


### DECLARATION

I/ We hereby declared that I/ We had read through this thesis and this thesis is adequate in terms of scope and quality which fulfill the requirements for the award of Bachelor Degree of Technology Management (Innovation Technology).

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**THE FACTORS OF INFORMATION AND COMMUNICATION  
TECHNOLOGY (ICT) ADOPTION AMONG SMALL AND MEDIUM  
ENTERPRISES (SMEs) IN MALAYSIA: A STUDY OF FOOD BEVERAGE  
SECTOR AT TERENGGANU**

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Submitted in partial fulfillment of the requirement for the Bachelor of Technology  
Management (Innovation technology) (Honors)

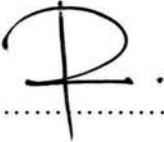
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**JUNE 2017**

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I declared that this report is the results by my own work, except for certain explanations and passages where every part of it is cited with sources clearly stated in the Reference.

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## DEDICATION

This thesis is dedicated to my parents and family who had supported me through the completion of study spiritually and financially. I also dedicated the appreciation to my classmate who had helped, assisted, supported and advised my research and effort. I feel appreciated to my supervisor, Madam Raja Huda who have consistently guided me keep perspective on what is important and for the valuable knowledge.

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## ABSTRAK

Perusahaan kecil dan sederhana (PKS) adalah salah satu sektor utama ekonomi di Malaysia. Kerajaan Malaysia sendiri telah menggalakkan pembangunan dan pertumbuhan pelbagai inisiatif termasuklah pelaksanaan ICT untuk memajukan pertumbuhan perniagaan SME ini. Oleh itu, kajian ini dijalankan untuk menentukan faktor-faktor penggunaan ICT di kalangan PKS di Malaysia terutamanya di Terengganu. Dalam mengumpul data dan maklumat yang diperlukan, kajian berdasarkan soal selidik telah digunakan untuk mengumpulkan data daripada pemilik PKS di kawasan Negeri Terengganu. Tujuan kajian ini adalah untuk mendapatkan pemahaman yang lebih mendalam tentang faktor-faktor yang mempengaruhi penggunaan ICT di kalangan PKS. Kajian ini memberikan persepsi yang lebih besar mengenai penggunaan ICT dalam perniagaan mereka. Kajian ini telah dihasilkan melalui soal selidik terhadap pengusaha PKS di negeri Terengganu dengan jumlah responden seramai 157 orang. Hasil kajian ini dibincangkan dan ditafsirkan untuk memberikan implikasi penting kepada usahawan PKS.

**Kata Kunci: ICT, PKS, Malaysia, Terengganu**

## ABSTRACT

Small and medium Enterprises (SMEs) are one of the key of economic sector in Malaysia. Malaysian government itself has promoted development and growth various initiatives include the ICT implementation to advance the growth the SMEs business. Therefore, this study was conducted to determine the factors of ICT adoption among SMEs in Malaysia especially at Terengganu. In gathering the data and information needed, questionnaire based survey was used to collect data from owners of SMEs in Terengganu area. The purpose of this study was to gain a deep understanding of the factors that influence the ICT adoption by SMEs. This study provides a greater perception about ICT adoption in their business. The study was produced through a questionnaire to SMEs in the Terengganu state with a total of 157 respondents. The result of this study are discussed and interpreted to provide key implications to SMEs entrepreneurs.

**Keywords: ICT, SMEs, Malaysia, Terenggan**

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## LIST OF ABBREVIATION AND SYMBOLS

ICT	-	Information and Communication Technologies
SMEs	-	Small and Medium Enterprises
IS	-	Information System
IT	-	Information Technology
DOSM	-	Department of Statistic Malaysia
R&D	-	Research and Development
F&B	-	Food and Beverage
IV	-	Independent Variable
DV	-	Dependent Variable
SPSS	-	Statistical Package for the Social Sciences
MRA	-	Multiple Regression Analysis
PC	-	Perceived Cost
PB	-	Perceived Benefit
EP	-	External Pressure
KS	-	ICT Knowledge and Skill
GS	-	Government Support
OP	-	Organizational Performance



