier and Kabst (2009) advocate that size of an organization can affect adoption and deployment outcomes for e-HRM. Large organizations are expected to have more facilitating characteristics to absorb the shocks and bumps (i.e., risks) concerning the adoption and deployment of e-HRM. E.g., large businesses have more access to financial capital and human resources, and moreover large businesses are more enabled to mobilize the financial capital and human resources necessary for e-HRM implementation (Thong, 1999). Subsequently large businesses are believed to have a greater necessity for e-HRM, due to the wide span of control required for the large scale of employee operations, associated with a large organization (Thong, 1999). The studies of Bartram (2005) and Strohmeier and Kabst (2009) tested and confirmed the former view of large organizations, which have a greater likelihood to adopt and deploy e-HRM. However these studies (Thong, 1999; Bartram, 2005; Strohmeier and Kabst, 2009) did have a blurred understanding for the size of an organization. The size of an organization can be split into two dimensions i.e., financial resources (revenues) and human resources (number of full time equivalents). Although interrelation between the two dimensions is possible, still it does not automatically imply that an organization with a large scale of full time equivalents also is provided with a high revenue level. Although the studies of Thong (1999), Bartram (2005) and Strohmeier and Kabst (2009) did not explicitly define the variable size, large organizations (i.e., in both financial resources and human resources) are expected to perceive fewer constraints in risk-taking towards adoption and deployment of e-HRM. Hence it is

expected that *"large organizations have a greater likelihood for adoption and deployment of e-HRM then smaller organizations"*.

2.4.2 Industry Type

Panayotopoulou et al. (2007) discovered that adoption and deployment outcomes for e-HRM differ by primary industry type. Hence the study by Panayotopoulou et al. (2007) indicates that specific industry characteristics can affect the outcome of adoption and deployment, the user expectations, and the user experience for e-HRM. E.g., technology intensive industries are more likely to adopt and deploy an "advanced" e-HRM direction - i.e., the long-term planning and forecasting of HR practices such as knowledge transfer - due to the factor that e-HRM is viewed as a representative image of new technology, which is identified to be important in technology intensive industries (Galanaki, 2002). Businesses in for example, the high-tech manufacturing industry are keen to show early adoption of new technology due to the fear of staying behind, which is "a mismatch" with their image. Also sectors identified to collectively start early technology adoption, consequently introduce a new way of working which facilitated the employee's attitudes toward e-HRM adoption and deployment (Panayotopoulou et al., 2007). In essence, the type of primary industry is likely to indicate the facilitating factor for adoption and deployment of e-HRM. Hence it is expected that *"technology intensive industries as high-tech manufacturing provide a greater likelihood for the adoption and deployment of e-HRM"*.

2.4.3 Strategic Direction

The dimension strategic direction is capable of demonstrating a linkage between the strategic business direction and HRM philosophy (Jackson, Schuler and Rivero, 1989). Jackson et al. (1989) indentified that for example, a business adopting a differentiation strategy made their labor force more affianced in risk taking, and thereby had a higher likelihood of adopting a long-term focus. The behavior adopted and deployed by the business is believed to be supportive towards innovation, consequently the HRM philosophy is likely to be aligned with the expected business profile regarding the adoption and deployment of a differentiation strategy. E.g., in the recruitment stage a business seeks for risk taking applicants and labor skills training is mainly focused around long-term topics. The findings of Jackson et al. (1989) still find support in recent studies regarding e-HRM adoption and deployment outcomes (e.g., Thompson, Teo and Sherin, 2007; Smale and Heikkilä, 2009). Hence the strategic direction could serve as indicator for the adoption and deployment outcome of e-HRM.

For the operationalization of the strategic direction, the study by Miller and Toulouse (1998) provides meaningful definitions. The Miller and Toulouse (1998) study the simplicity of strategic directions regarding the certainty/uncertainty of the business environment, thereby the study distinct five strategic directions namely *quality, innovation, alliances, services* and *cost reduction*. The different strategic directions are characterized by several variables as displayed in figure 5. When interlocking figure 5 with e-HRM philosophy, innovative characteristics are likely to be of significant importance for implementation of e-HRM, due to the innovative way of rearranging HR practices via e.g., e-HRM. Subsequently the former assumption implies that *"the favoring for innovation in the strategic direction increases the likelihood for adoption and deployment of e-HRM"*.

Quality	Innovation	Alliances	Services	Cost Reduction
➢ Tight quality control. ➢ Ensuring high quality production. ➢ Making products for high price markets. ➢ Warranties and guarantees.	➢ New product development. ➢ Product R&D. ➢ State-of-the-art products. ➢ Continual updating of products.	➢ Exchange of technologies with other firms. ➢ Product or process development with other firms. ➢ Integration with suppliers. ➢ Integration with retailers.	➢ Excellent customer service. ➢ Prompt delivery. ➢ Catering to market niches. ➢ Amassing special data on clients. ➢ Customizing products for users. ➢ Having a broad selection of products.	➢ Strategic procurement of supplies. ➢ Reducing production/ operating costs. ➢ Just-in-time manufacturing. ➢ Efficient inventory management. ➢ Hone operating efficiency.

Figure 5 variables per strategic direction

2.4.4 Role of HR

The dimension role of HR identifies the importance of HR staff in execution and implementation of HR processes and practices within the operational business field (derived from Dowling et al., 1994; Ulrich, 1997; Caldwell, 2003; Harris, 2008). Ulrich (1997) acknowledged four roles for HR staff along two axes (i.e., strategic/operational focus and processes/people orientated), *administrative expert, change agent, employee champion* and *strategic partner.* The framework by Ulrich (1997) is displayed in figure 6. There exist some criticism on the work of Ulrich (1997) which advocate that e.g., the typology is prescriptive, not empirically proven, based exclusively on U.S.A. experience of HR staff, and that the framework does not address the role conflict of the HR roles (Caldwell, 2003). Still this thesis prefers the framework of Ulrich (1997) over Caldwell's (2003), since Ulrich (1997) takes the role of HR as *"change manager"* into account. Hence indicating and recognizing the HR department as adapters of new ways for HRM. Caldwell's (2003) framework does not incorporate the possible HR role of change manager. Since e-HRM is assumed to be complex in the "basic" and "advanced" direction i.e., dealing with both information technologies and HR practices, change management is assumed to be a necessity in order to convince, encourage and entrust the employees and managers with e-HRM. Essentially HR managers are assumed to have the potential to develop the capabilities for change of HR staff, employees and managers in order to adopt and deploy e-HRM (derived from Hayes, 2007). Hence it is argued that the recognition for the role of change management is important to the HR manager, therefore the framework of Ulrich (1997) is preferred.

Figure 6 roles of HR

The roles identified by Ulrich (1997) shall be explained in more detail:

- *Administrative expert* →Traditional role of HR, which implies responsibility of HR for the efficiency of their own function as well as the entire organization. The HR staff is primarily participating in administering HR practices (e.g., payroll).
- *Employee champion* → This role is considered to keep employees of the business committed to the organization. The HR staff is assumed to be responsible for the engagement of employees within the organization, help the employees to meet the demands placed on them, represent the ideas and mindsets of employees in management discussions, and offer opportunities for growth.
- *Change agent* → HR is responsible for building the organizations capacity to change towards new HRM ways (e.g., e-HRM), and thereby take away any resistance and fear in this change.
- *Strategic partner* →Combination of the former three roles, and aligns HR practices with strategic management.

The HR roles identified could be related to the e-HRM adoption and deployment outcomes. However before interlocking the two concepts (i.e., e-HRM adoption and deployment outcomes and HR roles), it should be reminisced that the HR roles identified by Ulrich (1997) are the ideal spectrum of the axes. The HR staff is more likely to be typified in between the four roles thus combining characteristics of multiple HR roles. Nevertheless the recognition of HR as "change agent" and/or "strategic partner" is more likely to indicate the adoption and deployment of an "advanced" e-HRM direction i.e., the long-term planning and forecasting of HR practices (derived from Ulrich, 1997; Lepak and Snell, 1998; Lengnick-Hall and Moritz, 2003). As displayed in figure 6, the roles "change agent" and "strategic partner" indicate a more strategic focus instead of the operational focus. Roles exclusively operating at an operational focus are more likely to adopt and deploy a "basic" e-HRM direction i.e., the support for routine day to day practices, mainly retrieved in the administrative area (derived from Ulrich, 1997; Lepak and Snell, 1998; Lengnick-Hall and Moritz, 2003). Hence it is expected that "*strategic focus of HR staff increases the likelihood for adoption and deployment outcome of an "advanced" e-HRM direction".* Additionally this thesis also expects that "*operational focus of HR staff increases the likelihood for adoption and deployment outcome of a "basic" e-HRM direction".*

2.5 e-HRM technology

The angles corporate governance and organizational force - explored in paragraphs 2.3 and 2.4 - have developed a mindset towards potential e-HRM adoption and deployment outcomes. In essence, the preferences, expectations and settings provided a preliminary direction for e-HRM and these directions have been identified on a general angle (i.e., corporate governance) and a more specific angle (i.e., organizational force). The actual bundling of the preferences, expectations and settings is assumed - for the purpose of this thesis - to take place in the angle e-HRM technology. The angle e-HRM technology shall present dimensions regarding the actual implementation design of e-HRM. Hence this thesis is enabled to identify the direction and expectations of e-HRM in more depth. This paragraph shall therefore provide insights in the e-HRM technology angle.

2.5.1 e-HRM Goals

Several journals and papers have suggested "typical" arguments, goals and technologies associated with e-HRM implementation (e.g., Keebler and Rhodes, 2002; Hendrickson, 2003; Lengnick-Hall and

Moritz, 2003; Ruël et al., 2004.; Bell et al., 2006; Panayotopoulou et al., 2007; Strohmeier, 2007). E-HRM goals, in this context, are assumed to serve as a manual for e-HRM adoption and deployment outcomes. These e-HRM goals could be directed to justification for the implementation of e-HRM, could relate to the desired "complexity" of e-HRM, could be directed towards more easiness regarding user application or could be directed towards an increase of efficiency and effectiveness. Hence the repetition of could indicates that most suggested e-HRM goals are assumptions, and not yet related to journals and papers. However business provided several arguments for the implementation of e-HRM. These arguments vary from *"reductions in administrative and process costs"* to *"efficiency gains by more control and tracking of HR actions"* and *"fundamentally affect revenue channels"* (Lengnick-Hall and Moritz, 2003). The arguments provided by businesses indicate that e-HRM is guiding towards a new avenue for e.g., revenues, efficiency and savings as indicated by St. John et al. (2001) in the introduction of this thesis.

When analyzing the acknowledged arguments by businesses for e-HRM implementation, it becomes clear that innovation in the HRM philosophy is becoming more important (e.g., Lepak and Snell, 1998; Lengnick-Hall and Moritz, 2003; Ruël et al., 2004). Lepak and Snell (1998) advocate that the increasing demands placed on the HR staff, forces innovation in their current HRM philosophy. According to Lepak and Snell (1998) the increasing demands on the HR staff are a consequent from the introduction of virtual HR. Virtual HR is regarded as *"a network-based structure built on partnerships and typically mediated by information technologies to help the organization acquire, develop, and deploy intellectual capital"* (Lepak and Snell, 1998). Obvious similarities are observed between the definition of virtual HR and e-HRM (i.e., use of information technologies and deployment of more intellectual human capital) resulting in a blurred distinction between the two terms, as indicated in paragraph 2.1. Hence it is expected that the demands retrieved for virtual HR are also applicable for e-HRM. The demands referred to are identified as *"increased emphasis on the strategic focus of HR staff, greater demand of flexibility in HRM policies and HRM practices, the pressure to work as efficient as possible and to work more on basis of costs* and *the higher need for service orientation of HR staff towards management and employees"* (Lepak and Snell, 1998). Ruël et al. (2004) recognizes and reduces these HRM pressures by Lepak and Snell (1998) to three types of goals, *improving the strategic orientation of HRM, cost reduction/efficiency gains* and *client service improvement/facilitating management and employees*. In addition Ruël et al. (2004) noted during their case study - regarding international businesses and the adoption and deployment process of e-HRM - a fourth type of goal namely *allowing integration of an organization its global orientation*. Contradictory to the goals identified by Ruël et al. (2004) - assuming e-HRM can be used for analytical or decision support ends - a study by Haines and Lafleur (2008) identified that businesses still regard and use e-HRM for administrative ends rather than for analytical or decision support ends. Several other studies - mainly consultancy studies e.g., Watson Wyatt (2002) and CedarCrestone (2006) - confirmed the view of Haines and Lafleur (2008). The goals identified by Ruël et al. (2004), therefore needs some refinement to operational variables which can be indentified and tested thus providing clarity regarding the characteristics of variables for e-HRM goals. Hence per e-HRM goal characteristics shall be defined which intends to identify and measure the realization of the e-HRM goal in the data collection.

