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# CHAPTER ONE

## INTRODUCTION

### 1.1 Overview of electronic human resource management

In modern times, the widely usage of internet-based information and communication technology (ICT) has brought enormous changes to our society and economy. During the last decade, based on these new technologies, many business organizations have adopted and implemented a large number of ICT-based innovations in order to improve their business performance and eventually to acquire and keep competitive advantage. In the field of human resource management (HRM), many firms have been looking for more efficient ways to run HRM operations. Currently the information and communication technology has also extended into the HR processes and HRM department, which promoted the progress of electronic human resource management (E-HRM) (Stanton & Coover, 2004; Marler, 2006).

Under the new economic situation led by network economy, the unique advantage of intellectual capital has increasingly made it become the core resource of organizational development, and the value of human resource is one of the most important measurements for organizations' overall

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competitiveness (Lednick & Moritz, 2003). Nowadays human resource management is experiencing unprecedented impacts and challenges of various forces, which needs to get rid of the tedious administrative and transactional work, and pay more attention to strategic human resource management and corporate strategy (Lepak, 1998). The concept of human resource management needs to transform from traditional management department into the service department for both company and employees (Lin, 1997). Human resource managers should change from their traditional management role into enterprise strategic partners. Electronic human resource management (E-HRM), provides a short-cut for the transformation of traditional human resource management model into a new management paradigm (Gueutal & Stone, 2005).

E-HRM is an advanced human resource management tool, which can provide a wide variety of uses to an organization, including self-service for employees, information sharing, report generation and the management of functions. (Pass, 2002). E-HRM not only helps companies to accomplish information sharing and transparency by offering a consolidated, centralized information source to take the place of the original decentralized, incompatible data, but also changes the process of searching HR information from depending on the behavior of an individual or some people to computer systems (Varma & Gopal, 2011). Through web-based computer channels, E-HRM technology offers a

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platform to HR staff, employees and managers to look up, extract and modify relevant information so as to more effectively manage a organization's HR activities. Furthermore, the application of E-HRM will help to reduce the number of HR staff since the "HR middleman" has been eliminated (Yusoff, 2010). E-HRM can make use of advanced HRM idea to improve corporate overall level of human resource management, and to assist corporate leader to make scientific decisions.

## **1.2 Problem statement**

Knowing that the importance of E-HRM application, there is a need to learn about what factors will lead to the organizational adoption of E-HRM among business companies. However, according to (Ruel et al., 2007), the start of academic research of E-HRM is relatively late, and to some extent is still trying to keep pace with the HR practice.

It is generally agreed that E-HRM is one of the key factors to contribute outstanding changes for an organization and therefore should be paid more attention in HRM development field (Gueutal & Stone, 2005; Strohmeier, 2007). Based on this point of view, one research topic related to E-HRM is its organizational adoption. Strohmeier (2009) pointed out that many studies usually yield the result of a common E-HRM adoption when addressing the present adoption state. By contrast, the determinants of E-HRM adoption

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among companies are rarely worked out. Since E-HRM can bring a lot of benefits to a company, the first step for companies is to adopt E-HRM so as to gain the relevant benefits. Hence, it is very important to understand the factors influencing the decision of a business organization to adopt E-HRM. So far, very little empirical evidence has been published on the adoption of E-HRM, and the few findings are not consistent and are quite scattered. Among the various potential factors, only the firm size has been proved consistent by researchers as a determinant for E-HRM adoption (Teo et al, 2007; Hausdorf & Duncan, 2004). Therefore, one question may be asked, what are the major determinants that lead a company to adopt E-HRM?

In addition, although in recent years the interest in E-HRM has grown in developed countries and a certain number of E-HRM researches have been undertaken by scholars in USA and Europe (M. Voermans, 2006; Strohmeier, 2009; Troshani, 2011; Panayotopoulou, 2005), few studies related to E-HRM are from China. China is a developing country that is far different from developed countries in the context of technology, economy and environment. As a result, there is only a little knowledge concerning the factors that influence the adoption of E-HRM, especially within China's context. Therefore, in order to fill the knowledge gap, the purpose of this study is to identify the major determinants that impact the adoption of E-HRM among China's firms.

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This paper is based on three innovation adoption theories: Technology Acceptance Model (TAM) (Davis, 1989; Venkatesh and Davis, 1996), the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), and Diffusion of Innovation (DOI) (Moore and Benbasat, 1991; Rogers, 1995). These theories have been extensively used for investigating the factors that influencing organizational decisions to adopt several technological innovations, whether it is information system (IS), information and communication technology (ICT), management information system (MIS), E-commerce, or electronic customer relationship management (E-CRM). This study combines the above three innovation theories and previous relevant literature to develop a research model for E-HRM adoption.

### **1.3 Research questions and research objectives**

Based on the above problem statement, the research question of this study is:

- ♦ What are the major factors that influencing the adoption of E-HRM among firms in northeast of China?