## CHAPTER 1

### INTRODUCTION

#### 1.1 Background of the study

Business world nowadays has been influenced by Information and Communication Technologies (ICT). ICT are rapidly change the global production, business methods and relationship between enterprises and consumers. Every business in this era must bring ICT into their business operation and take advantage of the benefits they offer. Small and Medium Enterprises (SMEs) businesses are increasingly using and adopting ICT technology due to the advent of Personal Computer, cost-effectiveness and cheaper ICT products (Ghobakhloo, Sadegh Sabouri, Sai Hong, & Zulkifli, 2011). The use of ICT can improve business competitiveness with internet providing numerous opportunities for SMEs to compete equally with large corporations.

ICT refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication mediums. According to (Nduati, 2015), many countries around the world have established organizations for the promotion of ICTs, because it is feared that unless less technologically advanced areas have a chance to catch up, the increasing technological advances in developed nations will only serve to exacerbate the already-existing economic gap.

Meanwhile there is no official definition of Small and Medium Enterprises (SMEs) available. In this research, the researcher has adopted the following definitions of SMEs, a business with less than ten employees as a Micro Enterprise, between ten and fifty as Small Enterprises, and between fifty to two hundred and fifty employees as Medium sized enterprises (Tan & Eze, 2008).

The emergence of ICT has affected many industries and organizations including SMEs itself. ICT is important tool that provides the opportunity for SMEs to improve their competitiveness in business arena. In the rapidly changing business environment of this century, it is important for SMEs to adopt ICT in order to maintain their competitive edge, develop a global network of product exchange and establish wider international network. The effective use of information system (IS) and information technology (IT) can provide SMEs with the opportunity to take advantage of ICT in order to enhance the way they conduct business and increase core competencies. (Selamat, Jaffar, & Kadir, 2011)

## **1.2 Problem Statement**

This research is conduct to find out the factors that influence the adoption of ICT by SMEs in Malaysia. SMEs play an important role in all economies of the world including in Malaysia. The data from Official Website of SME Corp Malaysia (<http://www.smecorp.gov.my>), there are a total of 645,136 SMEs operating all around Malaysia. According to (Ongori & Migiro, 2010), SMEs play a major roles in economies by creating a lot of job opportunities and increasing income of the people but this type of enterprises have a lot of challenges to survive in global business world. The impact of globalization has forced SMEs to adopt ICT and the evolution of technology innovation has affected the way every business operates. But there are many SMEs

owner still not aware about the benefit that they can gain by adopting the ICT use. A source from Department of Statistic, Malaysia (DOSM) and SME Corp Malaysia stated that only 27% of SMEs use ICT in business operation. This is show that the level of awareness in ICT usage among SMEs in Malaysia is still low. This statistic also shows that there are still cannot accept the technology nowadays especially the use of ICT in their business. ICT adoption can improve information and knowledge management inside the firm. Particularly, the use of ICT to conduct business is quickly changing the way of doing business. With the strong waves of globalization, ICT is believed to be the most cost-efficient tool to help SMEs to compete with larger organization in attracting customers (Tan, Chong, Lin, & Eze, 2009). In order find out the key factors of ICT adoption in SMEs, this research is conducted based on previous research and focus on Terengganu area.

### **1.3 Research Question**

This research intends to answer the following question:

- 1.3.1 What are the factors that influencing ICT adoption by SMEs in Terengganu?
- 1.3.2 What is the impact of ICT adoption in determining SMEs performance?
- 1.3.3 What is the acceptance of ICT adoption among SMEs owner?

## **1.4 Research Objectives**

Several studies have been conducted before in identifying the factors that influence the adoption of ICT in business field. The researcher is also having the same intention in conducting this research based on the objectives for this issue.

The specific objectives of this research are:

- 1.4.1 To determine the factors of ICT adoption among SMEs in Terengganu.
- 1.4.2 To identify the impact of ICT adoption towards SMEs performance.
- 1.3.4 To examine the acceptance of ICT adoption among SMEs owner.

