

**THE IMPACT OF ENTERPRISE RESOURCE PLANNING SYSTEM
TOWARD ORGANIZATIONAL PERFORMANCE IN A CASE STUDY
MICRO-COMPANY**

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**BACHELOR OF TECHNOLOGY MANAGEMENT (TECHNOLOGY
INNOVATION) WITH HONOURS**

**FACULTY OF TECHNOLOGY MANAGEMENT AND
TECHNOPRENEURSHIP**

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

JUNE 2019

‘I/ We hereby declared the work I/ We had read through this thesis and in my/our opinion that this thesis is adequate in terms of scope and quality which fulfill the requirements for the award of Bachelor of Technology Management (Technology Innovation)’

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DECLARATION

“I admit that this report is the result of my own, except certain explanations and passages where every of it is cited with sources clearly.”

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DEDICATION

I would like to dedicate the appreciation to my beloved family especially my parents who always provide the support and encouragement to me when I faced the challenges in university life. Next, I would also like to dedicate to my supervisor and panel who offered valuable suggestion to me throughout the research, friends and course mates for the assistance during the completing of research.

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ABSTRACT

The business environment today is developing rapidly as such the amount of data and information that is being generated is huge which causes process of transferring information become more complex. Enterprise Resource Planning (ERP) System is a software that can integrate all the information across departments in an organization to enhance their Information Technology (IT) infrastructures, enhance business processes and deliver high quality of services. It can tremendously improve the efficiency and effectiveness of an organization. Technology Acceptance Model (TAM) is used as a theory model to identify the acceptance of the ERP System. The aim of this research is to investigate the impacts of implementation of ERP System toward organizational performance to provide a new insight for other system adopters especially micro-company. The study is conducted at a dynamic micro company involved in e-commerce. There are nineteen employees of which ten employees participated in the study. The respondents are directly involved in the daily operation of ERP system and were interviewed using semi structured questionnaires. The in-depth interview gives a more detailed information and knowledge of all the ERP System adopters and provider toward ERP System and its ability to improve the performance of the organizations. Based on the research, it is found that financial solution, human capital management solution, sales and service solution, procurement and logistic solution, product development and manufacturing solution and corporate service solution have impact toward organizational performance in the micro-company. The results showed that financial solution is the most influencing factors among these solutions. Although ERP System implementation is a costly investment to a micro size company, the adoption of ERP system has shown to provide benefits to organization. Thus, it is recommended to the company to adopt the ERP system and to include the vendors in the implementation process.

Keywords: *ERP System, Enterprise Resource Planning System, Organizational Performance, Micro-Company*

ABSTRAK

Persekitaran perniagaan hari ini sedang berkembang pesat dengan begitu banyak data dan maklumat yang dihasilkan adalah besar yang menyebabkan proses memindahkan maklumat menjadi lebih kompleks. Sistem Perancangan Sumber Daya Perusahaan (ERP) adalah perisian yang dapat mengintegrasikan semua maklumat di seluruh jabatan dalam organisasi untuk meningkatkan infrastruktur Teknologi Maklumat (IT) mereka, meningkatkan proses perniagaan dan memberikan perkhidmatan yang berkualiti tinggi. Ia dapat meningkatkan kecekapan dan keberkesanan sesebuah organisasi. Model Penerimaan Teknologi (TAM) digunakan sebagai model teori untuk mengenal pasti penerimaan Sistem ERP. Tujuan penyelidikan ini adalah untuk menyoal impak pelaksanaan Sistem ERP ke arah prestasi organisasi untuk memberikan pandangan baru kepada penerimanya yang lain terutamanya syarikat mikro. Kajian ini dijalankan di sebuah syarikat mikro dinamik yang terlibat dalam e-dagang. Terdapat sembilan belas pekerja di mana sepuluh pekerja mengambil bahagian dalam kajian ini. Responden terlibat secara langsung dalam operasi harian sistem ERP dan ditemuramah menggunakan soal selidik separa berstruktur. Temubual mendalam memberikan maklumat dan pengetahuan yang lebih terperinci mengenai semua pemakai dan penyedia Sistem ERP dan pembekal ke Sistem ERP dan keupayaannya untuk meningkatkan prestasi organisasi. Berdasarkan penyelidikan, didapati penyelesaian kewangan, penyelesaian pengurusan modal manusia, penyelesaian jualan dan perkhidmatan, penyelesaian perolehan dan logistik, penyelesaian produk dan pembuatan dan penyelesaian perkhidmatan korporat memberi kesan terhadap prestasi organisasi dalam syarikat mikro. Keputusan menunjukkan bahawa penyelesaian kewangan adalah faktor yang paling mempengaruhi di antara penyelesaian ini. Walaupun pelaksanaan Sistem ERP adalah pelaburan yang mahal kepada syarikat saiz mikro, penggunaan sistem ERP telah menunjukkan untuk memberi manfaat kepada organisasi. Oleh itu, adalah disyorkan kepada syarikat untuk mengguna pakai sistem ERP dan memasukkan vendor dalam proses pelaksanaan.