For the goal *improving strategic orientation of HRM*, Lawler and Mohrman (2003) suggest that the organizational members concerned with HR practices needs to become increasingly active in the organizational design and development area. The HRM characteristics identified by Lawler and

Mohrman (2003) can be used for detecting improved strategic orientation regarding HRM policies and HRM practices. The characteristics aimed at by the goal *improving strategic orientation of HRM* are:

- *HR planning activities* → Embodies the forecasting of HR needs and projected matching of individuals with job vacancies.
- *Organizational development activities* → Concerns the ability of the HR department, to cope with environmental changes, its internal and external relationships, problem solving capabilities, and use of human potential.
- *Organizational design activities* → Defines the set of formalized HRM practices as well as the formal and informal reporting relationships realized by the HR department. E.g., lines of authority, span of managers control, informal power decision making unit, and informal reporting lines. Additionally the design of HR systems is accomplished by the organizational design activities in order to ensure effective coordination of HR practices among employees, HR staff and managers.
- *Strategic planning activities* → Implies decision making of the HR department, for the accomplishment and integration of strategic organizational goals (i.e., increase market share, increase net profits, and so on) via HRM policies and HRM practices.

The goal *cost reduction/efficiency gains* is identified by different authors as driving factor behind implementation of e-HRM technologies (Keebler and Rhodes, 2002; Watson Wyatt, 2002; Lengnick-Hall and Moritz, 2003; Ruël et al., 2004) and even believed to be the strongest focus in e-HRM practitioner field (Bondarouk and Ruël, 2009). Lengnick-Hall and Moritz (2003) suggested the following characteristics are aimed at by the goal *cost reduction/efficiency gains*:

- *Number of full time equivalent* → Concerns the decrease of the total number of employees in the HR staff.
- *Organizational costs for performance of HR practices* → Imply the decrease in use and distribution of paperwork and costs for HRM transactions.
- *Reduction of the cycle times* → Defines the decrease in time as an effect of e-HRM implementation. Time in the former sentence, implies the time between the input and output of HR practices.

The goal *service improvement/facilitating management and employees,* implies the providing of service towards clients. As Ruta (2009) identifies e-HRM portals - portals which are frequently and easily accessed and aligned to HRM strategy - leverage intellectual capital creation and development thus facilitate the access of employees and management to intellectual human capital. The consequent development of intellectual human capital is also facilitated by the improved access to e-HRM portals for employees and managers (Ruta, 2009). Shared service center (henceforth referred to as SSC), management self service (henceforth referred to as MSS) and employee self service (henceforth referred to as ESS) are identified as key concepts regarding the *service improvement* goal (Lengnick-Hall and Moritz, 2003). These portals (i.e., SSC, MSS and ESS) facilitate control of personal and organization information. In a best-case scenario the business and its associates have access to the HRM practices and HRM information, thereby omitting potential hindrances as accessibility and user friendliness of e-HRM technology, time factor (i.e., working time or leisure time) and place

factor (i.e., work or home). The characteristics aimed at by the goal *service improvement* are (derived from Lengnick-Hall and Moritz, 2003; Ruta, 2009):

- *Enabling self service of employees, HR staff and managers* → Defines the self regulation of e-HRM for employees, HR staff and managers. The e-HRM portal should serve as facilitator for the accessibility, acceptance and user friendliness of HR practices, thereby enabling the users of e-HRM to interact with the portal, and thus neglecting the possible consultancy role of HR staff.
- *Content of the self services* → Concerns that the e-HRM portal should serve the improvement for usefulness, personal character, availability and timeliness of HR practices. Hence the interaction between the users of the e-HRM portal should be notified as fruitful by users and administrators, hence promoting the services provided via the e-HRM portal.

The goal *integration of an organization its global orientation* was identified by Ruël et al. (2004). Ruël et al. (2004) exposed that international businesses chose to standardize and harmonize HR policies and HR practices as premise for globalization/internationalization of the business orientation. Hence the following characteristics are aimed at by the goal *integration of an organization its global orientation* (Ruël et al., 2004):

- *Standardization of HR function* → Concerns the equalization of the body of HRM policies and HRM practices within the business i.e., plants, organization, departments and staff, in order to reduce the number of inconsistent HR practices.
- *Harmonization of HR function* → Implies the extent of integrated cooperation among HRM policies and HRM practices within the business i.e., plants, organization, departments and staff, in order to reduce the number of inconsistent HR practices.

The operationalized e-HRM goals are not likely to be deriving from country differences (different market mechanism per country i.e., LME or CME). Although the arguments per emphasize for an e-HRM goal could differ, it is not likely that country differences are to be observed in the "obvious" e-HRM goals. The arguments for the adoption of an e-HRM goal can derive from a wide array of arguments, likely to be retrieved in the different perceptions of operationalizing for the e-HRM goals. For example, the goal *integration of HR practices* is in principle desired by any business - thus neglecting country differences - and the same can be assumed for constrained variables as harmonization, reduction of cycle times, strategic planning activities. However the different emphasize on certain aspects of the e-HRM goals could predict the direction of e-HRM and the related e-HRM goals. E.g., the goal *strategic orientation* is not likely to be considered as an e-HRM goal in the implementation of a "basic" e-HRM direction. Rather it is assumed that the business is aiming to achieve the goal *cost reduction/efficiency gains* by adopting and deploying a "basic" e-HRM direction. In essence, it is expected that the identification of e-HRM goals could relate to possible country differences. However these country differences then relate to the differences in emphasize of variables attributed to the directions of e-HRM. Summarizing e-HRM goals are - in this thesis - expected to be an indirect consequence of country differences.

2.5.2 e-HRM Direction

The e-HRM direction is important to take into account since this is likely to pave the way for related e-HRM goals to be adopted and deployed by a business (Ruël et al., 2004). Alternatively to e-HRM directions, different types of e-HRM are also numerously referred to in journals (e.g., Lepak and

Snell, 1998). In essence, the difference between e-HRM type and e-HRM direction is distinguished on the macro level (i.e., HR practices are scattered throughout the business, thus indicating multiple decision makers for HR practices → e-HRM type) and the micro level (i.e., HR practices are dictated by HR staff and departments, thus indicating few decision makers for HR practices → e-HRM direction). Hence e-HRM type and e-HRM direction enable a distinction regarding the business level and HR level which could be used as "discriminator variable" (i.e., select the variable which is most likely to measure and be applicable for the unit of analysis). This thesis shall measure the adoption and deployment outcomes via HRM managers or change managers concerned with e-HRM implementation. Therefore this thesis prefers the term e-HRM direction, although the logic and rationale of the e-HRM type shall as well be incorporated in the definition of e-HRM direction.

Put bluntly, e-HRM can be regarded as a way of innovation within an organization, in order to meet up with the internal and external pressures i.e., the changing and increasing customer demands, greater competitive intensity, less expensive and widely available communications, information, transaction and product technologies and an increased complexity in production technology and coordination (St. John et al., 2001). Innovation within this context has the potential to affect three domains within an organizational setting, namely *product, processes* and *organization* (Looise and Riemsdijk, 2004). Many journals (e.g., Lepak and Snell, 1998; Lengnick-Hall and Moritz, 2003) link these innovation domains to e-HRM direction. Based on these findings, three major support types for e-HRM direction are identified:

- *Day to day support* → Supports the routine day to day practices of HR, mainly retrieved in the administrative area. HR practices referred to are for example, collecting organizational employee information, and payroll and personnel data administration. The support provided by e-HRM should reduce the "consultant" function of HR staff.
- *Short-term decision making support* → Implies the decision making for employee review, training and appraisal of employees, and recruiting and selection of new personnel. The HR practices in between "basic" and "advanced" are supported by this type of e-HRM direction.
- *Long-term decision making support* → Concerns the planning and forecasting of HR practices such as knowledge transfer, organizational change processes, strategic re-orientation of HRM, strategic competence management, and HR planning.

As noticeably mentioned in this thesis the different e-HRM directions could be ranked from "basic" direction (i.e., day to day support) to "advanced" direction (i.e., long-term decision making support) due to the different impacts on the strategic role of HR. Hence this ranking is more supportive for the assumptions and expectations stated in the former (sub) paragraphs.

2.5.3 e-HRM Literacy

The dimension e-HRM literacy is likely to result in different user levels (Thompson, Teo and Sherin, 2007). For example, user A does have more expertise with e-HRM than user B due to prior experiences in vocational training, former businesses, education, and so on. Hence user A is assumed to have a greater likelihood for successful adoption and deployment of e-HRM in the short term. In essence, it is assumed that users - i.e., businesses and their managers, employees and HR staff - do not start with the same foundation of technical understanding and/or expertise for e-HRM implementation (Thompson et al., 2007). Although it is important to note that users start with different levels of e-HRM literacy, it is highly unlikely that the e-HRM literacy is affected by country

differences. E.g., the emphasize for e-HRM adoption and deployment is expected to be affected by multiple factors like organization size and primary industry, thus expectations that e-HRM literacy is solely affected by country differences would be rather biased. Moreover the assumed affect can also work reciprocal i.e., e-HRM literacy could precede and thereby determine country differences. Rather the combined affect of several factors are assumed to determine e-HRM literacy.

2.5.4 e-HRM Portal

The term e-HRM portal indicates various aspects like type and user application (Hamerman, 2008; CedarCrestone, 2009; Ruta, 2009). In general an e-HRM portal implies a broad set of business process and analytical capabilities (Hamerman, 2008). In order to distinguish the general meaning for e-HRM portal, the type of e-HRM specifies the brand - implicitly also the in-house or out-bound production of the e-HRM portal - and the variety in the gathering of HR data. Various brands are regarded as leading options in HRIS or e-HRM technology such as SAP, Oracle, Lawson, Workday, Ultimate Software, ADP, Meta4, JD Edwards and Ceridian (Hamerman, 2008; CedarCrestone, 2009). Besides these external supplies of the e-HRM portal, a business can also adopt and deploy an e-HRM portal which is developed in-house, and thereby adjust and fine-tune the e-HRM portal to its own specific user preferences. Additionally a business can also adjust the variety of HR data made available by the e-HRM portal. E.g., a business can choose to couple the e-HRM portal to one centralized HR system or to diverse HR systems, the similarity of e-HRM applications across business units and the variety in user application for business units (Hamerman, 2008). Finally the e-HRM portal is likely to affect a wide spectrum of actors. Especially the intellectual capital, of the e-HRM portal users involved, is likely to be influenced (Ruta, 2005). Ruta (2009) specifies the group of actors into specific e-HRM portals applicable for employees, managers and/or shared cooperation's (e.g., centralized e-HRM portal applicable for the entire organization). The specification of the user identification could assist in identifying the company's primary target group for the e-HRM portal.

The specification for the e-HRM portal is not likely to explore the affect of country differences on the adoption and deployment outcomes for e-HRM. Rather the specification for the e-HRM portal could identify if any country differences are noticeable regarding characteristics as the user application and type of e-HRM portal.

2.6 Outcomes

All the angles elaborated thus far - i.e., corporate governance, organizational force and e-HRM technology - are assumed to affect the adoption and deployment outcome for e-HRM. However - as substantially mentioned in this thesis - these angles are likely to result in expectations or indicators for e-HRM. These expectations or indicators are likely to be confirmed by feedback of e-HRM outcomes (Strohmeier, 2007; Bondarouk and Ruël, 2009). Therefore this paragraph shall indicate dimensions for the outcomes angle.

2.6.1 HRM Competencies

Various journals indicate that HRM is a profession which requires its own body of knowledge by developing its unique HRM competencies (e.g., Kavanaugh et al., 1990; Bell et al., 2006; Harris, 2008). Bell et al. (2006) identified four primary domains of HRM competence, i.e., *knowledge of the businesses, delivery of HR practices, change management,* and *technology expertise*. The competencies identified by Bell et al. (2006) shall be elaborated in more detail.

- *Knowledge of the business* → Implies the extent to which an HR professional understands the financial, strategic, and technological capabilities of an organization, and the extent to which the HR professional translates this knowledge in actual value for the internal and external business chain. In other words, the HR staff is expected to spot internal and external opportunities and threats and translates this knowledge into a vision for the business e.g., how a business prevails those opportunities and threats in the current and future strength of the business marketplace. Hence the following factors are expected to be recognized in the development of *knowledge of the business*; ***interpreting of business environment, understanding of the value chain, define value proposition of the business, and leveraging business technology*** (derived from Bell et al., 2006; Ulrich, Brockbank, Johnson, Younger and Sandholtz, 2008).

In essence, the HR competence *knowledge of the business* is likely to add value in the long-term decision making, and moreover is expected to add value to the overall strategic making competence, since these decisions normally require a vision for the business strategy which is not likely to render by ad hoc decision making. Extending this line of thought by adding the role of country differences (i.e., put bluntly, differences are to be observed in *CME* → nature of economy features long-term relationships, which invest extensively in relational contracting whose value "complete" an otherwise incomplete or impossible value asset, and *LME* → nature of economy features short-term relationships, which invest extensively in assets whose value can be realized if modified to other purposes; based upon Hall and Soskice, 2001.), this thesis expects that "*businesses in CME feature a greater likelihood to increase the HR competence knowledge of the business, as a consequence of e-HRM adoption and deployment*" and "*businesses in LME feature a smaller likelihood to increase the HR competence knowledge of the business, as a consequence of e-HRM adoption and deployment*".

