Abstract

This study examines empirical evidence from a survey conducted in Omani organizations to determine whether the importance of individual CSFs varies across the ERP implementation life-cycle. The CSFs included in the survey were derived from a structured review of literature. Purposive sampling was used to select ERP stakeholders who had both experience and knowledge of ERP implementations. The survey data are analyzed and used to evaluate four hypotheses: Individual CSFs vary in importance across the ERP implementation life-cycle; The number of CSFs that are important increases across the ERP implementation life-cycle; Categories of CSFs vary in importance across the ERP implementation life-cycle; Technical CSFs are of less importance than other CSFs for successful ERP implementation. The data support the first three, but the fourth is rejected.

Keywords: Critical Success Factors (CSFs), Dynamism, Empirical Study, Enterprise Resource Planning (ERP) Systems, Implementation Life-Cycle, Lifecycle Distribution, Oman

Introduction

The complexity of enterprise resource planning (ERP) systems and their importance for businesses of all sizes continue to ensure that they remain a topic of intense interest for researchers. Their complexity warrants investigation across the full ERP lifecycle; for instance from addressing the human and organizational issues relating to pre-implementation readiness (Abdinnour-Helm, Lengnick-Hall, & Lengnick-Hall, 2003) through to post-implementation maintenance and support (Law, Chen, & Wu, 2010). However, there has been a significant focus on the implementation phase of the ERP lifecycle and its critical success factors (CSFs); for instance Al-Mashari, Al-Mudimigh, and Zairi’s (2003) taxonomy of CSFs, Akkermans and Van Helden’s (2002) paper on the relationships between CSFs, and Finney and Corbett’s (2007) com-
The paper is structured as follows. The literature review discusses those studies that informed the design of our empirical study; this includes both the range of CSFs that have been identified within the ERP implementation life-cycle and how authors have defined the ERP life-cycle (and mapped CSFs to its stages). Following this the research methodology for the empirical investigative work is presented, including the procedures for data collection and analysis. The survey results are reported and the data are used to evaluate the extent to which the hypotheses are supported. The implications arising from this study are discussed, including its strengths and limitations and we conclude by identifying opportunities for future work.

CRITICAL SUCCESS FACTORS AND ERP IMPLEMENTATION

There has been extensive research undertaken around the ERP systems phenomenon to determine how to maximize the opportunity for successful ERP implementation and usage. This has led to a significant focus on the identification and use of ERP critical success factors (CSFs). In this work the definition of CSFs is based on those of Leidecker and Bruno (1984), Pinto and Slevin (1987), Rockart (1979) as discussed in Esteves (2004) and can be stated as: CSFs are those factors that if carefully addressed, sustained and managed will have a positive impact in preparing stakeholders at different stages of the ERP implementation thus helping the organization to achieve a successful outcome.

A number of studies have identified the positive impact of using CSFs to improve ERP success, for instance (Al-Mashari et al., 2003; Brown & Vessey, 2003; Finney & Corbett, 2007; Ngai, Law, & Wat, 2008; Ram & Patinson, 2009). Two main approaches have been adopted by researchers to identify precisely what these CSFs are: contextual empirical studies and (meta) analyses of existing work. There are strengths and limitations attached to both approaches. Those who focus on empirical research and, in particular, case studies provide valuable insights into what has emerged from
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