Kata kunci: Sistem ERP, Sistem Perancangan Sumber Daya Enterprise, Prestasi Organisasi, Syarikat Mikro

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LIST OF ABBREVIATION

APEC	=	Asia Pacific Economic Cooperation
BOM	=	Bills of Material
ERP	=	Enterprise Resource Planning
GDP	=	Gross Domestic Production
ICT	=	Information and Communication Technology
IT	=	Information Technology
LE	=	Large Enterprise
MNC	=	Multi-National Company
MRP	=	Manufacturing Requirements Planning
QC	=	Quality Control
ROA	=	Return on Assets
ROI	=	Return on Investments
SME	=	Small and Medium Enterprise
TAM	=	Technology Acceptance Model

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

In today's global business environment, organizations and firms are desperately seeking for improvements to maintain their competitiveness in their respective industry. Information System are widely used as a tool to improve organizations or firm's performance in term of effectiveness, time and cost. Enterprise Resources Planning System as known as ERP System is a phrase we often listen in our daily life. ERP systems which evolved from Manufacturing Requirements Planning (MRP) System, is an integrated information system that feature a lot of functions that support business management by managing the entire organization's resources efficiently and effectively. ERP System have drawn increasing attention by different size of organizations and firms from multi-national company (MNC), small and medium enterprise (SME) and micro-company, because it provides variety of benefits to a business. According to Barker and Frolick (2003), ERP System involves the planning and managing of the organizations' resources in the most efficient, productive, and profitable manner. It enables companies to integrate their business processes and all information relevant to their organization (Nah and Delgado, 2006). However, Kumar and Van Hillegersberg (2000), defined ERP System as a configurable information system that integrate information within and across functional boundaries within an organization. ERP is a comprehensive software solution that seeks to integrate the complete range of business processes

and functions in order to present a company-wide view of the business from a single IT architecture (Al Mashari et al., 2003). When an organization have efficient business processes, they can be more competitive in the marketplace.

Based on Trott and Hoecht (2004) research, the benefits of ERP systems are linked to effectiveness and efficiency of business processes because firms can get more accurate and timely information. Through integrating business functions, firms can reduce data collection time and avoid data duplication. With timely information, ERP helps managers improve decision making speed and quality as well as facilitates communication between users. Gaps between business functions and departments are lowered because an ERP system is a tool that integrates business processes across functional boundaries. Links with suppliers and customers can be significantly strengthened (Gupta, 2000; Trott and Hoecht, 2004). ERP systems improve coordination and facilitate cooperation with suppliers, and they improve responsiveness to market and customer requirements. ERP systems also allow firms to access electronic commerce. ERP systems improve decision-making speed, enhance control of operations and costs, reduce costs, and boost enterprise-wide information dissemination. The complexity of ERP systems implementations; the drastic organizational, cultural, and human changes; the typical high customization expenses; and implementation problems all contribute to new customers' reconsidering their ERP implementation plans (Allen et al., 2002).

However, although mature ERP systems have been used for long time, there remains dearth of research on the impact of ERP on organizational performance. The empirical research on the impact of ERP systems on organizational performance includes studies by Poston and Grabski (2000); Hunton, Lippincott, and Reck (2003); and Nicolaou (2004). The reviewed research on the impact of ERP System on organizational performance has produced contradictory results.

1.2 Problem Statement

A typical ERP implementation is complex. Associations have had a lot of trouble in coordinating the ERP programming with the equipment, working frameworks, database administration frameworks, and media communications suited to their organizational needs. While leaders may take a stab at financial related upgrades from ERP adoption, firms may encounter monetary impacts (Markus and Tanis, 2000).

Furthermore, additional complexity arises due to the ERP software implementation results in changes all through the division or the whole firm. ERP usage require significant interests in programming and equipment, coordinate execution expenses, and preparing for framework clients (Davenport, 2000; Wortmann, 1998). To address this heavy cost and complexity, ERP merchants created preset programming parameters dependent on "best practice" models inside a given industry (Schrageheim, 2000). In any case, this methodology adds to the complexity by introducing rigidity with the implementation process, regularly causing task delays and disappointments (Williamson, 1997; Knorr, 1999; Wortmann, 1998). ERP implementations can have lengthy project windows of 3 to 5 years (Davenport, 2000), which lead to higher costs as well as time.