- *Delivery of HR practices* → Refers to the knowledge and competence to deliver state-of-the-art, and innovative HR practices for the operational aspects of managing people and organization (Ulrich et al., 2008). In other words, HR staff is expected to intelligently and efficiently schedule and arrange HR administrative processes. The processes refer to queries for basic pay, retirement savings, network access, e-mail address, and so on, which should facilitate the recognition for the reference to administrative processes. The understanding of the following factors are expected to be observed for the competence *delivery of HR practices*; ***managing labor policies and procedures, understanding labor legislation, selection of right individuals, develop the suitable skills needed of employees, and the management of HR processes priorities and workflow*** (Ulrich et al., 2008).

E-HRM could be adopted and deployed by the expectation to "fix" the administrative burden recognized in the delivery of HR practices. However as Ulrich et al. (2008) note, it is essential that the operational HR processes are performed flawlessly. Moreover the recognition of management for excellent delivery of HR practices could build the creditability for the HR department to become a strategic business partner. The incorporation of country differences - i.e., CME and LME distinction - is not likely to have a significant affect regarding the observations of the competence *delivery of HR practices,* since both nature of economies trust on the HR department to accomplish the administrative HR policies, although the perception for the execution differs*.* Even though the competence *delivery of HR practices* is mainly operated at the day to day practices, thus referring to a "basic" e-HRM direction, still HRM should build creditability for strategic partnership in both the

CME and LME, and thereby country differences are neglected. E.g., in order to adopt and deploy an "advanced" e-HRM direction, the HR department should be recognized by the management to be capable of adding value to the long-term activities of the organization which is not likely if the HR department is not (yet) skilled in the delivery of HR practices. The adoption and deployment of a "basic" or "advanced" e-HRM direction in LME or CME are thus assumed to both require the support from the HR competence *delivery of HR practices* (derived from Lepak and Snell, 1998; Keebler and Rhodes, 2002; Ruël et al., 2004; Ulrich et al., 2008).

- *Change management* → Directs to the capacity of HR staff to act as a change steward for the organizational culture and adapt to changes in the internal and external market, which could have a significant impact on the HR practices i.e., new ways of creating competitive advantage via changes in delivery and implementation in HR practices, HR policies, and/or HRM philosophy (Ulrich et al., 2008). HR is expected to develop, and thereby increase, the understanding for the concept of organizational culture. Hence adjustments - to the organizational culture or changes affecting the overall HRM philosophy and the consequent HR practices and HR policies - are expected to be translated in a clear and coherent way to the individual level i.e., client, employee, manager, HR staff and related third parties. Also it is expected that HR is - via developing the competence *change management* - capable to adjust the speed of change. In essence, HR staff can act as facilitator, translator and guiding steward in the implementation phase of new regulations for the organizational culture and HRM philosophy. The following factors are expected to be of importance for the development of the HR competence *change management*; ***recognize and understand organizational culture, apply lessons learned to improve future change efforts, ensuring that human, financial and informational resources are aligned with the desired change, monitor progress of change initiatives, translate organizational culture to the individual level, and ensure recognition of organizational culture by external customers and investors*** (Bell et al. 2006; Ulrich et al., 2008).

The adoption and deployment of e-HRM is likely to set direction towards new paths, and thus change the current philosophy and culture of HR. The HR competence *change facilitator* is critical in the introduction phase of e-HRM and could thereby "make or break" the change implemented, which is a consequence of the e-HRM implementation. The inclusion of country differences - i.e., CME and LME distinction - is assumed to affect the adoption and deployment outcome of e-HRM. A CME is generally characterized by multilateral and bottom-up management which is assumed to encourage the interaction between employees, HR staff and management. Moreover CME feature a willingness to understand and satisfy the goals of all stakeholders (derived from Hall & Soskice, 2001). Contradictory a LME generally feature top-down and unilateral management, hence assumed to discourage the interaction between employees, HR staff, and management. Additionally LME's are primarily operating towards the maximization of the stakeholder value, thus neglecting goals of other stakeholders (Hall & Soskice, 2001). Hence the differences in mindset towards the primary organizational goal - i.e., shareholder maximization versus satisfying goals of diverse stakeholders - and the interaction of information between managers, HR staff, and employees, are expected to expose different levels for the HR competence *change management*. Therefore this thesis expects that "*businesses in CME feature a greater likelihood to increase the HR competence change management, as a consequence of e-HRM adoption and deployment*" and "*businesses in LME feature*

a smaller likelihood to increase the HR competence knowledge of the business, as a consequence of e-HRM adoption and deployment".

- *Technology expertise* → Embodies the capacity to use e-HRM technology and web-based channels to deliver services to employees and managers (Brockbank and Ulrich, 2003). Hence HR staff is assumed to guide and train targeted actors - i.e., employees, managers and related third parties as suppliers, consultants and vocational training instructors - on issues such as, how to use the new technology, and integration of e-HRM usage with the overall organizational setting in an efficient and effective way. Although several similarities could be identified for this competence with regard to the HR competence *change management,* the competence *technology expertise* is more dedicated to e-HRM as change to be understand, learned and managed and moreover entangles the HR competences *change management, delivery of HR practices,* and *knowledge of the business.* Hence the lessons learned by training the former HR competences, can facilitate the learning and usage of the HR competence *technology expertise.* The understanding of the following factors are expected to be recognized for the competence *technology expertise*; ***leveraging information technology, understanding of technology, monitoring progress of technology, translate technology impact to the individual level, and align technology with the HRM philosophy*** (Brockbank and Ulrich, 2003; Lawler and Mohrman, 2003).

The role of country differences - i.e., distinction between CME and LME - is not expected to result in different levels for the HR competence *technology expertise.* This thesis argues that the HR competence *technology expertise* is vital in order to adopt and deploy any type of e-HRM (i.e., "basic" or "advanced") in any nature of economy (i.e., CME and LME), and thereby aligns the organizational goals to the desired effectiveness and efficiency of e-HRM. Since all types of e-HRM require the support by the HR competence *technology expertise* in any type of economy, in order to adopt and deploy the new e-HRM technology, it is not expected that different user learning levels shall be revealed for the HR competence *technology expertise*. Therefore the adoption and deployment of a "basic" or "advanced" e-HRM direction in LME and/or CME are expected to require the support by the HR competence *technology expertise* (derived from Hall and Soskice, 2001; Brockbank and Ulrich, 2003; Ruël et al., 2004).

2.6.2 Services of HRM

As cited by many journals, the strategic position and possibilities of the HRM is expected to increase as an outcome of e-HRM adoption and deployment (e.g., Keebler and Rhodes, 2002; Hendrickson, 2003; Ruël et al., 2004). For example, it is assumed that e-HRM reduces the amount of paperwork for the HR staff i.e., the employees and managers are enabled, via options as ESS and MSS, to self-administrate their working hours and use the shared service center to specify, read and address questions regarding contract specification, lone specification or other issues related to HR without the interference of HR staff (Hendrickson, 2003). Hence HR staff could redirect the "available time" - resulting from the decreased time necessary for administrative HR practices and paperwork - towards more strategic issues on the organizational management level (Hendrickson, 2003). The strategic position of the HR staff is thus assumed to become more important, due to the adoption and deployment of e-HRM. However several journals indicate that a shift in strategic importance is not a subsequent outcome of adopting and deploying e-HRM (Keebler and Rhodes, 2002; Bondarouk and Ruël, 2009). Hence employees and managers should not automatically be assumed to cope with

the new overall strategic objectives and e-HRM goals, instead of focusing more on day to day transactions. The variable e-HRM direction (i.e., subparagraph 2.5.2) could predict the importance of shift in services provided by HRM. E.g., if a business adopts and deploys a "basic" e-HRM direction (support for routine day to day practices, mainly retrieved in the administrative area), it is not likely that the services provided by HRM emphasizes knowledge transfer among employees, managers and HR staff. Rather the business adopting a "basic" e-HRM direction is assumed to emphasize the collection of personnel data administration (derived from Lepak and Snell, 1998; Ruël et al., 2004; Ulrich et al., 2008). This thesis assumes that the type of service differs - deriving from the role of HR - due to the adoption and deployment of a "basic" or "advanced" e-HRM direction. As considerably discussed and assumed, the incorporation of country differences (i.e., *CME* → nature of economy features long-term relationships, which invest extensively in relational contracting whose value "complete" an otherwise incomplete or impossible value asset. *LME* → nature of economy features short-term relationships, which invest extensively in assets whose value can be realized if modified to other purposes; based upon Hall and Soskice, 2001) are for this thesis assumed to indicate the adoption and deployment of a "basic" or "advanced" e-HRM direction. Consequently the variables e-HRM direction and nature of economy are assumed to affect the level of outcome for the services of HRM. E.g., the adoption and deployment of an "advanced" e-HRM direction is expected to result in the supply of "advanced" strategic services such as, building the brand of the business with customers, shareholders and employees, accurately recruit and retain talented employees, and knowledge transfer among employees, managers and HR staff. The adoption and deployment of a "basic" e-HRM direction is expected to result in the supply of "basic" strategic services such as, the collection of personnel data administration, and decreasing administrative costs of the organization. Hence this thesis expects that "*businesses located in CME feature an increased likelihood to adopt and deploy "advanced" strategic services*" and "*businesses located in LME feature an increased likelihood to adopt and deploy "basic" strategic services*".

2.7 Theoretical Framework

So far several assumptions and mindsets have been made regarding the initial theoretical angle framework (i.e., figure 3). The theoretical angle framework - as presented in figure 7 - could provide interesting thoughts to be examined for the topic e-HRM. Although not yet tested, it is believed that the different mindsets of the corporate governance consequently results in different perceptions for the possible role of e-HRM in the organization. Hence the different mindsets of corporate governance are assumed to result in differences for the adoption and deployment outcomes of e-HRM. E.g., an "advanced" e-HRM direction is more likely to be implemented by a business located in CME due to the presence of inter-corporate networks favoring relational contracting. The focus on long-term decision making support for HRM practices - i.e., "advanced" e-HRM direction - is more likely to be recognized and appreciated in an environment which is coordinated by collaborative relationships valuing and exchanging information in order to satisfy most of the directions, rights, responsibilities and control of the involved stakeholders, recognized in this thesis as characteristics of CME.

In essence, the differences in country setting can affect a wide span of elements in the theoretical angle framework and could explore the "realms" surrounding a "failure" in the adoption and deployment phase of e-HRM, and thus explore the overall extent of e-HRM adoption and deployment. The former assumption could explain why businesses do not (yet) adopt arguments regarding e-HRM as strategic partner (Bondarouk and Ruël, 2009) Moreover the assumption -

concerning the country differences mainly identified in socio-economic variables and socio-cultural variables - could extend the argument by Smale and Heikkilä (2009) who state that country differences in socio-political variables can explain the differences in e-HRM implementation outcomes.

Corporate Governance	
Political Economy Varieties * Nature of economy. * Social preference for vocational training of employees and educational systems.	*Socio-Cultural Force* * Human capital. * Social capital.

Organizational Force			
Size of Organization * Financial resources. * Human resources.	*Industry Type* * Primary industry type.	*Strategic Direction* * Quality strategy. * Innovation strategy. * Alliances strategy. * Services strategy. * Cost reduction strategy.	*Role of HR* * Administrative expert. * Change agent. * Employee champion. * Strategic partner.

e-HRM Technology			
e-HRM Goals * Improving strategic orientation of HRM. * Cost reduction. * Client service improvement. * Integration of the organizational global orientation.	*e-HRM Direction* * Day to day support. * Short-term decision making support. * Long-Term decision making support.	*e-HRM Literacy* * Experience with e-HRM.	*e-HRM Portal* * Type. * User application.

Outcomes	
HRM Competencies * Knowledge of the business. * Delivery of HR practices. * Change management. * Technology expertise.	*Services of HRM* * "Basic" strategic services. * "Advanced" strategic services.

Figure 7 theoretical angle framework

The theoretical angle framework provides an overview of identified dimensions, potentially affecting the implementation, adoption and deployment of e-HRM. More explicit the theoretical angle framework defines theoretical variables which could be included in the methodology to be used for this thesis. However the UTOS elements and explicit variables need to be defined and operationalized which shall therefore be presented in chapter 3.

3. Methodology

The previous chapter provided insights in the angles affecting e-HRM. More specifically constructs, dimensions and components were identified regarding e-HRM and the suggested role of country differences. As mentioned in chapter 1, a direction is set in the research objective which is stated as:

The main objective of this thesis is to investigate and indentify to what extent country differences are affecting the adoption and deployment outcomes of e-HRM.

Consequently a key question and sub questions were provided and the assumption is made that the theoretical angle framework - established in chapter 2 - should provide the following insights:

- A clear definition of the concept e-HRM/HRIS.
- A conceptual theoretical framework which identifies the different angles involved within the process of adoption and deployment outcomes for e-HRM/HRIS.

Following these insights, a logical next step is to develop a methodology, which shall explore the insights assumed, expected and suggested in chapter 2. Hence this chapter shall first summarize the assumptions made into chapter 2, and subsequently select concepts likely to offer the richest results regarding the key question and sub questions hereby maximizing the opportunity of what can be learned from the data collection. The selection of concepts shall be presented in paragraph 3.1. Subsequently paragraph 3.2 shall elaborate on the research strategy for this thesis, thus identifying the research instruments and UTOS (i.e., unit of analysis, treatment, outcome and setting) likely to offer the richest results regarding the research objective, key question and sub questions. To conclude paragraph 3.3 shall present the "final operationalization" of the variables studied for this thesis.