Tornatzky and Fleischer (1990) developed the context for the adoption of technological innovation, known as technology-organization-environment (TOE) model, including organizational, technological and environmental contexts. This TOE framework has showed consistent relationship with the behavior of technology adoption (Chau & Tam, 1997; Chengular, 1999; Kuan

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& Chau, 2001; Jeon et al., 2006). However, the TOE framework may have certain limitations, because individual characteristics are not involved. It is agreed that the personal features of an executive or a manager in one company may also influence his/her decision for technology adoption. Based on the limitation, Thong (1999) added individual contexts into Tornatzky and Fleischer's (1990) TOE framework and suggested these four characteristics could affect organizational adoption of technology innovation.

This study starts the research from the above mentioned four aspects: individual factors, technological factors, organizational factors and environmental factors to identify the main determinants of E-HRM adoption among China's firms. Therefore, the research objectives of this study are as follows:

- ◆ To investigate the individual factors that influences the adoption of E-HRM among firms in northeast of China.
- ◆ To examine the technological factors that influences the adoption of E-HRM among firms in northeast of China.
- ◆ To determine the organizational factors that influences the adoption of E-HRM among firms in northeast of China.
- ◆ To examine the environmental factors that influences the adoption of E-HRM among firms in northeast of China.

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In order to answer the research question, this paper formulates a decision framework of adoption to describe what factors influence the organizational adoption of E-HRM among China's firms. This proposed research framework is presented in Chapter 3.

## 1.4 Operational definitions of potential factors

According to the earlier studies, operational definitions of the potential factors in the current research are provided:

*Individual context:*

- ♦ **HR manager's attitude:** An HR manager's positive or negative feelings (evaluative affect) about performing the target behavior (Fishbein & Ajzen, 1975; David, 1989).
- ♦ **HR manager's subjective norm:** A HR manager's perception that most people who are important to him/her think he/she should or should not perform the behavior in question (Fishbein & Ajzen, 1975).

*Technological context:*

- ♦ **Departmental relative advantage:** The degree of advantage in which adopting E-HRM is perceived to contribute to the users either at individual or organizational level (Davis, 1989; Rogers, 2003).

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- ♦ **Compatibility:** The degree to which adopting E-HRM is perceived as being consistent with the existing values, past experiences, and needs of potential adopters (Rogers, 2003).
  - ♦ **Complexity:** The degree to which adopting E-HRM is perceived as difficult to understand and use (Rogers, 2003)

*Organizational context:*

- ♦ **Top management support:** The availability of a creative supportive climate and adequate resources provided by an organization's top management for the adoption of E-HRM (Rai & Bajwa, 1997; Teo et al, 2007; Troshani, 2011).
- ♦ **IT expertise:** The availability of technical staff or consultants in dealing with the adoption of E-HRM (Kittipong, 2009; Teo et al, 2007).

*Environmental context:*

- ♦ **Industry pressure:** The overall trend, competition and direction of operational practices that force a firm to adopt E-HRM in order to survive in the business or remain its competitive advantages (Hwang et al, 2004; Kittipong, 2009)



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## 1.5 Significance of the study

E-HRM is a way of organization executing HR policies, tactics and practices through the web-based technology. This research is an exploratory study on the adoption of E-HRM in China's companies. As a matter of fact, this paper will provide a better understanding, and important insight into the major factors affecting the adoption and implementation of E-HRM in mainland China's companies.

In particular, this paper will contribute to the knowledge related to the adoption of E-HRM for both HR practitioners and academic researchers as follows:

1. This paper fills a knowledge gap about the adoption of E-HRM that will give a better understanding of this innovation to management and helps develop more positive attitudes and be more acceptable towards the adoption of and implementation of E-HRM.
2. Such knowledge will be useful for top management to be more proactive in promoting the E-HRM adoption to enhance HRM effectiveness so as to improve an organization's efficiency and increase competitiveness.
3. This paper has used a theoretical foundation from innovation theories and Technology-organization-environment (TOE) context framework to model the technological adoption of E-HRM. This will also offer additional useful

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material to those who wish to undertake academic research related to the adoption and diffusion of innovation.

4. This study also contributes to the global understanding of adoption of technology innovation through the development of the research model in China's innovative context.

## **1.6 Organization of the study**

This study begins with an introduction of the research area and background of the study. The remainder of the paper is organized as follows. This paper is divided into six parts:

Chapter 2 contains a literature review on previous studies related to the organizational adoption of E-HRM, human resource information system (HRIS), internet-based information and communication technology, etc. It presents the theoretical framework that the previous papers used to analyze organizations' technology innovation and their relevant findings. The literature review works as a basis for the research and development of the model, construction of the hypothesis as well.

Chapter 3 presents a description of the proposed research model and hypothesis. This chapter focuses on explaining each variable in the research

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model, and presents selections of measures, sampling design, data collection procedure, and data analysis techniques.

Chapter 4 presents the empirical results of the hypothesis testing, beginning with summary statistics, followed by analysis of the measures, demographic profile of respondents and the results of hypothesis testing.

Chapter 5 presents a summary of the study findings and discusses the theoretical and practical implications of the study. Limitations of the study are acknowledged and a number of suggestions for future research are proposed.

Reference and appendixes are included in the end of the paper.