

Implementation of ERP in Human Resource Management

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INTRODUCTION

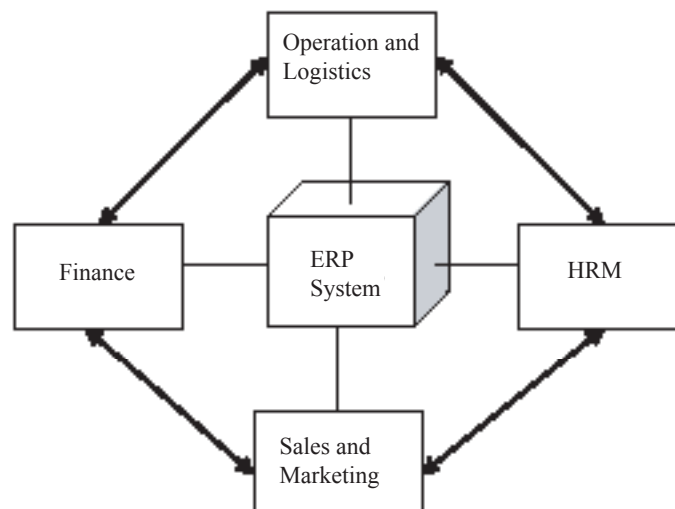
In 1999, Peter Drucker said: “A new Information Revolution is well under way. It is not a revolution in technology, machinery, techniques, software or speed. It is a revolution in concepts.” As a result of information technology (IT) innovation and reorganization, enterprise resource planning (ERP) was proposed by the Gartner Group in the early 1990s. It is a successor to manufacturing resource planning (MRP II) and attempts to unify all departmental systems together into a single, integrated software program that runs off a single database so that the various departments can more easily share information and communicate with each other (Koch, 2002). Over 60% of the U.S Fortune 500 had adopted ERP by 2000 (Kumar, & Hillegersberg, 2000; Siau, 2004),

and it was projected that organizations’ total spending on ERP adoptions was an estimated \$72.63 billion in 2002 (Al-Marshari, 2002).

Many scholars have recognized the importance of people in organizations, and this viewpoint is the central focus of the human resource management (HRM) perspective (Pfeffer, 1995). In this perspective, HRM has the potential to be one of the key components of overall enterprise strategy. Additionally, HRM may provide significant competitive advantage opportunities when they are used to create a unique (i.e., difficult to imitate) organizational culture that institutionalizes organizational competencies throughout the organization (Bowen & Ostroff, 2004).

Typically, an ERP system supports HRM, operation and logistics, finance, and sales and marketing functions (Daven-

Figure 1. Function modules of an ERP system



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port, 1998) (see Figure 1). But the early development stage of ERP in enterprises was all along with the center of production and sales course. Until recently, research has empirically supported the positive relationship between corporate financial performance and HRM function, and managers have also realized that HRM can deliver organizational excellence and competitive advantage for enterprises (Boudreau & Ramstad, 1997; Huselid, 1995; Wright, McMahan, Snell, & Gerhart, 2001). The HRM module was introduced into ERP, forming a highly integrated and efficient resource system with the other function modules of ERP. However, there are still many HRM-related problems that may result in the failure of ERP projects arising. So, there have been regular appeals to scholars for more research about the implementation of ERP systems in the HRM perspective in the last few years (Barrett & Mayson, 2006).

This article introduces the functions of an HRM module in ERP systems from the fields of human resource planning, recruitment management, training management, time management, performance management, compensation management, and business trip arrangement. Then it analyzes five HRM-related problems that may block the enterprises from implementing ERP successfully, and it provides reasonable recommendations. Finally, the article discusses future trends and suggests emerging research opportunities within the domain of the topic.

BACKGROUND

ERP, a term coined by the Gartner Group, is not simply a tool that provides singular outputs, but rather an infrastructure that supports the capabilities of all other IT-based tools and processes utilized by a firm (Enslow, 1996). Shang and Seddon (2000) classified the different types of ERP benefits as: IT infrastructure benefits, operational benefits, managerial benefits, strategic benefits, and organizational benefits. Palaniswamy (2002) pointed out that the failures

of ERP projects were not because the software were coded incorrectly, rather the companies failed to understand the real organizational needs and systems required to solve their problems to improve performance. Lynne, Axline, Petrie, and Cornelis (2000) analyzed the adopters' problems with ERP including project phase problems, problems with product and implementation consultants, shakedown phase problems, underestimating data quality problems and reporting needs, and so on.

Within the managerial literatures, a coherent approach provides a conceptual basis for asserting that human resource is a key source of competitive advantages, since it offers a unique contribution to value creation, rarity, imperfect imitability, and non-substitutability of a firm's strategic resources (Bellini & Canonico, 2007). Stone (2007) considered the past, present, and future of HRM theory and research. He concluded that HRM theory and research has considerable potential to enhance organizational efficiency and effectiveness. Ashbaugh and Rowan (2002) summarized the technology features of a modern HRM system (see Table 1).

In addition, some scholars have already studied the relationship or connection of ERP implementation with HRM. For instance, Ashbaugh and Rowan (2002) argued that the major difference between ERP and its predecessors (e.g., MRP II) is the linkage of financial and HRM applications through a single database in a software application that is both rigid and flexible. Wright and Wright (2002) listed two of the most-cited HRM risks in an ERP system: lack of user involvement and inadequate training. Hsu, Sylvestre, and Sayed (2006) supplied another often-overlooked HRM factor when implementing an ERP system—that is, the result of high stress levels on the staff, particularly in the finance or accounting departments, which are already under stress from the heavy workload in a legacy system. Li (2001) studied the HRM function module in an ERP system. He insisted that the practical HRM system should be built up to improve incentive mechanism and to strengthen the training of employees while applying ERP.

Table 1. Technology features of modern HRM system

Integration	User friendliness
Common relational database	Enhanced reporting and analysis
Flexible and scalable technology	Process standardization and malleability
Audit trail and drill down capabilities	Internet and capabilities
Robust security	Document management and imaging
Workflow	

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