3.1 Concepts

Before defining and setting of the research strategy, it is important to know what is exactly desired to be explored for this thesis, and what concepts are likely to offer the richest insights and maximize the learning's regarding the thesis objective, key question and sub questions. Regarding the concepts selection, two concepts can be derived from the research objective and subsequent questions, namely *e-HRM adoption and deployment outcomes* (i.e., dependent variable) and *country differences* (i.e., independent variable).

Countries are - for the purpose of this thesis - mainly distinguished on basis of their nature of economy. Consequently the nature of economy is associated with social preferences for vocational training, educational system, human capital and social capital. These social preferences have been overviewed in subparagraph 2.3.1 and 2.3.2. Two natures of economy are identified by Hall and Soskice (2001):

- *Coordinated Market Economy* → Nature of economy features long-term relationships, which invest extensively in relational contracting whose value "complete" an otherwise incomplete or impossible value asset. Examples of countries typified as CME are Germany, Sweden, and the Netherlands.
- *Liberal Market Economy* → Nature of economy features short-term relationships, which invest extensively in assets whose value can be realized if modified to other purposes. Examples of countries typified as LME are the U.K., and the U.S.A.

E-HRM adoption and deployment outcomes are - for the purpose of this thesis - assumed to mainly derive from different e-HRM directions. Consequently the outlook for the adoption and deployment outcomes are distinguished and categorized. Based on the journals of Lepak and Snell (1998) and Lengnick-Hall and Moritz (2003), three different e-HRM directions are identified (i.e., subparagraph 2.5.2). The outer spectrums of the e-HRM direction are:

- *"Basic" e-HRM direction* → Supports the routine day to day practices of HR, mainly retrieved in the administrative area. HR practices referred to are for example, collecting organizational employee information, and payroll and personnel data administration. Hence the support provided should reduce the "consultant" function of HR staff.
- *"Advanced" e-HRM direction* → Concerns the planning and forecasting of HR practices such as knowledge transfer, organizational change processes, strategic re-orientation of HRM, strategic competence management, and HR planning.

When relating the assumed country differences with the e-HRM direction, it is expected that the nature of economy can affect the e-HRM direction adopted and deployed, and thereby affect the outcomes of the adoption and deployment phase. E.g., an "advanced" e-HRM direction is more likely to be implemented by a business located in CME, due to the presence of inter-corporate networks favoring relational contracting. The focus of the "advanced" e-HRM direction on long-term decision making support for HRM practices is more likely to be recognized and appreciated in an environment which is coordinated by collaborative relationships, valuing and exchanging information in order to satisfy most of the directions, rights, responsibilities and control of the involved stakeholders i.e., CME environment. However there are three premises for an assumed affection or causality i.e., *time-order, correlation* and *spuriousness. Time-order* implies that the relation between the two concepts is explicit in their *time-order* i.e., variable X precedes variable Y. The relation of country differences and e-HRM adoption and deployment outcomes can be reciprocal. Both variables can be a cause and effect e.g., country differences can cause differences in e-HRM adoption and deployment outcomes but e-HRM adoption and deployment outcomes can also cause noticeable differences for countries (not necessarily associated with the assumed distinction "*nature of economy*"). However the latter is not likely to be expected since HRM outcomes that cause country differences is not (yet) studied whereas the former - i.e., country differences causes differences in HRM outcomes - is studied considerably, by among others Croucher et al. (2006) and Estevez-Abe et al. (2001). Hence this thesis suggests that country differences are expected to cause and precede e-HRM adoption and deployment outcomes. The second element *correlation* embodies the co-variation between the concepts. Hence deliberately, explicitly and well-argued empirical research should control the supposed co-variation between the variables selected. The third item (i.e., *spuriousness*) regards if a third concept interferes with the assumed relation in the causal setting. For this thesis it is noted that the current setting of concepts could result in a tunnel vision which assumes that exclusively country differences affect the adoption and deployment outcomes of e-HRM. Therefore the dimensions of the concept organizational force could provide a better insight in the adoption and deployment outcome of e-HRM. Omitting the organizational force as a concept could eventually result in a biased view, regarding the spuriousness of the factors explored. E.g., the country differences could be regarded as main entry for differences in adoption and deployment outcomes, while in fact the underlying organizational differences are more likely to explore the differences in adoption and deployment outcomes of e-HRM. Moreover the predictions - regarding the adoption and deployment outcomes for e-HRM - have more premises for a solid foundation framework of the e-HRM process.

Figure 8 provides an overview of the selected concepts, categorization and dimensions subjected to this thesis.

Concepts	Categorization	Dimensions
E-HRM adoption and deployment outcomes (i.e., e-HRM technology and outcomes angles in figure 7)	Dependent variable (Y)	*1) E-HRM goal expectation, 2) e-HRM direction, 3) HRM competencies and 4) services of HRM*
Country differences (i.e., corporate governance angle in figure 7)	Independent variable (X)	*1) Political economy varieties and 2) socio-cultural force*
Organizational force	Interfering variable (T)	*1) Size, 2) industry type, 3) strategic direction and 4) role of HR*

Figure 8 concepts subjected to research strategy

3.2 Research Strategy

Until now the focus has been on selecting the variables for the research. However in order to measure and study the variables, an appropriate research strategy should be adopted. This research aims to explore the selected variables e-HRM adoption and deployment outcomes, country differences, and organizational force. Moreover this thesis assumes there are several "realms" surrounding current research dedicated to e-HRM. One of these "realms" is the affect of country differences on the adoption and deployment outcomes for e-HRM, which is scarcely researched as indicated in the beginning chapter. Hence a quantitative research is preferred over a qualitative research. The quantitative research is preferred due to its strength to study assumed relations over a large research sample. Although one has to be aware of its largest weakness - i.e., lack of possibility to gain in depth insights in the phenomenon studied - the problem should be considered as a tradeoff. Moreover qualitative research is too expensive in the time factor and money factor, especially for a topic which (yet) features a low level of knowledge in the practitioners and scientific field. Also qualitative research generally makes use of a small database for the selected units of analysis. Subsequently the data collection is aimed at explanatory research. Hence the richness of the qualitative research is not yet applicable for this thesis topic, since the assumed affect of country differences needs to be tested and verified first, preferably in a large group which shall provide enough statistical certainty in reliability and validity.

Before selecting the research method suitable for this thesis, the UTOS shall be presented and explained in figure 9. The UTOS should identify and specify which phenomenon is researched. Consequently the research method should be a logic choice, by combining figure 9 with the selection of concepts to be subjected i.e., figure 8.

Element	Specification	Argumentation for Choice of Specification
Unit of Analysis	HR managers or change managers involved with e-HRM implementation phase.	*In order to increase the statistical power of the assumed affection, it is preferred to design the research at the individual level. Moreover aggregated units could "damage" the research findings i.e., the observations for the unit of analysis is not independent.*
Treatment	The assumed variety in countries (i.e., nature of economy).	*The choice for the treatment derives from paragraph 3.1 where several assumptions and explanations are deliberately argumented.*
Outcome	Attitude (i.e., adoption and deployment) towards e-HRM.	*The choice for the treatment derives from paragraph 3.1 where several assumptions and explanations are deliberately argumented.*
Setting	Worldwide.	*In order to support the assumed affect of country differences on e-HRM adoption and deployment outcomes, country differences are desired. A platform will have to be chosen which can reach units worldwide during a given time period.*

Figure 9 UTOS

Consequently to the argumentation for the concept selection and UTOS for this thesis, the survey fis "the first to think of" research method to fit the current description of the research concepts, UTOS, and approach. Survey research can be used for data-collecting reflecting a larger population. Explicitly it is mentioned as a good way to measure attitudes and orientations of individuals, reflecting a large population. In essence, survey research is regarded as *"a systematic method to collect data in systematic ways by making use of questionnaires and interviews"* (Babbie, 2007). Of the latter definition, the questionnaire is preferred, since they can present statements and questions in a standardized way and therefore less time-consuming way. Interviews can also present statements and questions but are generally more controlled and conducted vis-à-vis, whereas a questionnaire can be self-administered and self-explanatory thus a less laborious research method. However applying a questionnaire is not without any disadvantages, two disadvantages - generally encountered in a questionnaire - are *low response rate* and *the reliability that competent and willing respondents participate especially incase of self-administered questionnaires* (Babbie, 2007). As outlined in figure 9, the questionnaire should be addressed to a unit of analysis "playing" a key role in the e-HRM implementation phase. Hence preferably HR managers and change managers should be selected since they are likely to be concerned with implementation of e-HRM. The second criticism should hereby be evoked, assuming that HR managers or change managers are component in their job and moreover are willing to co-operate for uncovering the "realms" of e-HRM. However the first criticism for the questionnaire remains. Therefore a communication platform used especially by HR "experts" and change managers can ensure access to the unit of analysis, and thereby improve the response rate. The communication platform for interaction which covers e-HRM, provides this thesis with a greater likelihood to reach the desired unit of analysis. Moreover the selected unit of analysis and communication platform should be more likely to cooperate with a self-administered questionnaire than randomly selected HR managers and change managers. The former is assumed from the "logic" that if the HR manager or change manager is willing to take the effort to participate in the communication platform, than they are showing more willingness to communicate about e-HRM than randomly selected HR managers and change managers, which could not be willing to participate in the questionnaire. The communication platform chosen is LinkedIn. LinkedIn is a communication platform enabling one to stay in touch with a professional network, which can power

your career and provide answers or advice by industry experts (LinkedIn, 2009). In the network of LinkedIn special groups have been created, several groups created concern the topic of e-HRM, HRIS, HR change, and so on. As a member of the group for e-HRM, HRIS, and so on, the researcher can spread the questionnaire to fellow group members interested, active and participating in e-HRM topics. A covering letter should inform the participants regarding the background information for the questionnaire. The covering letter referred to can be retrieved in appendix 3, and a list of LinkedIn groups invited to participate in the questionnaire is enclosed in appendix 4. Additionally spreading the questionnaire via LinkedIn purposively and randomly, distracts HR managers from a worldwide group of HR managers. Thereby the purposively and selected groups are of considerable size (i.e., approximately 100 members per group). Further randomizing of the groups is not preferred due to the novelty of the communication platform LinkedIn. LinkedIn is not (yet) widely used as platform for scientific studies, and thereby the response rate is difficult to estimate. Further randomizing would moderate the unit of analysis, and thereby desire that most of the units selected must participate in the questionnaire. Since the response rate is difficult to estimate, a large unit of analysis is preferred and therefore the groups of LinkedIn shall not be diminished.

The questionnaire shall contain open-ended and close-ended questions. Moreover statements are included in the questionnaire. The statements could be measured via scales or indexes. The dissimilarity between a scale and an index is that an index is used for accumulating scores while a scale assigns scores to patterns of responses (Babbie, 2007). As this thesis explores the pattern and separate level of variables, a scale is preferred to be included in the questionnaire. This thesis adopts likert scaling due to its standardized response categories determining the intensity of variables mostly varying from strongly agree to strongly disagree (Babbie, 2007). The concepts selected for the statements - i.e., figure7 - are very explicit, and moreover are selected around the ideal outer of the spectrum. Therefore it is not likely that the spectrums are very sensitive to different opinions, and a five-point likert scale is likely to be appropriate for observing distinctions in opinions, regarding the statements for the questionnaire. In order to reward the respondents for their time, effort and participation, an overview of the results and a summary of the research shall be e-mailed to the respondents. The token of gratitude should also motivate respondents to participate in the research. It is assumed that e-HRM forum members on LinkedIn are eager to learn about e-HRM "realms", an overview of the results is a way to learn about e-HRM and thereby could be an extra motivation for participation.

3.3 Operationalization of Variables

The former paragraph has selected a questionnaire as the research method "to be" for this thesis. The questionnaire shall embody statements and questions which shall operationalize the concepts - i.e., figure 8 - by open-ended questions, close-ended questions and five-point likert scales. However before operationalizing the variables in questionnaire content, the concepts - i.e., figure 8 - needs further operationalization i.e., the researcher needs to translate the dimensions and components to measurable variables. Hence figure 10 shall present an overview of the variables included, which will be studied by means of the questionnaire. The consequent questionnaire can be retrieved in appendix 5.

