ASSESSING CRITICAL SUCCESS FACTORS FOR ERP IMPLEMENTATION SATISFACTION: A STUDY OF CONSULTANTS PARTICIPATION AND USER TRAINING

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A dissertation submitted in partial fulfillment of the
requirements for the award of the degree of
Master of Science (Information Technology - Management)

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JANUARY 2013

This dissertation is dedicated to my family for their endless support and encouragement.

ACKNOWLEDGEMENT

First and foremost, I would like to express heartfelt gratitude to my supervisor **Dr. Nor Hidayati Zakaria** for her constant support during my study at UTM. She inspired me greatly to work in this project. Her willingness to motivate me contributed tremendously to my project. I have learned a lot from her and I am fortunate to have her as my mentor and supervisor. Besides, I would like to thank the authority of Universiti Teknologi Malaysia (UTM) for providing me with a good environment and facilities which I need during research process.

ABSTRACT

An Enterprise resource planning (ERP) system is a company wide information system that integrates all aspects of a business and promises one database, one application across the entire enterprise. ERP implementation has been an important activity for improving efficiency and is a critical investment that can significantly affect future performance of a company. Consultant participation and user training are essential factors that can contribute to ERP implementation satisfaction. Studies examining the effects of consultant participation and user training on ERP implementation satisfaction are rare. Thus, this present study was designed to fill this gap in research. A relevant research model was developed to test three (3) hypothesized paths among the study's variables, namely consultant participation, user training, ERP implementation satisfaction. Data was collected by survey questionnaires from 109 of ERP users. The Smart PLS tool was used for data analysis. In sum, the results of this research show that (1) ERP implementation satisfaction depends on consultant participation especially on the quality of consultants' services and user training. (2) User training plays a mediator role between consultant participation and ERP implementation satisfaction.

ABSTRAK

Sistem ERP merupakan sistem maklumat yang mengintegrasikan semua aspek perniagaan deusan menggunakan satu pangkalan data. Pelaksanaan ERP amat penting bagi sesebuah syarikat meningkatkan kecekapan dan prestasi syarikat. Kajian literatur menunjukkan perunding dan latihan pengguna adalah faktor penting yang boleh menyumbang kepada kepuasan pelaksanaan ERP. Bagaimanapun, kesan penyertaan perunding dan latihan pengguna pada kepuasan pelaksanaan ERP ini tidak meudapat perhatian sewagarnyc didakm kajian lirctur. Sustem kajian ini telah dijalankan untuk mengisi jurang ini dalam penyelidikan. Satu model kajian yang berkaitan telah dibangunkan untuk menguji tiga (3) hipotesis iaitu penyertaan perunding, latihan pengguna, pelaksanaan ERP kepuasan. Data telah dikumpulkan oleh tinjauan soal selidik daripada 109 pengguna ERP. Smart PLS telah digunakan untuk kerja analisis data. Keputusan penyelidikan ini menunjukkan bahawa (1) ERP kepuasan pelaksanaannya bergantung kepada penyertaan perunding terutama pada kualiti perkhidmatan perunding dan latihan pengguna. (2) latihan pengguna memainkan peranan pengantara di antara penyertaan perunding dan kepuasan pelaksanaan ERP.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Enterprise Resource Planning (ERP) System is an IT innovation that enhances organizational performance (T. Somers & Nelson, 2001). It is one of the most important development in information technology and one of the fastest growing segments in the software market (T. Somers & Nelson, 2001). ERP integrates an extensive range of business functions to provide a broad view of the organization from a single IT architecture (Gable, Klaus, & Roseman, 2000). ERP's goal is every department or functional area work together, enables an organization to automate and integrate business processes, share data through one central database in entire organization.

Organizations are progressively replacing their legacy systems with ERP packages and have spent billions of dollars for ERP implementation (Eric T.G. Wang & Chen, 2006) and thousands of businesses are running these integrated systems successfully worldwide (Gargeya & Brady, 2005).The growing demands for ERP have some reasons, for example, expectations of revenue growth, competitive pressures to become a low cost producer, and ability to compete globally(T. Somers & Nelson, 2001). Benefits of a correctly selection andimplementation of ERP system

can be significant leading to great reductions in inventory cost, lead time for customers, production time, and production costs (T. Somers & Nelson, 2001).