## **1.5 Scope and Limitation of the Study**

The scope of this study is to investigate the factors of ICT adoption by SMEs in Terengganu and only focus on food beverage sector. This study will show the factors that influence SMEs to adopt the ICT in their business. The target respondents are the SMEs entrepreneur in Terengganu only.

There are a few limitations in this research study. First, this research is conducted in Terengganu state. Therefore, the study will only be conducted all around Terengganu area and the applicability of finding to others state is not be stated. Second, the aim of this study is to investigate the factors of ICT adoption by SMEs only, so the company that are not SMEs are not discuss. Third, this study was only focused on food beverage sector only thus another SMEs sector will not be mention. Then researcher assumes that

all respondent have enough knowledge to answer the questionnaire. Lastly, the researcher will assume all respondent are answering the questionnaire honestly.

## **1.6 Importance of the Study**

This study will benefit to the person who are conducting the SME business. It was important to identify the key factors that influence the adoption of ICT by SMEs. Besides, the study also provides the outcome of adoption of ICT towards SMEs performance and a little bit study on acceptance to the adoption of ICT. The research will provide a valuable feedback to SMEs owner in order to offer deeper information on adoption of ICT.

## **1.7 Summary**

This chapter has introduced the background of the study, problem statement, research question, research objectives and scope and limitation of the study. The researcher proceeds to the next chapter and discussed about literature review. Further study on this topic will make readers clearer about the factors of ICT adoption in SMEs.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

This section will focus on reviewing the literature review to address the ICT adoption factors from SMEs perspective. Various theories and studies about ICT adoption are reviewed to look at the usage of ICT in SMEs and the factors that make firms adopt the ICT into their business.

#### 2.2 Concept of Information and Communication Technology (ICT)

Information and communications technology or normally called as ICT is an umbrella term that includes any communication device or application, including radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. ICTs are often spoken of in a particular

context, such as ICTs in education, health care, or libraries. Importance of ICTs not lies in the technology itself than in its ability to create greater access to information and communication. Internationally, the United Nations actively promotes ICTs for Development as a means of bridging the digital divide. According to (Megha, 2011) the concept of ICT depends on the local culture and the particular ICT available and how it is configured and managed.

The understanding, management and configuration of the available technology might vary the concept of ICT from a collection of tools and devices used for particular tasks, such as publishing, course delivery and transaction processing. Second, an organized set of equipment like a workshop for working on information and communication. Third, components of integrated arrangements of devices, tools, services and practices that enable information to be collected, processed, stored and shared with others. Lastly is a component in a comprehensive system of people, information and devices that enables learning, problem solving and higher order collaborative thinking. That means that ICT as key elements underpinning a sharable.

ICT contributes at various points along a line of activity. According to (Ghobakhloo et al., 2011), ICT is used in various activities and the type of ICT use depends on the activities itself. The key outputs of educational activities are context of knowledge, experience and products. The output should be useful to the users.

According to (Alam & Noor, 2009) today's business has use ICT as a one of the medium for improve business competitiveness. Adoption of the ICT is enable business to compete with their competitors on global scale.

### **2.2.1 Concept of ICT adoption**

In context of technology, adoption means an acceptance of a new product or innovation, according to the demographic and psychological characteristics of defined adopter groups. ICT adoption is an acceptance or adopts the ICT tools such as computers, internet and mobile phone into the business that can gain more value added to the companies.

In the era of e-commerce and globalization, many companies are acquiring ICT to support their business needs (Junaidah Hashim, 2007). By adopt the ICT use, SMEs owners will enable to successfully compete in today's global economy.

### **2.3 Concept of Small and Medium Enterprises (SME)**

(Berisha & Pula, 2015) stated that the definition of small and medium enterprises (SME) SMEs can be define from of various authorities, a review of relevant literature of the field, theoretical overview through comparison with practices of the different countries and critical overview of standard criteria and approaches of different authors in the definition of small and medium enterprises. From quantitative criteria, SME are named by adjectives indicating size, thus economists tend to divide them into classes according to some quantitative measurable indicators. The most common criterion to distinguish between large and small businesses is the number of employees. While in qualitative criteria, SME may be difficult to define precisely on paper, but most are easy to recognize once they are seen in operation.