Concepts	Dimensions	Variables	Components
e-HRM Technology	*e-HRM direction*	**Day to day support**	*HR practices as collecting employee information and payroll*
		Short-term decision making support	*HR practices as employee review, training and appraisal*
		Long-term decision making support	*HR practices as worker knowledge transfer and HR planning*
	Content of e-HRM goals	**Improving strategic orientation**	*Time spent on HR planning*
			Time spent on organizational activities
			Time spent on organizational design
			Time spent on strategic planning
		Cost reduction	*Full time equivalents of HR department*
			Costs of performing activities
			Cycle time of HR activities
		Client service improvement	*Enabling self service*
			Content of service
		Integration of global HR function	*Harmonizing the HR function*
			Standardizing the HR function
	Services of HRM	**"Basic" strategic services**	*Services as collection of personnel data and administrative costs*
		"Advanced" strategic services	*Services as recruiting and retaining talented employees and contributing to building the brand of the business*
	HRM competencies	**Knowledge of the business**	*Organizational and strategic capabilities*
		Delivery of HR practices	*Designing and managing basic HR practices as work schedules and environment*
		Change management	*Create, encourage and maintain organizational culture*
		Technology expertise	*Leverage and use new technologies for HR practices*
Corporate Governance	*Socio-cultural force*	**Human capital**	*Protection of employee in recruiting and separating phase*
			Dedication of employee and employer to invest in skill level
		Social capital	*Trust in advice of partnerships*
			Trust in collaboration with partnerships
	Political Economy Varieties	**Nature of economy**	*Liberal market economy*
			Coordinated market economy
		Vocational training type	*Basic pay for employee via labor unions or national bargaining*
			Basic pay for employee via individual company
		Educational system	*Evaluation of training and development of employees performed immediately after the training*
			Evaluation of training and development of employees performed some months/years after the training
Organizational Force	*Size of Organization*	**Financial resources**	*Revenue*
		Human resources	*Number of full time equivalent*
	Industry type	**Primary industry type**	*-*
	Strategic Direction	**Quality strategy**	*High quality production*
		Innovation strategy	*Continual updating of products*
		Alliances strategy	*Product and/or process development with other firms*
		Services strategy	*Customizing products for users*
		Cost reduction strategy	*Reducing production / operating costs*
	Role of HR	**Administrative expert**	*HR practices as basic pay*
		Change agent	*HR practices as employee expansion and/or reduction*
		Employee champion	*HR practices as selection, training and development of employees*
		Strategic partner	*HR practices as corporate strategy development*

Figure 10 concepts, dimensions, variables and component list

4. Results

The former three chapters have thoroughly selected and described the research proposal. Hence the researcher is enabled to conduct the questionnaire. As a logical outcome the findings and outcomes for the questionnaire shall be provided in this chapter. However after the deadline passed for the collection of questionnaire data, the researcher was confronted with four completed questionnaires. Although the methodology chapter did not explicitly mention the anticipated number of respondents, it is common sense that four completed questionnaires will not be sufficient input for statistically significant findings and conclusions. Hence the research committee and the researcher decided to divert their initial research methodology, in order to meet up with the research objective and the key question of this thesis. Paragraph 4.1 shall reflect on the response level of the initial research methodology and provide extra explanation for the diverted research methodology. The presentation and interpretation of the actual findings - of the new research methodology as setup in paragraph 4.1 - shall be presented in paragraph 4.2. Additionally the usefulness of the questionnaire elements and research element - i.e., theoretical angle framework presented in figure 7 - shall be reflected as well in paragraph 4.2.

4.1. Response

After the closing date of the questionnaire four questionnaires were completed and returned. Of the four questionnaires, one questionnaire was labeled as invalid. Three questionnaires are - for the purpose of this thesis - regarded as insignificant response for providence of statistically significant findings. However the chapters comprehended so far are reproducible, therefore it would be unwise to neglect the current thesis progress for future research regarding the affect of country differences on the adoption and deployment outcomes for e-HRM. Hence it is important to reconstruct what basic aspects should at least be covered in the results and conclusions chapters, in order to reflect on the research objective and the key question. Reflections on these basic aspects indicate that the following should be covered in the remaining of this thesis, *strengthening the current questionnaire (i.e., appendix 4)* and *provide preliminary insights towards the research objective and key question.* The integration of these basic aspects in the thesis findings and conclusions should support future research towards "the affect of country differences on the adoption and deployment outcomes for e-HRM". Because of the reproducibility of this thesis, the initial thesis set-up (i.e., chapters 1, 2 and 3) can be used and diverted, in order to gather statistically valid and reliable findings in future research.

As the basic aspects are recognized, a "new" methodology will have to be chosen in order to realize the basic aspects. Hence the "new" basic aspects focus on strengthening the questionnaire and provide preliminary insights in the research objective and key question. These features are consulted best by means of a pilot case study. Via this methodology, the thesis is enabled to cover the basic aspects anticipated, and thereby learn from purposeful findings and conclusions. An interview shall gather the data from international companies, who have adopted and deployed e-HRM. The outlay for the interview is included in appendix 6. The following paragraph shall elaborate on the companies selected, and the consequential findings of the interviewed companies.

4.2 Findings and interpretation of the data

As mentioned in paragraph 4.1, international companies are preferred to be interviewed in order to realize the basic aspects. In more detail, companies invited for an interview were international companies installed in the Netherlands, and preferably featured in Fortune's global 500 (i.e., top 500 corporations worldwide as measured by revenue). The companies selected should be active in an

international environment due to the international scope of these thesis i.e., country differences. The other requisite (i.e., large company) is explained by the assumed and confirmed increased exposure of large organizations to e-HRM implementation (Thong, 1999; Bartram, 2005; Strohmeier and Kabst, 2009)

Three businesses agreed to participate in an interview, GasTerra, Rabobank International and Vitol Tanks Terminal International. The following subparagraphs shall reflect on the findings per case (business). Also the findings for the completed questionnaires shall be recapitulated.

4.2.1 GasTerra

In 2005 Gasunie (wholesaler of Dutch natural gas) was split up in two companies. GasTerra is one of the two companies, established out of the former Gasunie. Formally owned by the Dutch government (50 %), Shell (25%) and Exxon (25 %), GasTerra continued the "original role" of commercial venture and wholesaler of natural gas to the international clientele of the former Gasunie. The international clientele is based in Europe (e.g., Germany, Italy, England France, and Belgium), compromising half of the total revenue for GasTerra. In order to continue the "original" activities of Gasunie, GasTerra focuses on sustainable development for their competitive strategy and strategic actions. As follow-up to the advocating of sustainable development, in 2008 GasTerra's HR initiated a restyling for their department. Part of the restyle is the adoption and deployment of e-HRM, implemented by the HR department of GasTerra. Although the following could suggest that HR in GasTerra functions as a business unit, in reality GasTerra's HR is quoted as supporting staff.

GasTerra explains the e-HRM initiation, goal and current features as:

"E-HRM is initially initiated in 2008. The HR department was renewed, as consequence to the detachment of GasTerra from the former Gasunie. Hence the HR department decided it would be interesting to exploit some HR processes by e-HRM. As HR mainly focuses on the "rewarding HR" process, it was decided to install one e-HRM technology (i.e., IBS) which facilitates the service component for the payroll activities."

In essence, the e-HRM technology in GasTerra initially focuses on delivering and collecting data towards/from employees (face-to-face). GasTerra's payroll for employees located in outer clientele is arranged by the respective accountant's and/or the international HR affairs of Shell and Exxon. GasTerra does not recognize significant differences in the payroll for employees detached to external clientele. However it is important to note that GasTerra's HR is rarely involved in the negotiations with the labor unions/external clientele. Also in reflection to other possible affects of country differences on the adoption and deployment outcomes for e-HRM, GasTerra is not convinced that differences will occur. The reflection on the e-HRM goal of GasTerra in 2010 is quoted as:

"The original aim for e-HRM diverted to cost reduction of HR activities. However the reductions which are notified via e-HRM do not encourage us to install more HR practices via e-HRM applications. Rather it is believed that huge cost reductions/efficiency gained is recognizable for large businesses."

Hence further investigation towards the *"skeptical"* attitude for e-HRM resulted in the following quote:

"In principal GasTerra is interested in the development of e-HRM. However benchmarking opportunities via Shell and Exxon cases learns us that the positive flow and hype for e-HRM are not

realized yet. Shell and Exxon learns us that adoption and deployment of e-HRM also cost a lot of time (i.e., learning employees, HR and managers to comprehend e-HRM technology)*, face difficulties with the international business language in the company* (i.e., insufficient knowledge of English, German, French or other key language in company)*, and from the onset trust the positive vibe for e-HR* (i.e., trust that e-HRM feature will adopt and deploy itself, thereby neglecting that e-HRM installation needs guidance)*."*

Hence the e-HRM application deployed by the benchmarking opportunities is *"failing"* in the view of GasTerra, since the extra costs for HR are trashing the potential savings or revenues by e-HRM. Despite the skeptical attitude of GasTerra towards e-HRM, GasTerra does recognize that e-HRM can potentially add value to the development, recruitment and retaining of the labor force. However due to the benchmarking lessons of Shell and Exxon, GasTerra prefers to continue her HR activities via the *"regular"* and *"old-fashioned"* vis-à-vis techniques. Moreover GasTerra indicates that:

"GasTerra does have a low labor turnover, hence most employees of GasTerra are very familiar with the old HR system (i.e., HR processes and activities without coupling to e-HRM technology)*. Since the introduction of e-HRM, the e-HRM applications are rarely used by the biggest part of employees who admittedly prefer to work with the old HR system."*

Considering the understanding of the questionnaire, GasTerra did not face any difficulties and assesses the questionnaire as passable if you keep up with the specialist literature for e-HRM. However GasTerra's felt that the questionnaire itself is *"positive loaded"* towards e-HRM, the negative aspects for e-HRM could therefore be omitted in the results of the questionnaire.

4.2.2 Rabobank International

As a division of the Rabobank Group, Rabobank International serves the business and private banking clients. Especially clients operating in the food and agriculture are the focus for Rabobank International. The headquarters of Rabobank International is established in the Netherlands, Rabobank International also operates in the regions Asia, Europe (i.e., the Netherlands excluded which is operated as one separate region), Australia and New Zealand, North-America, and South-America. Most of the HR processes for Rabobank International are arranged on regional level. The global processes for HR are explained as:

"Rabobank International makes use of a so called umbrella system. The umbrella system implicates that the headquarters - located in the Netherlands - do provide HR policies, processes and activities which - as a raindrop - are adopted and deployed by the regional levels of Rabobank International."

This *"umbrella system"* is also adopted and deployed for e-HRM purposes, as illustrated by Rabobank International:

"The e-HRM application is initiated in 2000, rooted by the management need for more insights regarding the HR activity of the global collection of personnel data. Moreover the e-HRM application - just like the "umbrella system" - focuses on the global activities for benefits and performance evaluation of personnel. The payroll for personnel is arranged per region."

However Rabobank International refers to the (thus far) referred e-HRM application (i.e., translation of *"umbrella system"* to e-HRM application) as management information system. Hence Rabobank International views e-HRM as:

"E-HRM enables the role of virtual HR, and thereby HR practices focuses more on the self-service for employees and managers, and allows participation of third parties (i.e., parties other than HR and employees of Rabobank International)*."*

The following section shall elaborate on the management information system, since the management information system concerns the international HRM for Rabobank International and therefore is more of interest for the data collection of this thesis.

The management information system (henceforth referred to as MIS) technology adopted and deployed in Rabobank International is provided by one external supplier since 2009. Before 2009 the MIS technology was provided via an internal technology. As previously quoted the MIS application focuses on HR activities featuring benefits and performance evaluation of employees. Regarding future activities for the MIS application Rabobank International comments:

"The implementation of e-HRM features for recruitment and selection are scheduled, but are primarily directed to the regional level. Other possible e-HRM features as training and development, career management and the already installed performance evaluation feature more global similarities, than recruitment and selection. For example, global similarities are hardly recognizable for the requirements of job vacancies between countries. Only for higher job functions (i.e., management) *several requirements are globally matching but these job functions are recruited via other channels than the e-HRM application."*

The long during experience with MIS makes Rabobank International an interesting case, with regard to notification of change for strategic importance of HR and/or competences of HR as a consequence of MIS adoption and deployment:

"We only recognize that the MIS application facilitates the efficiency of HR processes. As a consequence of e-HRM adoption and deployment e.g., HR processes are less sensitive to errors, HR policies and practices are globally integrated, and the chances on globally conflicting HR processes decreased. However the MIS application also cost a lot of time for the HR department (i.e., learning employees, HR and managers in order to comprehend MIS application)*."*

Additionally Rabobank International notes that MIS/e-HRM is of more interest for large businesses due to the complexity of their environment. Large businesses therefore have more need to structure their wide span of control via e-HRM.

As mentioned in the outlining of the *"umbrella system"*, Rabobank International wondered what exactly is implied by e-HRM in this questionnaire. As the depiction of Rabobank International for e-HRM illustrated, seemingly minor details of the description for e-HRM can twist the understanding of e-HRM to other systems, regarded as e-HRM by Rabobank International or other companies but defined as other systems" by the researcher. These "other systems" could be of less interest to the actual research. Also the intention of the MIS technology applied by Rabobank International is hard to place in the e-HRM directions used by the questionnaire (i.e., rewarding of HR). Finally the understanding of the distinguisher for the country differences variable (i.e., the LME/CME typification for a country) is differently explained by Rabobank International, than the definition for CME and LME used by this thesis:

"LME features governments that are preferably devolved in the national economic activities for example, countries as the Netherlands. CME features more interventions of the government in the national economic activities for example, countries as China."

4.2.3 Vitol Tanks Terminal International

Vitol Tanks Terminal International (henceforth referred to as VTTI) serves logistics and storage in a network of bulk logistics around the world. Recently the activities of VTTI are integrated in the Vitol group which is - broadly defined - considered as an oil conglomerate. Hence many greenfield sites have been established and new opportunities of growth have surfaced, which is also reflected in the business strategy of VTTI. The headquarters of VTTI is located in the Netherlands, and VTTI established sites in e.g., Belgium, U.S.A., U.A.E., Latvia, Pakistan, Russia, Malaysia and Argentina. The growth of the company is initiated on three fronts i.e., expanding existing assets, acquiring new assets and developing greenfield opportunities. The role of the HR department is considered by VTTI as:

"HRM is recognized as key to success for VTTI. Hence successful HR policies, practices and activities will subsequently result in development of personnel which is our competitive advantage, and thereby will eventually affect the market position of VTTI."

