ERP Implementation Projects in Asian Countries: A Comparative Study on Iran and China

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ABSTRACT

This research studies critical success factors that influence the ERP implementation project in a Middle-Eastern country, namely Iran and compares the results with findings in a country in East Asia, namely China. A survey questionnaire was distributed to Iranian organizations with ERP systems. A total of 384 responses were collected and analysed using the Structural Equation Modelling. Findings are then compared, with the enterprises of China, to check for the similarities & differences. The outcomes showed that ERP implementation success in Iran is influenced by Top Management Support, Project Management Program, Organizational Culture, User Education & Training, ERP User Involvement, ERP User Characteristics, ERP Software Suitability, ERP Information Quality, ERP System Quality, ERP Vendor Quality. The central aim of the current research is to understand the most significant factors of ERP project success that help adopting companies to realize the benefits of ERP implementation.

KEYWORDS

Asian Countries, China, Critical Success Factor, Enterprise Resource Planning, ERP Implementation Project, Iran, Organizational Culture, Project Management Program

INTRODUCTION

Enterprise resource planning (ERP) systems can be considered as cornerstone that allows most organizations to achieve their business goals (Alhirz & Sajeev, 2015). In recent years, many firms have invested in enterprise resource planning (ERP) in order to integrate all business activities into a uniform system. The implementation of ERP enables the firm to reduce the transaction costs of the business and improve its productivity, customer satisfaction and profitability. Companies around the world have implemented ERP systems because the use of ERP systems has been considered as a key determinant of competitive advantage. Amiri and Kazerooni (2014) affirmed that enterprise resources planning (ERP) is the most operative computer application in the present public utility, to support the operations of a utility enterprise. The ERP systems offer several considerable tangible benefits to the implementing companies like cost effectiveness in inventory, personnel, procurement, cash/order management, improvements in productivity, and overall profitability, and they also present a number of most important intangible benefits such as improved information and processes, internal integration, and improved customer service (Dezdar & Ainin, 2011a). Regardless of the countless benefits of the ERP system, its adoption and implementation have not been without issues (Peslak, 2012). Sar and Garg (2012) confirms that 60% to 70% of the ERP projects are not implemented
successfully. So, there is an urgent need to identify and understand the factors that affect the success or failure of ERP implementation (Amid et al., 2012). The majority of previous studies have been devoted to developed countries, while in developing countries, many companies have moved towards using such systems. The majority of IT/IS management standards and guidelines have been developed by technologically-leading countries. But developing countries, which mostly confront with especial challenges, have a different condition from the implicit assumptions of leading countries (Eichhorn & Tukel, 2015). Dezdar (2012) emphasized that additional effort should be directed to ERP projects in developing countries as they represent a vast potential ERP market and a very large pool of companies.

Following the gaps discussed above, this study aims to identify the critical success factors that influence ERP implementation success in Iranian and Chinese companies. Understanding the critical factors of the success of ERP implementation would be of benefit to both implementing companies and ERP software vendors. ERP implementing companies could achieve an understanding of the complexities inherent in ERP implementation projects to avoid possible barriers. In addition, decision makers will be able to prepare better strategies to increase the likelihood of achieving the desired results. Besides, ERP system vendors would build ERP products that keep their customers happier and consequently they may possibly increase their market share and their profits.

In the following sections, the related literature is reviewed. Then, research framework and hypotheses are presented followed by the research methodology chosen to conduct the study. Next, data collection and analysis are described and findings are discussed. Finally, conclusions and implications for future research are highlighted.

**CRITICAL FACTORS FOR SUCCESSFUL ERP IMPLEMENTATION**

Implementation of an ERP system is a complex process including a great many factors and conditions which can potentially influence successful implementation. These factors might have a positive effect on the ERP implementation project outcome, whereas the lack of these conditions could create trouble through ERP implementation (Dezdar & Ainin, 2011b). In ERP system implementation, CSFs could be recognized as the few key areas where things must go right for the implementation to succeed (Callaghan et al., 2013). The CSF method is an attractive method for researchers and managers because it facilitates the identification and prioritization of critical factors that will possibly affect ERP implementation benefits (Sar & Garg, 2012).

Critical success factors for ERP projects have been studied from a number of different perspectives (Zhang et al., 2005). Holland and Light (1999) focused on strategic factors that span the whole project and tactical factors that can be applied to particular parts of the project. Esteves-Sousa and Pastor-Collado (2000) concluded that the CSFs model should have four perspectives: strategic, tactical, organizational and technical. Al-Mashari et al. (2006) presented a categorization of ERP critical factors where 12 factors were divided into three dimensions related to the stages of ERP project. Nah et al. (2003) performed a survey of the Chief Information Officers (CIOs) of Fortune 1000 companies to gain some understanding of the CIOs’ views of the importance of each of the 11 criteria in determining the success in the implementation of an ERP system. Somers and Nelson (2004) divided the 22 CSFs to two parts as ‘key players’ and ‘key activities’. Finney and Corbett (2007) identified 26 critical success factors based on the investigation of all CSFs in the literature and grouped them into strategic and tactical categories. Finally, Dezdar and Sulaiman (2009) developed a compilation of CSFs for ERP implementation projects. They employed content analysis method to scrutinize the studies conducted in last 10 years and provided 17 CSFs in five main categories, as follows:
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