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The Role of Knowledge Management Processes in ERP Implementation Success

Saeed Rouhani, IT Management Department, University of Tehran,Tehran, Iran
Somayeh Hosseini, Mehralborz University, IT Management Department, Tehran, Iran
Mehdi Shami Zanjani, IT Management Department, University of Tehran, Tehran, Iran.

ABSTRACT

Due to response to the business goals, organizations need to implement enterprise resource planning systems. But the risk of failure in the implementation project of these systems is so high, therefore paying close attention to the effective factors of implementation is very necessary. One of the effective factors is knowledge management (KM). In this study, the role of Knowledge management processes in implementation of enterprise resource planning systems is studied and the existence of knowledge management as a required factor will be emphasized. Research data, in the questionnaire format have been gathered from experts in the field of enterprise resource planning system in Iranian companies. Some of the studied organizations have implemented this system and others were in the implementing phase. Data analysis with structural equation modeling (SEM) methodology by Lisrel software shows positive relation between knowledge management processes and Success of enterprise resource planning system implementation.

KEYWORDS

Enterprise Resource Planning (ERP) Systems, Knowledge Management (KM), Structural Equation Modeling (SEM), Success

INTRODUCTION

For responding to the changing competitive environment in global market, organizations need to utilize enterprise resource planning systems as an information system to achieve integrity in business processes, information and knowledge flow. Using this type of system could bring advantages such as advanced technology, effectiveness, integration, reporting capabilities, right access to data, improved customer service, effective communication and security (Roman, 2009).

Despite the increasing desire to implement this type of information systems in organizations, fear of failure leads to stop or delay in project implementation. In other words, with the high failure rate estimated up to 61% (Ghosh, 2012), it can be critical for organizations to identify success factors of the implementing project.

Also, if the implementation projects have been done successfully it wouldn't be guaranteed the success of this precious system continually. Because during the use of system, change in business environment, personal factors, customer requirement and many other factors can inevitably affect business processes and change them widely. So the enterprise resource planning system wouldn't be effective in organization if it doesn't match to changes.

Hence, successful implementation doesn't ensure the performance of the system certainly acceptable for a long time and also, variety of factors are responsible for positive continues effects

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of the system. Knowledge management is one of them that according to literature proposed to have positive effect on successful implementation of enterprise resource planning system (Arun, 2015).

Therefore, in regard to the necessity of enterprise resource planning system for organizations, knowledge management seems as a critical success factor in implementation project. In this paper the role of knowledge management process in implementing project will be studied and we are trying to reduce failure rate of this expensive and complicated project by extracting and applying effective knowledge related to successful implementation.

Two fundamental research questions will be proposed in this study:

1. Is there any significant relation between knowledge management readiness and successful implementation in organizations or not?
2. Does the use of knowledge management processes have noticeable effect on successful implementation of enterprise resource planning systems or not?

In regard to above questions, the research hypothesis will be defined as below:

There is a meaningful connection between knowledge management and successful implementation of enterprise resource planning systems.

Besides, with decomposition of knowledge management to its processes, we can introduce many other questions. In other words, by supposing that knowledge management is built up processes such as, knowledge creation, knowledge organization and integrity, knowledge sharing and knowledge use we can analyses the effect of them on the results of information system implementation in the fields of finance, learning and growth, customer and internal business processes.

THEORETICAL BACKGROUND

Enterprise Resource Planning System (ERP)

ERP systems are software which manages business processes by means of modules. It supports organizational processes, such as planning, production, sales and marketing, distribution, accounting, finance, human resource management, project management, inventory management, maintenance, transportation and e-commerce. This system has been designed to solve the problems of separate information departments in organizations as is called: "Information Islands" (Muscatello, Small, & Chen, 2003). Enterprise resource planning systems emphasizes efficiency of business processes in enterprises. To achieve this goal, they maintain mechanism for data/information consistency through high degrees of standardization, formalization, and specialization (Azhdari, MousaviMadani, & Zarebahramabadi, 2012).

Successful Implementation of Enterprise Resource Planning Systems

Despite interest to enterprise resource planning system implementation, the project failure rate is estimated between 67% and 90% (Calogero, 2000; Shore, 2005). In literature, the critical factors for project success and failure have been reported (Amid, Moalagh, & Zare Ravasan, 2012; Liaquat, Patrick, & Rashid, 2002). In this paper we calculate enterprise resource planning system success by using balanced scoured card model (Batada, 2012). The proposed model is categorized into 4 dimensions as finance, Customer, internal business process and finally learning and growth. In financial dimension, the project is examined from some point of view such as investigating, predicted budget and spending money. In customer dimension, the focus is on external customer- persons who are using the system indirectly and the elimination of bottlenecks and customer service are the goals. In internal business process, internal condition of the organization is focused and the desired result is increment in functional capacity of system and elimination its weakness through to user requirement (Gibbs, 2014). In learning and growth dimension, the main focus is on impressive use of the system and improvement in system by means of increasing learning and creativity skills.