In order to assist HR in their activities, in 2009 the management team decided to implement e-HRM within VTTI. The implementation of e-HRM is considered as responsibility of the European HR Port services (i.e., the integrated European division of HR for VTTI). The e-HRM application and installment of the e-HRM application is explained as:

"The e-HRM application is essentially directed at the assistance and futuristically replacement of the day to day activities for HR. At the same time we are keen to explore if e-HRM can assist in the forecasting of HR (e.g., the long term decision making support for HR)*. Especially for greenfield sites, we are exploiting what opportunities can arise by e-HRM implementation. Brownfield sites are less favorable for e-HRM exploitation, since these sites feature robust "old-fashioned" where employees are very familiar with the HR system, thereby employees are likely to ignorant towards new technologies, such as e-HRM. Hence greenfield sites are more adoptive to changes in HR technology."*

Considering the e-HRM technology adopted and deployed in VTTI, the e-HRM technology integrates multiple external e-HRM technologies with one internal e-HRM technology. The goal and consequences for e-HRM is considered as:

"The initial goal for e-HRM is the integration and globalization of the HR function. Since the goal setting and subsequent adoption and deployment of e-HRM, no noticeable differences have occurred in the HRM setting. The consideration of HR for the competitive strategy of VTTI makes our HR department strategically important, and this position has not changed since the installment of e-HRM."

Cross-examining VTTI with the observance of possible country differences for e-HRM adoption and deployment per site, VTTI quotes that:

"In essence, country differences are recognized for the HR processes of VTTI. Especially the recruitment and selection of employees features country differences. Consequently the recruitment and selection of employees is and will be considered per site. These country differences are recognized

due to the different labor representation (i.e., labor unions) *per country. Other HR practices - for example, payroll, training and development, and health and safety - are in our opinion more recognized as a trade-off, regarding the adjustment of local HR requirements to globally integrated HR requirements."*

Since the initial questionnaire did not meet the anticipated high number of respondents, the questionnaire elements have been discussed with VTTI. VTTI explains one of the key variables, distinguisher for country differences (i.e., the LME or CME typification for a country), as:

"CME is an economy which is heavily influenced by the government, the government supports and leads the growth of the national economy (a state led economy). Examples of CME are China and the former East republic of Germany (D.D.R.). Contradictory LME feature governments who are less inclined to support the growth of the national economy for example, the Netherlands, Belgium and Sweden."

This perception of CME and LME differs widely from the initial definition provided in this thesis (i.e., subparagraph 2.3.1). Additionally it is retrieved that VTTI does not regard social capital and the competitive strategy of a business to be of more importance than options as interface of e-HRM, management support, and fairness perception for the user (e.g., what information to provide, perceived job relatedness, and so on). Essentially, social capital and competitive strategy could affect the *"final"* e-HRM application but in the matter of VTTI their importance is not identified. Finalizing VTTI quotes the questionnaire as:

"The questionnaire is more suitable for advanced users of e-HRM. Some of the statements concern strategic importance and more advanced HR competences for HR, these items can become significantly notified by HR over a period of ten years. Hence beginning users like us, could be withheld from participation in the questionnaire."

4.2.4 Completed Questionnaires

As mentioned in paragraph 4.1, four questionnaires are completed and returned of which one is regarded as invalid. Although no statistical significant findings can be retrieved from these completed questionnaires, still some interesting insights can be provided with regard to the research objective and key question. These insights are summed up below, and will be featured per angle.

Corporate Governance

- Confrontations are observed for country of employment and the coherent calue of LME/CME, according to the theory advocated by Hall and Soskice (2001).
- When considering the distinction between collaborative HRM practices and calculative HRM practices, the differences in the roles of HR align with the LME and CME typification, as noted by Gooderham et al. (1999). E.g., a country typified as LME by a HR manager appoints more traditional HR activities to their HR department whereas a country which is typified to feature more CME characteristics - according to the HR manager - appoints a more "all-round" role to their HR department.
- The initial theory for LME and CME, and their affect on "basic" and "advanced" e-HRM direction, is justified in the completed questionnaires. E.g., the characterization for the country of employment as LME and CME did align with the preliminary expectations for the

favoring of a "basic" or "advanced" e-HRM direction as formulated in this thesis (i.e., subparagraph 2.3.1).

- The feature of high or low employment/unemployment protection does not correspond to noticeable differences in the e-HRM direction.
- The featuring of high or low social capital does not have an explicit impact on the features of the e-HRM direction, as well as for the e-HRM adoption and deployment outcomes.

Organizational Force

- All respondents are identified as large organizations, according to their financial resources and human resources.
- None of the respondents is active in a technology intensive industry.
- The feature of less strategic focus on innovation does not impose a higher likelihood of strategic intent in the e-HRM adoption and deployment outcomes.
- None of the respondents feature an extra-ordinary focus on strategic focus. One respondent revealed a focus on the operational activities for their HRM division, and featured more focus on the "basic" e-HRM direction.

E-HRM technology

- All e-HRM goals identified are supported by the respondents. Although the focus on e-HRM goals is not perceived as the same for all e-HRM goals, no significant affection can be observed by "delivering" variance in the e-HRM goals.

Outcomes

- The HRM competences are gradually affected by e-HRM adoption and deployment for two of the three respondents. The HRM competencies, which gradually changed for the two respondents, did not align with the expectations as formulated in this thesis (i.e., subparagraph 2.6.1).
- The HRM competencies that are recognized to change significantly are "*delivery of HR practices*" and "*technology expertise*".
- The identification of the country of employment in LME and CME typology, does not affect the representation for "advanced" strategic services in the e-HRM technology, nor for "basic" strategic services in the e-HRM technology.

The data collected provided some interesting thoughts. However only for the corporate governance angle, the assumptions in this thesis are confirmed. But as mentioned severally the lack of data diminishes the findings and their impact on the conclusions. A larger, and thereby more meaningful data pool, could have increased the impact of the findings as well as the relevancy of the findings. Nevertheless some lessons can be learned from these initial findings, which could assist towards an increase in response and more accurate data for future research. The next chapter shall reflect on these lessons and the aligned conclusions, set limitations and will also provide suggestions for future research.

5. Conclusion, Discussion and Recommendations

The former chapter provided an interpretation for the data collection, via interviews and the questionnaire. However a coupling of the results to the research objective and research questions has not yet been provided. Therefore paragraph 5.1 shall reflect on the findings, and consequently present a preliminary conclusion regarding the affect of country differences on the adoption and deployment outcomes for e-HRM. The conclusions provided in paragraph 5.1 are not without limitations. Therefore paragraph 5.2 shall highlight the most important limitations with regard to the conclusions for this thesis. The coupling of the former two paragraphs (i.e., 5.1 and 5.2) could assist to identify what direction of e-HRM research is recommended to investigate. Hence paragraph 5.3 shall elaborate on future recommendations.

5.1 Conclusion

In order to reflect on the thesis findings, the research objective and research goals shall be presented once more. The research objective for this thesis is stated as:

The main objective of this thesis is to investigate and indentify to what extent country differences are affecting the adoption and deployment outcomes of e-HRM.

Moreover the field research body part (i.e., chapters 4 and 5) should achieve the following results:

- An in-depth view on the affect of country differences on the adoption and deployment outcomes for e-HRM.
- Consequences for businesses around the world, deriving from the results of the research.
- Strengthen the current questionnaire (i.e., appendix 4).

Hence the following matrix (i.e., figure 11) is retrieved, when coupling the desired results and research objective to the findings.

Role of country differences	Consequences for businesses	Strengthen questionnaire	Research Objective
➢ Generally the role of country differences is suggested to be of no importance, regarding the e-HRM adoption and deployment outcomes. ➢ When investigating the featuring of HR processes in an e-HRM application, it is suggested that *"acquiring HR"* is likely to be coherent with local *"recruitment"* differences. ➢ LME and CME typology confirmed the expectations for the adoption and deployment of a "basic" or "strategic" e-HRM direction by CME or LME (i.e., subparagraph 2.3.1)	➢ Generally no consequences for business in their adoption and deployment outcomes, when e-HRM is coupled to HR processes as *"rewarding HR"* and *"developing HR"*. ➢ Different outcomes expected per country for the coupling of e-HRM to the HR process *"acquiring HR"*. ➢ The cases included suggest that e-HRM is more likely to lead to an advantage for large businesses.	➢ The definition provided for CME and LME is not clear for all respondents. ➢ The term e-HRM needs detailed explanation for the respondents. ➢ Questionnaire seems to be more applicable for *"experienced"* e-HRM users. ➢ The role of social capital and strategic direction of the business are not suggested to be of importance for e-HRM adoption and deployment outcomes.	➢ The theory expected and thereby used in this thesis cannot be confirmed on basis of the findings. ➢ Hence country differences are not suggested to affect the adoption and deployment outcomes of e-HRM (i.e., strategic activities and HR competences).

Figure 11 integration of research findings with research objective and desired results

In essence, the data presented in figure 11 does not support the expectation that country differences do affect the adoption and deployment outcomes of e-HRM. The cases, incorporated within this research, rarely notify changes in the presumed adoption and deployment outcomes (i.e., changes in services provided by HR and HR competences selected), as a consequence of e-HRM implementation. Rather the integration of the global HR and cost reduction/efficiency improvement are notified to gradually change as a consequence of e-HRM adoption and deployment, but the adoption and deployment of these "basic" strategic activities do not differ between countries. However when investigating the affect of country differences on the featuring of HR processes in the e-HRM application, it is suggested that the featuring of HR processes in e-HRM applications could differ per country. For example, the HR process "acquiring HR" does have a higher likelihood to be observed as country difference, while other HR processes as "rewarding HR" and "developing HR" become standardized regardless of country differences.

Further desk research towards the offering of e-HRM system providers (i.e., ADP, Oracle HR, SAP, Lawson and Ceridian), confirms that the elements of the HR process "acquiring HR" (i.e., recruitment and selection) are not (yet) a standardized part of e-HRMwhereas other HR processes, as "rewarding HR" (i.e., performance evaluation, compensation, and benefits), "developing HR" (i.e., training and development, and career management), "retaining HR" (i.e., retention, and work-family balance) and "protecting HR" (i.e., health and safety, employee relations, and legal issues) are profoundly advertised to be part of the e-HRM technology. Niche system providers (i.e., StepStone and Stylus Inc.) do supply the practice e-recruitment, thereby matching to the HR process "acquiring HR". However the niche system providers aforementioned only offer e-recruitment, thus the service providers do not offer the integration of "acquiring HR" into one e-HRM application.

The following does suggest that e-HRM adoption and deployment can differ per country, though the "why" of country differences remains unidentified. It is first of all obvious that "acquiring HR" concerns external employees and is thereby market-facing, whereas the other mentioned HR processes (i.e., "rewarding HR", "developing HR" and "protecting HR") mainly concerns internal employees and is more company-facing. In addition most of the data (i.e., curriculum vitae and motivation letters) handled by the process "acquiring HR" are considered as high volume data of low value to the business. The other HR processes handle low volume data of high value to the business. Data of employees is more of interest to businesses and generally more of interest to the management, then application data. Also the data provided via "acquiring HR" (i.e., vacancies) are presented on another platform which is favored to be exposed to a "bigger" crowd than management and HR. Finally job vacancy (as part of the HR process "acquiring HR") changes all the time, in order to align to the particular job market, the role, seniority, sort of contract, and so on. Therefore the interests for the HR process "acquiring HR" are hard to categorize as an unchanging feature which can be translated into an e-HRM application. Other HR processes (i.e., "rewarding HR", "developing HR" and "protecting HR") are "unchanging" since workflows of supposed "best practices" are not likely to change due to e.g., different performance reviews, compensation, career management health and safety issues, and employee relations.

Another element which is suggested to affect the e-HRM adoption and deployment outcomes is the size of a business. The data confirmed the expectation that large businesses feature an increased likelihood for adoption and deployment of e-HRM, due to the complexity of the environment and large span of control. These factors can be diminished and reorganized efficiently via e-HRM. The

element *"role of HR"* is also suggested to affect the features of an e-HRM application. The data indicated that organizations who regard their HR as supporting staff before e-HRM implementation, are more likely to feature e-HRM with "basic" strategic activities for example, payroll and collection of employee data. Organizations who indicate that their HR is part of the competitive advantage, are more likely to feature e-HRM with "advanced" strategic activities for example, training and development of employees, develop job content and employee reward programs. Finalizing the findings also indicate that other elements expected to affect the e-HRM adoption and deployment outcomes (i.e., human capital, social capital and strategic direction of the corporate business) have no significant influence on the features of an e-HRM application.

The findings for the suggested affect of country differences on the HR process "acquiring HR", with regard to e-HRM adoption and deployment, could provide interesting thoughts for future recommendations. These recommendations for future research as well as for strengthening the questionnaire shall be coupled and elaborated in paragraph 5.3. However an indication of the limitations for the current research could also assist with regard to future recommendations. Hence the limitations shall be featured first in the following paragraph.