Based on these reasons, this researcher needs to highlight which factors of ERP System technology is affecting the organizational performance in micro-company

1.3 Research Objectives

The ERP Systems play an important role in today's business management environment to improve organizational performance and encourage the micro-company to utilize this technology. This research mainly focused on examine the functions of ERP System influence organizational performance in micro-company.

To gain better understanding of this study, specific research objectives were set up as below:

- i. To determine the factors of ERP System that influence organizational performance in micro-company
- ii. To identify the relationship between implementation cost and organizational performance in micro-company
- iii. To analyze the most influencing factors of ERP System toward organizational performance in micro-company

1.4 Research Questions

The following were the research questions which were important in this study:

- i. What does the factors of ERP System influence organizational performance in micro-company?
- ii. Is there any relationship between implementation cost and organizational performance in micro company?
- iii. Which factors of ERP System influence the most toward organizational performance in micro company?

1.5 Research Scope

This research on ERP System function that will affect organizational performance of a micro company. This research would identify the relationship between ERP System and organizational performance. This research was conducted in a company that has currently implement ERP System.

1.6 Limitations of Research

The limitations of the study are time limitation and information limitation. This research is given a short period of time to carry out the data collections stage. Besides that, this research focus on micro-company. Hence, the data collected from this research will be limited and are only applicable on specific research area.

Furthermore, data for research and policy making are often generate by asking question. Surveys and interview method are frequently used to gather such data efficiently. However, when the topic is sensitive in nature, respondents may refuse to cooperate in the survey, refuse to answer specific questions, and tend to answer dishonestly (Chaudhury et al, 2008). These sources of error can negatively influence data quality and thus jeopardize the usefulness of the data for both research and policy making.

On top of that, the limitation of research also happens in accessing secondary information. This is because some journal and reports online need payment in order to access.

Lastly, language problem is also one of the limitations as the interview questions was designed in English version. The respondent may not be familiar with the language thus confusions will occur. Hence the researchers need to take time and explain the questions one by one to the respondents with other language that the respondent familiar with such as Mandarin and Malay.

1.7 Significance of Research

These days, numerous associations invest intensively in actualizing ERP system, anticipating that positive advantages to their association. Considering the advantages

that association may appreciate, for example, better consumer loyalty, enhance data precision and enhanced basic leadership for best administration, this robust system moved toward becoming among the riskiest investment in association (Noor' Aini et Al. 2015). This research is important since majority of the previous studies were not regarding micro-company, and different size of company have different perspective toward ERP system. Hence. This study will provide a new insight to the micro-company who are ready to adopt ERP system and ERP system provider who are ready to provide service to micro-company and produce a huge impact toward organizational performance.

1.8 Structure of Research

This research is structured into five chapters which are introduction, literature review, research method, data analysis as well as conclusion and recommendations.

In chapter one, which is the introduction of research, the background of study, problem statement, research objectives, research questions, scope, limitations of research and significance of the research will be discussed. This will give an overview to the specific objectives of this research.

In chapter two, literature review of the research will provide all the relevant theories and the framework under which the study was conducted to achieve the objectives of the research. This chapter will brief the details regarding ERP System, Organizational Performance and SMEs.

In chapter three, the research method of the research, the method that was used to collect the information will be discussed. This will show the validity and reliability of the data collected

In chapter four, the data collected during chapter three will be carefully interpreted and analyzed to translate the data into an understanding result.

The last chapter of the research presents the conclusion and recommendations of the result together with management implications of the study based on the data analyzed.

1.9 Summary

This chapter is structures as the introduction of whole research. It introduces the topic of the study including background, problem statements, research objectives, research questions, scope, limitations of research, significance of research as well as the structure of this research.

CHAPTER 2

LITERATURE REVIEW

2.1 Overview

In this chapter, researcher discussed related theories of ERP System and organizational performance that used as secondary data. This chapter improved the understanding of study that carried out by researcher through secondary data such as articles, journals and others. The theories, concepts and relevant terms for this topic were explain in detail. For more perceptions to understanding with this research of topic, this chapter were organized in subtopics. Section 2.1 described about overview of ERP System. In section 2.2 discussed about the definition of SMEs. In section 2.3 would brief about the Enterprise Resource Planning System. Section 2.4 will explain the significance of ERP System. Section 2.5 is regarding adoption of ERP System. Section 2.6 discussed the organizational performance. Section 2.7 explained the conceptual framework of this research. Lastly, the summary for Chapter 2 was showed in Section 2.8.

2.2 Small and Medium Enterprises

This subject includes definitions of small and medium-sized enterprises (SMEs), including company size refinement. It also provides the operational necessities and problems that SMEs are looking for when striving to operate in the varied socio-