

# Investigating Critical Success Factors Affecting ERP Implementation in Chinese and Pakistani Enterprises

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## ABSTRACT

*Carrying with itself the most effective, efficient & cross-functional integrative capabilities, the importance in adoption & usage of ERP systems has significantly increased in vibrant and dynamically responding business settings of today. This study attempts to present the ERP system's implementation success in terms of organizational impact, on time and under allocated budget by qualitatively examining relationship of each of the identified critical success factors (CSFs) to project's implementation success in enterprises of a developing country, China, by using validated responses from 12 organizations, using a questionnaire survey approach. Summary of survey's results are then presented in a tabular form to get a clearer view of the impact of CSFs during ERP system implementation. Findings confirm that 10, 9 and 1 out of the 20 proposed factors that are identified from the literature are critical, least critical & not critical respectively. Findings are then compared, in brief, with the enterprises of another developing country, Pakistan, to check for the similarities & differences. This study intends to enrich understanding on the most significant factors to trim down chances of failure regarding ERP project implementation success and is anticipated to contribute to the on hand body of knowledge in this regard.*

**Keywords:** *China, Critical Success Factor, Developing Countries, Enterprise Resource Planning, ERP System Implementation, Pakistan, Proposition, Questionnaire, Survey*

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## INTRODUCTION

Rapidly changing business settings or environments worldwide, internationalization of operations as well as economic globalization are pressing hard in stimulating enterprises across the globe to opt for effective operational as well as strategic initiatives to create, achieve and sustain a long term competitive advantage by effectively integrating its suppliers, customers and partners in achieving the objective of integrated supply chains. In pursuing this, implementation of information systems such as Enterprise Resource Planning (ERP) make easy the desired level of integration (Yusuf et al., 2004) and due to increase in its adoption by the companies in the current state indicates that the potential benefits of supply chain management and integration is about to be unleashed to a significant extent (Moller, 2005; McGaughey & Gunasekaran, 2007). The use of information and communication technologies like ERP system has profoundly increased in the vibrant organizations of today due to its intra- and inter-organizational integration capability & functionality, streamlining of business operations, improving information flow, enhancing business flexibility and replacement of the old aging & incompatible legacy information systems. Kuppusamy et al. (2009) found that application of such technologies are supportive; in making an enterprise more flexible to adapt and respond effectively to the rapid changes occurring in the dynamic business environments, in streamlining and integrating various business processes or operations, and in improving the flow of information throughout an enterprise.

Although numerous benefits, both operational as well as strategic, are associated with the ERP system's adoption, if implemented successfully, but there exists considerable number of studies that discussed of the organizations for not reaping, in full, the potential economic benefits from such technological investments (Briggs et al., 2003). Huge investments are required to be made by the enterprises to implement information technology systems such as ERP in their organizational structure (Rao & Mandal, 2011; Hanafizadeh et al., 2010).

Because of complexity, enterprise-wide scope, high resource commitment (Lai, 2006; Sternad et al., 2009), more time demanding, management and staff engagement, association of high risks etc., expected to arise with accompanying large-scale organizational and process changes in transition to such a new system, the managers in several organizations therefore, find its implementation as the most cumbersome task and a much more complex exercise in the systems' development projects. Due to all such and many other constraints, its rollback amid implementation or even after implementation is not easy because of the involvement of high expenditures that are already incurred on the selection and pre-implementation stages of such systems. For instance, Sobeys, a very large retail chain, in Canada, when decided to terminate its ERP system's initiative suffered more than US\$45 million in first quarter of 2001 (Kumar et al., 2003), which clearly indicates how an organization can suffer with such an escalated amount of financial loss by terminating such projects. Similarly Davenport (1998) found unsuccessful implementation efforts at Fox-Meyer Drug and Dell etc. Legare (2002) also reported 40% to 60% failure rate in ERP implementation in his study. However, the frequency of success and failure in the implementation of the ERP systems has helped the practitioners and scholars in better understanding of the phenomenon in question. As ERP systems are based on the best business practices and processes of the businesses located mostly in western countries therefore, more researches regarding the factors associated with its successful implementation and subsequent evaluation of the system's benefits as well as their impact on organizational performance have been conducted in the context of the developed countries (Huang, 2010; Dawson & Owens, 2008; Equey & Fragnière, 2008; Ngai et al., 2008; Agouram et al., 2007; Kumar et al., 2003; Mabert et al., 2000). The lack of empirically supported research on examining critical success factors or ERP project management issues particularly in the context of developing countries like China and Pakistan has signified the importance of the need as well as motivated the authors to undergo

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