5.2 Limitations
The former paragraph provided an overview of the conclusions. However the thesis and consequent conclusions are not without limitations and imperfections. This paragraph shall indicate the most important boundaries for the conclusions of this thesis.

"To start of", the conclusions, expectations and suggestions are affected by time. Time refers to "the phase of HR" in the business and is indicated via the questionnaire and the interview. Nevertheless it is difficult to estimate if a business diverts towards an "advanced" e-HRM direction or "basic" e-HRM direction over time. In other words, the exact time process for e-HRM direction chosen and the actual e-HRM realization is not observed, and thereby limits the conclusions. For example, CME businesses in the pilot phase of e-HRM realizes that an "advanced" e-HRM direction is not rendering in their businesses, and therefore redirects towards an e-HRM application featuring the "basic" e-HRM direction. Therefore it is highly recommended to observe and analyze the actual implementation phase of e-HRM, enabling observance for the suggested country differences in this thesis of withholding in a longitudinal setting.

Additionally the opinions of respondents for the questionnaire are not tested by an objective researchers view. A biased opinion could have been suggested by respondents. The biased opinion could be a consequence of the management board from a business, potentially stressing e-HRM advantages to the HRM manager, in order to accept the e-HRM disadvantages. Therefore the advantages of e-HRM and the consequent results are more likely to be positively reviewed. Aligned to the preserving for disadvantages of e-HRM in the questionnaire, other aspects - not stressed by the management of a business and/or the questionnaire - of e-HRM could be neglected by the respondents, resulting in a neutral or negative review of this aspect in the findings.

5.3 Recommendations
Although this study is initially set up as an explanatory research, the limited responses to the questionnaire and the finalizing interviews have affected the expected outcomes of the study. Hence the study can be regarded as a pilot study. A pilot study should improve the main research or design

and therefore the suggestions shall be provided in this paragraph. Additionally this paragraph shall provide suggestions for future research regarding country differences and e-HRM.

As the pilot study indicated, some elements in the questionnaire are experienced as to be of little importance to the adoption and deployment outcomes of e-HRM. Also other suggestions and recommendations have been provided for the questionnaire for example, the vague definitions for e-HRM, CME and LME, and the inability to observe a change for the strategic importance of HR and HR competences. Hence the questionnaire has been revised and enclosed in appendix 7. In essence, the questionnaire is not directed at adoption and deployment outcomes but the questionnaire is focusing on the features of HR processes in an e-HRM application. This is recommended due to the inability of all respondents to notify change for the original adoption and deployment outcomes (i.e., strategic importance of HR and/or HR competences).

Additionally the original adoption and deployment outcomes are more likely to be retrieved in a longitudinal study via purposeful sampling of heterogeneous instances. As indicated in paragraph 5.2, the time factor can be an important barrier to the questionnaire, and thereby bias the findings. Although the limited findings for this thesis give a preliminary indication that country differences are neglected for e-HRM adoption and deployment outcomes, the opinion of respondents is a factor which can "make or break" this suggestion. The respondents could misunderstand the questionnaire, and thereby bias the findings. A longitudinal study is less sensitive to the time factor and bias of respondents. The selection in this method for purposeful sampling of heterogeneous instances is explained by the suggestions, regarding that only large businesses will perceive advantages of e-HRM. Hence small organizations are not suggested to expose significant differences in their strategic importance, efficiency, service element and integration of the HR function as a consequence of e-HRM adoption and deployment. Therefore a case study featuring small companies is not recommended.

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Appendix

Appendix 1 journal top 40 of Financial Times 2007

Retrieved 27 October 2009 via

http://en.wikipedia.org/wiki/Wikipedia:WikiProject_Academic_Journals/FT_Top_40.

1. Journal of Accounting and Economics (Elsevier)
2. The Accounting Review (American Accounting Association)
3. Journal of Accounting Research (University of Chicago)
4. The American Economic Review (American Economic Association, Nashville)
5. Journal of Political Economy (University of Chicago)
6. Econometrica (Econometric Society, University of Chicago)
7. Journal of Business Venturing (Elsevier)
8. Entrepreneurship Theory and Practice (Baylor University, Waco, Texas)
9. Journal of Small Business Management (Blackwell)
10. Journal of Finance (Blackwell)
11. Journal of Financial Economics (Elsevier)
12. Review of Financial Studies (Oxford University Press)
13. Strategic Management Journal (John Wiley and Sons)
14. Academy of Management Journal (Academy of Management, Ada, Ohio)
15. Academy of Management Review (Academy of Management)
16. Administrative Science Quarterly (Cornell University)
17. Human Resource Management (journal) (John Wiley and Sons)
18. International Journal of Human Resource Management (Routledge)
19. Organizational Behavior and Human Decision Processes (Academic Press)
20. Journal of Applied Psychology (American Psychological Association)
21. Journal of International Business Studies (Academy of International Business)
22. Management International Review (Gabler)
23. Journal of Marketing Research (American Marketing Association)
24. Journal of Consumer Research (University of Chicago)
25. Journal of Marketing (American Marketing Association)
26. Management Science (Informs)
27. Operations Research (Informs)
28. Journal of Operations Management (Elsevier)
29. Information Systems Research (Informs)
30. MIS Quarterly (Management Information Systems Research Center, University of Minnesota)

31. Harvard Business Review (Harvard Business School Publishing)

32. California Management Review (UC Berkeley)

33. Sloan Management Review (MIT)

34. Long Range Planning (Elsevier)

35. Academy of Management Executive (Academy of Management/OUP)

36. Accounting, Organizations and Society (Elsevier)

37. The Rand Journal of Economics (The Rand Corporation)

38. The Journal of Business Ethics (Kluwer Academic)

39. Organization Science (Informs)

40. Journal of the American Statistical Association (American Statistical Association)

Week --->	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	1	2	3	4	5	6	7	8	9	10	11
Agenda																											
Developing research design	■	■																									
Preliminary key question and sub questions	■																										
Finalizing research strategy and research design		■																									
Deadline research design																											
Developing theoretical framework			■	■	■	■	■	■	■																		
Literature reading			■	■	■																						
Literature reviewing					■	■	■																				
Development of framework for analysis							■	■	■																		
Deadline theoretical framework																											
Developing methodology								■	■	■																	
Design experimental study									■																		
Design UTOS setting										■																	
Operationalize detailed design for data collection										■																	
Deadline methodology																											
Perform experimental study										■	■	■	■	■	■												
Data collection															■												
Data analysis																■											
Deadline results																											
Thesis writing												■	■	■	■	■	■	■	■	■	■						
Deadline conclusion, discussion and recommendations																											
Finalize draft version																						■	■	■			
Deadline draft thesis (review)																								■			
Deadline thesis for review																											■
Colloquium																											

Appendix 2 time schedule for master thesis

Appendix 3 covering letter for the questionnaire

Dear Sir/Madam,

Via this message I am inviting you to help me complete my master thesis by participating in a research project on e-HRM. By spreading this questionnaire among HR professionals, I hope to find out if country differences affect the adoption and deployment outcome of e-HRM. E-HRM in this questionnaire refers to electronic human resource management technologies (e.g., Oracle, SAP, Lawson, JD Edwards, and In-house production) meant to support HR staff in the execution of their activities.

The questionnaire takes about 30 minutes to complete. The information supplied by participants will be treated as confidential and will remain anonymous. This questionnaire is accessed by copying and pasting the following link in your web browser

http://docs.google.com/Doc?docid=0AWjqHYuglW7jZGNkNHg0bl8xZ3AzNTg2ZHA&hl=en.

If you could please return the completed questionnaire by e-mailing the document to y.bakker@student.utwente.nl, I would be very grateful for your cooperation. **As a token of appreciation for your time and effort, the full results of this questionnaire will be forwarded to your e-mail address.**

I will be collecting data until February 18. If you have any questions about the questionnaire, I would be happy to answer them. Please feel free to contact me by e-mailing y.bakker@student.utwente.nl.

If you have a spare moment to complete the questionnaire, I would sincerely and highly appreciate your help and input!

Kind regards,

Yorrick Bakker

y.bakker@student.utwente.nl

Appendix 4 LinkedIn groups invited to participate in the questionnaire

Group Name	Members	Profile
HRIS/HRMS Research Center	149	The group puts the members in touch with developments for HRIS systems and HRMS software vendors.
E-HRM	467	The group is started by the idea to share thoughts about the e-HRM framework founded by the group owner. Now the group is an enduring topic on the latest developments for e-HRM.
HR Puzzle supporter	686	This group is created for people that work in the area of e-HRM or just want to keep in touch with innovation in the HR-arena.
HR Young Professionals	85	This group is made to share thoughts - among young HR professionals - on issues as strategic HR and human capital management, web 2.0 and HR and HR transformation, and change management.
HRIS & Payroll Professional Network	3.488	The HRIS & Payroll Professional Network is a nation-wide group for payroll and human resource information systems (HRIS/HRMS), and encourages HR professionals to share information and exchange ideas for HRIS.
HRIS U.K.	195	The group is accessible for all professionals with an interest in HR systems as Oracle HRMS, Payroll, SAP HR, ATS, and e-Recruitment.
HRM World	174	An international group for professionals who work in HRM, in order to keep track of the latest trends, best practices, etcetera, for HRM.
IHRIM	843	This group is providing the tools to help HR and HRIS professionals perform their jobs effectively while growing both professionally and personally.
International HRIS Managers	195	This group is intended for International HRIS Managers, in order to share ideas on challenges, strategies and solutions in the world of International HRIS.
The HRIS World	892	This group is created to discuss and share thoughts on issues as new HRIS systems, industry trends, issues you are experiencing with your particular system, opportunities, put bluntly anything related to HRIS.
Web 2.0 - Web 3.0 for HRM	861	This group purposively explores Web 2.0 and Web 3.0 applications within the HRM domain.

The list of groups is retrieved on 18 January 2010.

Appendix 5 questionnaire

In this questionnaire e-HRM refers to electronic human resource management technologies meant to support employees, managers, and HR staff in executing HR tasks and activities (e.g., Oracle, SAP, Lawson, JD Edwards, or in-house developed e-HRM technology).

1. In what country are you currently employed?............................

2. In what country is the company's corporate headquarter located?............................

3. How would you describe the company's organization?
   1. Independent company with a single site
   2. Independent company with more than one site
   3. Subsidiary/division of a national group
   4. Subsidiary/division of an international group
   5. Corporate headquarters of a national group
   6. Corporate headquarters of an international group
   7. Other, namely.............................

4. How would you assess the company's* operations in the international context?
   Company* refers to the entire company.
   1. Operating in the home country
   2. Operating in multiple countries within one continent
   3. Operating on multiple continents

5. How many full-time equivalents (FTEs) are employed in your company*?
   Company* refers to the entire company.
   1. 1 - 250 FTEs
   2. 250 - 500 FTEs
   3. 500 - 1000 FTEs
   4. 1000 - 3000 FTEs
   5. More than 3000 FTEs

6. What is the approximate revenue of your company*?
   Company* refers to the entire company.
   1. 0 - 25 million dollars
   2. 25 - 50 million dollars
   3. 50 - 100 million dollars
   4. 100 - 300 million dollars
   5. 300 - 500 million dollars
   6. More than 500 million dollars

7. In what primary industry is your company* operating?
   Company* refers to the entire company.
   1. Agricultural/Mining/Construction
   2. Consumer Products Manufacturing
   3. High-Tech Manufacturing
   4. Other manufacturing (e.g., printing and publishing, process of rubber and plastics, etc.)
   5. Transportation
   6. Communications
   7. Public Utilities
   8. Wholesale
   9. Retail
   10. Financial Services

11. Health Care
12. Education (including universities and further education)
13. Public Administration
14. Other, namely............................

8. How would you assess your company's* business environment?
   Company* refers to the company where you are currently employed.

	1	2	3	4	5	
Liberal Market Economy (LME)						**Coordinated Market Economy (CME)**

LME coordinate their activities primarily via competitive market arrangements (exchange of goods and services in context of competition). Outcomes of company behavior are a result of the demand and supply conditions in the market.

CME coordinate their activities via mutual collaboration among economic actors (business, government, interest groups, and trade unions). Outcomes of company behavior are a result of the strategic interaction between the company and other economic actors.

9. Which actor is the **primary** decision maker for the following policy decisions in the company where you are currently employed?

	Line management	Line management in consultation with HR department	HR department in consultation with line management	HR department
Basic pay and benefits for employees				
Recruitment and selection of employees				
Training and development for employees				
Employee expansion and/or reduction				
Corporate strategy development				

10. Approximately what proportion (in percentages) of the company's* annual revenue is currently spent on the training and development of employees? ....
    Company* refers to the company where you are currently employed.

11. Approximately what proportion (in percentages) of the company's* employees have received internal and/or external training within the past 12 months? ....
    Company* refers to the company where you are currently employed.

12. What is your company's* current e-HRM stage?
    Company* refers to the entire company.
    1. No Plans / not aware
    2. Conceptualizing plans
    3. Pilot phase
    4. Less than 1 year of experience
    5. 1 - 3 years of experience
    6. 3 - 5 years of experience
    7. 5 - 10 years of experience
    8. More than 10 years of experience

13. What type of e-HRM technology is implemented in your company*?
    Company* refers to the entire company
    1. SAP
    2. Oracle (EBS)
    3. Lawson
    4. Workday
    5. Ultimate Software (Ultipro)
    6. ADP
    7. Meta4
    8. JD Edwards
    9. Ceridian
    10. In-house developed
    11. Other, namely.............................