1.2.1 Motivation of the Study

Despite the popularity of ERP systems, the failure rate of ERP system implementation has remained high (Amid, Moalagh, & ZareRavasan, 2011).Frequent reports of ERP failure indicate that ERP failure rates remain at between 67% and 90% , and 35% of ERP implementations are canceled (Amid, et al., 2011). ERP implementation projects are, on average, take 2.5 times as long as intended, 178% over budget, and deliver only 30% of promised benefits (Amid, et al., 2011; Z. Zhang, Lee, Huang, Zhang, & Huang, 2005).

These statistics imply ERP software packages are complex (Gargeya & Brady, 2005; Umble, Haft, & Umble., 2003) and their implementations are difficult, expensive and also places tremendous demands on organization time (Lapiedraa, Alegreb, & Chiva, 2011; T. M. Somers & Nelson, 2004; E. Umble, R. Haft, & M. M. Umble., 2003; Z. Zhang, et al., 2005). ERP implementations are more complicated than other packages because of their integrative nature (Lapiedraa, et al., 2011), so the implementation process must be managed as a program of wide-ranging organizational change initiatives rather than as a software installation effort (Hong & Kim, 2002). According to Gargeya and Brady (2005), partial failure and complete failure are two levels of failure for ERP systems implementations. In partial failure, organization will gain some modifications processes and it will have some disruptions in daily works. In complete failure, ERP project is stopped before implementation or cause serious functional and financial damage to the organization.

Much effort has been done by IS researchers in order to avoid such failures and helping companies better make use of their resources. Some IS researchers have provided valuable insights into the process of ERP implementation (Yusuf, Gunasekaran, & Abthorpe, 2004) and some identified a variety of CSFs affecting for the ERP implementation (P Ifinedo, 2011; T. Somers & Nelson, 2001; T.M.Sommers

(P Ifinedo, 2011; T. Somers & Nelson, 2001; T. M. Somers & Nelson, 2004). Most of these researches assigned to developed countries rather than developing countries because only 10–15% of global ERP system sales involve to developing countries (Amid, et al., 2011). However, it is believed that developing ones have become interest for expansions of ERP implementations (Amid, et al., 2011; Hawari & Heeks, 2010).

There is only some reports that have emerged of ERP failures in developing countries including suggestions that developing country implementations face specific difficulties over those found in developed countries (Xue, Liang, Boulton, & Snyder, 2005) . One of the difficulties is ERP software packages are designed by western vendors and the structures and processes embedded in these systems reflect western processes (Amid, et al., 2011). It is assumed that fundamental misalignments are likely to exist between requirements of companies in developing societies and the functions of western ERP systems (Amid, et al., 2011). Consequently, these misalignments lead ERP implementation failures tend to occur when organizations in developing countries effort to adopt foreign ERP systems (Amid, et al., 2011; Xue, et al., 2005).

Due to lack of experience, high investment of funds made by organizations in developing countries to implement or move to ERP systems, and high failure rate of ERP implementations in developing societies (Hawari & Heeks, 2010), Finding the CSFs would be desirable because Critical success factors (CSFs) are crucial to achieving the predetermined goals of a project, and vital to the success of an ERP implementation.In terms of an ERP implementation, the CSFs are those conditions that must be met in order for the implementation process to happen successfully and in fact CSFs are well-defined as factors required to guarantee a successful ERP project (Holland & Light, 1999). Companies must be aware of the factors that influence the success of their implementations to prevent failures (Tsai, Lee, Shen, & Lin, 2011).

