ABSTRACT

It is very important to identify what are the key factors across different steps within Enterprise Resource Planning (ERP) implementation models. This study consists of two phases. The first phase involves a questionnaire survey among experienced ERP consultants in order to identify the key successful factors of each step within ERP implementation models. In the second phase, experienced ERP consultants are interviewed to examine why these factors are important at each of the implementation steps and what are the difficulties of using Western ERP implementation models in China. The results suggest that ERP implementation is likely to be more successful if ERP implementation models address implementation challenges and leverages. This study provides guidance to ERP consultants on how to utilize their limited resources by considering these factors at each step within the ERP implementation models.

Keywords: Chinese culture variations; critical success factors; enterprise resource planning; ERP implementation; implementation model

INTRODUCTION

An ERP implementation is usually a large and complex project that involves large groups of people and other resources working together under considerable time pressure and facing many unforeseeable developments (Davenport, 1998). Over the past few years, critical success factors (CSFs) of ERP implementation have been well studied (Evestes & Pastor, 2001), but very little attention has been paid to ERP implementation models. On the other hand, the compound annual growth rate of the China ERP market was estimated to be triple the worldwide growth rate, and the China ERP market was forecasted to reach half a billion US dollars in 2008 (IDC, 2004b). However, previous studies on ERP implementation were focused mainly on large companies in Europe and the US; very few have focused on enterprises in China (He, 2004). Therefore, there is a gap in the study of CSFs across ERP implementation models for ERP implementation in China.

The purpose of this article is to investigate what and why CSFs are relatively important in each step within selected ERP implementation models. Results of this
study also help to understand the culture issues of using Western ERP implementation models for ERP implementation in China and, consequently, help to improve ERP implementation success in China.

This article commenced by summarizing previous research findings relating to the CSFs of ERP implementation. The second part examines different types of ERP implementation models found in the existing literature. A research framework then is developed. Empirical ERP implementation models are selected in order to help to assess major ERP challenges. Finally, the vendor ERP implementation models then are embedded with data from a questionnaire survey and personal interviews in order to illustrate contributions of CSFs across ERP implementation models and the culture issues of using Western ERP implementation models in China.

BACKGROUND LITERATURE

Enterprise Resource Planning (ERP) systems are configurable information system packages that integrate information and information-based processes within and across functional areas in an organization (Kumar & van Hillegersberg, 2000). ERP systems have become a popular information system in a rapidly changing business environment since the 1990s (Chung & Snyder, 2000). ERP systems come as standardized commercial packages composed of several modules that allow customers to adapt them to their requirements (Evestes & Pastor, 2001).

Many of the most experienced IT organizations have failed in their ERP implementations. Implementation failures may include cancellation before completion or never successfully integrating them into the business on implementation (Standish, 1999). Approximately 20% of systems are terminated before implementation (Computerworld, 2001). More than 50 European companies revealed that an overwhelming 92% was dissatisfied with the results achieved from their ERP implementations (PA, 2000). More than 70% of ERP implementations fails to meet stated objectives such as staying within budget, finishing on schedule, and system performing well (Buckhout, Frey, & Nemec, 1999).

The reason for these failures is that the implemented ERP systems suffer from system integration problems; the lack of alignment between people, processes, and the new technology; and precluding organizations from realizing anticipated benefits or even to recover the cost of the implementation effort (Davenport, 1998). ERP implementation problems were influenced by a clash between the customer’s culture (defined by the stakeholder’s norms), values, and beliefs, and the changes in culture that arise from the imposition of the ERP package (Krumbholz & Maiden, 2001).

However, many organizations still are planning to invest heavily in ERP systems. ITtoolbox (2004) conducted an online survey from the ITtoolbox network in March of 2004 in order to gain insight into current ERP implementation trends among companies worldwide. The survey results demonstrated that many companies are looking to improve functionality in 2004 by adding new ERP packages. IDC (2004a) reported that the ERP market rose 5% in 2003 to reach nearly US $25 billion and was estimated to hit US $36 billion by 2008.

There are many motivations for investing in an ERP system. A successful ERP system makes it possible to develop and implement a variety of flexible supply chain options that can create significant cost and value advantages (Hayes, Hunton, & Reck,
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