14. To what extent are employees and managers in your company* using e-HRM delivery
    channels for HR-related questions and activities?
    Company* refers to the entire company.

HR general list (face to face)	%
HR specialist's	%
Line manager's	%
Employee self-service (online)	%
Manager self-service (online)	%
HR shared service center*	%

    HR shared service center* refers to centralized unit for HR services

15. Please assess each of the following statements.
    The following statements refer to the company where you are currently employed.
    1. Strongly agree
    2. Agree
    3. Neither agree nor disagree
    4. Disagree
    5. Strongly disagree

	1	2	3	4	5
Our e-HRM applications are coupled to common HR data across all business units/ departments /divisions.					
Our e-HRM applications are similar across all business units/departments /divisions.					
Our e-HRM applications are based on the company-wide standardized HR processes and practices.					
Our company pursues a competitive strategy by reducing the production/operating costs.					
Our company pursues a competitive strategy by ensuring high-quality production.					
Our company pursues a competitive strategy by continual updating of products.					
Our company pursues a competitive strategy by customizing products for users.					
Our company pursues a competitive strategy by product and/or process development with other firms.					

16. Please assess each of the following statements.

The following statements refer to the company where you are currently employed.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

	1	2	3	4	5
Our company negotiates with labor unions to determine the basic pay of employees.					
Our basic pay for employees is determined by our company's management.					
Our basic pay for employees is determined by national/industry-wide collective bargaining.					
Our management is involved in defining the company's HR strategy.					
Our evaluation of the training and development of employees is performed immediately after the training.					
Our company does have a clearly defined communication policy for the HR strategy.					
Our company does have a clearly defined mission statement.					
Our HR staff is involved in designing the organizational strategy.					
Our employees are involved in designing the organizational strategy.					
Our company arranges performance appraisals and/or reward systems for employees at the individual employee level.					
Our employees are protected in the job orientation* via regulations embodied in the state and/or company.					
Our company supports employees with the necessary knowledge, skills and competencies to do their job.					
Our employees are determined to invest (learn and apply) in the necessary knowledge, skills and competencies to do their job.					
Our employees help fellow employees at work even though it is not in their job description.					
Our employees are encouraged to be part of a team at work.					

Job orientation* refers to the process in which a new employee is introduced to the company and his coworkers, and is given information about the content of the labor agreement such as working hours, place of work, holidays, pension fund, bonuses, social security and performance standards.

17. Please assess the following statements.
    The following statements refer to the company where you are currently employed.
    1. Strongly agree
    2. Agree
    3. Neither agree nor disagree
    4. Disagree
    5. Strongly disagree

	1	2	3	4	5
Our e-HRM application supports the routine day to day tasks of HRM. For example, supporting payroll, administration practices and/or report preparation for personnel data.					
Our e-HRM application supports the decision making of HRM. For example, personnel policy/procedure development, employees hire processing and/or employee award programs.					
Our e-HRM application supports the forecasting of HRM. For example, personnel recruitment strategies, analysis and review of personnel budget, approach in reclassifications of jobs and/or develop job content of new staff positions.					
Our HR ability to articulate the value proposition of the company is increased as a result of our company's adoption of e-HRM.					
Our HR ability to interpret the business environment (understanding of marketing and sales, competitor analysis, requirements of external customers) is increased as a result of our company's adoption of e-HRM.					
Our HR ability to develop the suitable skills needed of employees is increased as a result of our company's adoption of e-HRM.					
Our HR ability to manage labor policies and procedures is increased as a result of our company's adoption of e-HRM.					
Our HR ability to monitor the progress of change initiatives is increased as a result of our company's adoption of e-HRM.					
Our HR ability to design and deliver HR practices that create and maintain the organizational culture is increased as a result of our company's adoption of e-HRM.					
Our HR ability to use new emerging technologies for the design and delivery of HR practices is increased as a result of our company's adoption of e-HRM.					
Our HR ability to leverage information technology for HR practices is increased as a result of our company's adoption of e-HRM.					
Our company's e-HRM application aims at increasing the performance of HR forecasting for employee needs.					
Our company's e-HRM application aims at reducing the organizational costs for the performance of HR practices.					
Our company's e-HRM application aims at enabling HR practices to serve as self-service for employees, HR staff and/or managers.					
Our company's e-HRM application aims at reducing the inconsistent practices across different HR functions.					
As a result of our company's adoption of e-HRM, a higher level of success is noticeable in the contribution of HR to strategic activities like competitor analysis, coupling of HR practices to the value chain and understanding the requirements of external customers.					
As a result of our company's adoption of e-HRM, a higher level of success is noticeable in the collection of personnel data.					

As a result of our company's adoption of e-HRM, a higher level of success is noticeable in the decreasing administrative costs for the organization.					
As a result of our company's adoption of e-HRM, a higher level of success is noticeable in the contribution of HR to building the company brand with customers, shareholders and employees.					

18. Please assess the following statements.

	1 (Long)	2	3	4	5 (Short)
The length of the questionnaire is					

	1 (Easy)	2	3	4	5 (Difficult)
The questionnaire is					

19. In general, do you have any remarks concerning the questionnaire?

Appendix 6 interview protocol

Questions related to information over the pilot case

- ➢ In which divisions/countries of your company is e-HRM currently implemented?
- ➢ Who has decided to initiate the installment of the e-HRM application in your organization (e.g., management, line managers, HR staff, and so on)?
- ➢ Who has the responsibility for the implementation of e-HRM in your organization?
- ➢ What type of e-HRM technology is implemented (e.g., SAP, Oracle, and so on)?

Questions related to questionnaire

- ➢ Are the terms CME and LME familiar to you?
- ➢ In your perception, what is the most important difference between CME and LME?
- ➢ Is the competitive strategy of the company considered or discussed, regarding the potential outcome of the e-HRM application?
- ➢ Is trust within e-HRM implementation more important than other "common aspects" as interface, management support, fairness perception, and so on?
- ➢ Are there any "target groups" indicated as the most important users of the e-HRM delivery channel in your organization?
- ➢ Is the overview of "groups" for the e-HRM delivery channel exhaustive?
- ➢ Can you indicate how important the "common" e-HRM goals are for your organization? **Goals are improving strategic orientation, cost reduction, client service improvement, integration of global HR function**
- ➢ Are there alternative goals (besides the "common" goals) to be accomplished for your organization by e-HRM implementation?
- ➢ Can the three indicated e-HRM directions define the actual application of your e-HRM technology?

Questions related to e-HRM application

- ➢ During the e-HRM initiation in the different countries, did the organization purposively consider to dismiss certain HR processes in the e-HRM implementation for certain divisions/countries?
- ➢ Are there differences noticeable in the e-HRM application for the different divisions/countries regarding the featuring of HR processes in the e-HRM application? **Also ask for personal opinion regarding this question e.g., what HR process is most likely to be a difference for countries/divisions and what HR process is least likely to be a difference for countries/divisions**.
- ➢ Are these differences in the former question related to cultural understandings or rather the shape of economy?
- ➢ Are there any disadvantages noticeable, as a consequence of e-HRM adoption and deployment?
- ➢ As a consequence of e-HRM adoption and deployment, does the HR ability (e.g., change management, technology expertise, knowledge of the business, delivery of HR practices) becoming significantly important/improved? If yes, is there a difference noticeable between division/countries?

➢ As a consequence of e-HRM adoption, does the strategic position of HR becoming significantly important/improved? If yes, is there a difference noticeable between division/countries?

Closing questions

➢ Would you consider responding to the current questionnaire? Why?

Appendix 7 revised questionnaire

In this questionnaire e-HRM refers to electronic human resource management technologies meant to support employees, managers, and HR staff in executing HR tasks and activities. Also e-HRM enables HR to become a virtual part of the organization and thereby diminishes the face to face contact between HRM, employees and managers (e.g., Oracle, SAP, Lawson, JD Edwards, or in-house developed e-HRM technology).

1. In what country are you currently employed?.............................

2. In what country is the company's corporate headquarter located?.............................

3. How would you describe the company's* organization?
    Company* refers to the entire company.
    1. Independent company with a single site
    2. Independent company with more than one site
    3. Subsidiary/division of a national group
    4. Subsidiary/division of an international group
    5. Corporate headquarters of a national group
    6. Corporate headquarters of an international group
    7. Other, namely.............................

4. How would you assess the company's* operations in the international context?
    Company* refers to the entire company.
    1. Operating in the home country
    2. Operating in multiple countries within one continent
    3. Operating on multiple continents

5. How many full-time equivalents (FTEs) are employed in your company*?
    Company* refers to the entire company.
    1. 1 - 250 FTEs
    2. 250 - 500 FTEs
    3. 500 - 1000 FTEs
    4. 1000 - 3000 FTEs
    5. More than 3000 FTEs

6. What is the approximate revenue of your company*?
    Company* refers to the entire company.
    1. 0 - 25 million dollars
    2. 25 - 50 million dollars
    3. 50 - 100 million dollars
    4. 100 - 300 million dollars
    5. 300 - 500 million dollars
    6. More than 500 million dollars

7. In what primary industry is your company* operating?
    Company* refers to the entire company.
    1. Agricultural/Mining/Construction
    2. Consumer Products Manufacturing
    3. High-Tech Manufacturing
    4. Other manufacturing (e.g., printing and publishing, process of rubber and plastics, etc.)
    5. Transportation
    6. Communications
    7. Public Utilities

8. Wholesale
9. Retail
10. Financial Services
11. Health Care
12. Education (including universities and further education)
13. Public Administration
14. Other, namely............................

8. Does your company* have a policy for the following areas?
Company* refers to the entire company.

	Yes, written	Yes, unwritten	No	Don't Know
Mission statement				
Corporate strategy				
Personnel/HR management strategy				
Basic pay and benefits for employees				
Recruitment and selection of employees				
Performance evaluation of employees				
Training and development for employees				
Health and safety policies				
Retention and work-family balance				

9. Which actor is the **primary** decision maker for the following policy decisions in the company where you are currently employed?

	Line management	Line management in consultation with HR department	HR department in consultation with line management	HR department
Basic pay and benefits for employees				
Recruitment and selection of employees				
Training and development for employees				
Employee expansion and/or reduction				
Corporate strategy development				

10. What is your company's* current e-HRM stage?
Company* refers to the entire company.
1. No Plans / not aware
2. Conceptualizing plans
3. Pilot phase
4. Less than 1 year of experience
5. 1 - 3 years of experience
6. 3 - 5 years of experience
7. 5 - 10 years of experience
8. More than 10 years of experience

11. What type of e-HRM technology is implemented in your company*?
    Company* refers to the entire company
    1. SAP
    2. Oracle (EBS)
    3. Lawson
    4. Workday
    5. Ultimate Software (Ultipro)
    6. ADP
    7. Meta4
    8. JD Edwards
    9. Ceridian
    10. In-house developed
    11. Other, namely............................

12. To what extent are employees and managers in your company* using e-HRM delivery
    channels for HR-related questions and activities?
    Company* refers to the entire company.

    HR general list (face to face)   %
    HR specialist's   %
    Line manager's   %
    Employee self-service (online)   %
    Manager self-service (online)   %
    HR shared service center*   %
    HR shared service center* refers to centralized unit for HR services

13. How would you assess the following HR features of your company's* e-HRM application?
    Company* refers to the entire company.

	Global (e-HRM applicable for all sites/countries)	Regional (e-HRM applicable for a cluster of sites/countries)	Local (e-HRM applicable for one site/country)	Not applicable
Compensation and benefits (payroll)				
Recruitment				
Selection				
Training and development				
Performance evaluation				
Career management				
Health and safety regulations				
Work-family balance of employees				

14. Some of the aforementioned HR features (i.e., question 13) for our company's* e-HRM
    application are not installed because:
    Please select all options applicable.
    Company* refers to the entire company.
    1. The knowledge necessary for the e-HRM feature is insufficient by employees, HR and/or
       managers.
    2. The resources to the e-HRM feature are limited
    3. The e-HRM feature is not compatible with other HR systems/applications of our
       company.
    4. The e-HRM feature will cost too much time to implement.
    5. The e-HRM feature will not improve our current HR feature.
    6. Other, namely............................

15. Please assess each of the following statements.

The following statements refer to the entire company.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

	1	2	3	4	5
Our e-HRM applications are coupled to common HR data across all business units/ departments /divisions.					
Our e-HRM applications are similar across all business units/departments /divisions.					
Our e-HRM applications are based on the company-wide standardized HR processes and practices.					
Our e-HRM application aims to support the routine day to day tasks of HRM. For example, supporting payroll, administration practices and/or report preparation for personnel data.					
Our e-HRM application aims to support the decision making of HRM. For example, personnel policy/procedure development, employees hire processing, employee training, management of the employee career and/or employee award programs.					
Our e-HRM application aims to support the forecasting of HRM. For example, personnel recruitment strategies, analysis and review of personnel budget, approach in reclassifications of jobs and/or develop job content of new staff positions.					