I would exam two salient critical success factors, namely consultant participation and user training on ERP implementation satisfaction. If a company wishes to implement an ERP, it can rarely be done completely in house because of

the complexity of the system. So, most organizations collaborate with their ERP suppliers and/or consultants(Tsai, et al., 2011). These suppliers and consultants are external facilitators that affect ERP success (Wu & Wang, 2007). ERP suppliers and consultants help not only in improving the quality of the ERP products, but also in ensuring user knowledge (Tsai, et al., 2011). Consultants' experience, expertise, and knowledge allow clients to have an appropriate ERP system and help train users to fully exploit the technology (T. M. Somers & Nelson, 2004; Eric T.G. Wang & Chen, 2006;Wong, Scarbrough, Chau, & Davison, 2005).

I select user training as second CSF for two reasons: first, According to previous studies, I found consultant participation and user training can be interrelated because user training is one of the services that are provided by ERP consultants but they have not investigated the mediator role of user training between consultant participation and ERP implementation. Also, they have not justified what is the effect of ERP consultants on user training. Second, people element is one of the most important factors affecting organizational ISs implementation and deployment (Z. Zhang, et al., 2005). User training is a critical intervention to support the successful implementation of information systems innovations (Sharma & Yetton, 2007).

So, the present research is motivated, in part, by the desire to shed light in this area of study because of two reasons: first, when adopting an ERP system in a developing country, there is a need to recognize unique Asian context because developing countries have different conditions from developed countries (Amid, et al., 2011; Z. Zhang, et al., 2005), and there is lack of research in order to examine CSFs on ERP implementation satisfaction in organizations of developing societies. Second, there is no study to investigate the effect of consultant participation and user training on ERP implementation satisfaction. Third, there is no study to empirically investigate the relationship of consultant participation with user training for ERP implementation satisfaction.

1.3 Research Questions

The research questions of this study are as follow:

i. What are the CSFs that influence ERP implementation satisfaction?
ii. What are the effects of consultant participation and user training (CSFs) on ERP implementation satisfaction?
iii. What is the effect of consultant participation on user training?

1.4 Research Objectives

The research objectives of this study are as follow:

i. To identify CSFs for ERP implementation satisfaction.
ii. To identify the effects of consultant participation and user training (CSFs) on ERP implementation satisfaction.
iii. To investigate empirically the effect of consultant participation on user training.

1.5 Project Scope

This research focuses on an Iranian organization because ERP vendors are extent their market into developing countries and ERP systems are being adopted by companies in such societies. Iran also as a developing country has been trying to implement ERP systems but high failure rates of implementations are announced (Amid, et al., 2011), and there is no comprehensive study that identifies CFFs for ERP implementation satisfaction in Iranian industries and other similar cases.

This research would propose a research model which is composed of consultant participation, user training and ERP implementation satisfaction. I would

examine the research model in ERP implementation and ERP post implementation stages and our respondents will be the users of the ERP system.

1.6 Significance of the Study

This research study on CSFs, namely, consultant participation and user training for ERP implementation satisfaction in Iranian company because no significant study has been addressed CSFs for ERP implementation satisfaction in developing countries such as Iran that has not had noticeable experience in this area. So, the results of this study can be interesting for vendors, developers and other cases in developing countries.

This research will propose a research model in order to make a new direction for managers. Managers will be informed on what CSF should be given high precedence and consideration, and what the effects of such factors on ERP implementation are. So, this study could enhance ERP implementation because the key goal of this research is to identify CSFs and their effects on ERP implementation satisfaction.

1.7 Chapter Summary

This chapter discussed the overview of this study which included a brief introduction of ERP systems and motivation of the study that reflected problem background and research gap. Since research gap highlighted there was no empirical study for investigation the effects of consultant participation (CSF) and user training on ERP implementation satisfaction and also there was no empirical study for investigation the relationship between consultant participation and user training (CSFs), I proposed three project objectives, namely to identify CSFs for ERP implementation satisfaction, to identify the effects of consultant participation and user training (CSFs) on ERP implementation satisfaction, and to investigate

empirically the effect of consultants participation on user training that are needed to successfully be achieved in order to fill up the research gap. Likewise, I justified the "project scope" reflecting the area of our research which is ERP implementation and post implementation. Finally, I defined "significance of the study" reflecting the contribution of the research which enhance ERP implementation through justification of CSFs (consultant participation and user training) and their effects on implementation satisfaction.

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