# THE BARRIERS AND CHALLENGES OF ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM IMPLEMENTATION IN MALAYSIA INDUSTRY

LEE LI FEI

PC12046

**SPINE LABEL:** 

ITM – LEE LI FEI

BACHELOR OF INDUSTRIAL TECHNOLOGY MANAGEMENT WITH HONOURS

UNIVERSITI MALAYSIA PAHANG

# THE BARRIERS AND CHALLENGES OF ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM IMPLEMENTATION IN MALAYSIA INDUSTRY

LEE LI FEI

# THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF INDUSTRIAL TECHNOLOGY MANAGEMENT WITH HONORS

# FACULTY OF INDUSTRIAL MANAGEMENT UNIVERSITI MALAYSIA PAHANG

JANUARY 2016

#### SUPERVISOR'S DECLARATION

I hereby declare that I have checked this project and in my opinion, this project is adequate in terms of scope and quality for the award of degree of Bachelor of Industrial Technology Management with Honors.

Signature	:
Name of Supervisor	: DR. SHAHRYAR SOROOSHIAN
Position	: LECTURER
Date	:

#### **STUDENT'S DECLARATION**

I hereby declare that the work in this project is my own except for the quotations and summaries which have duly acknowledge. The project has not been accepted for any degree and is not concurrently submitted for award of other degree.

Signature:Name: LEE LI FEIID Number: PC12046Date: 10 DECEMBER 2015

## **TABLE OF CONTENTS**

	Page
SUPERVISOR'S DECLARATION	ii
STUDENT'S DECLARATION	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
ABSTRACT	vi
ABSTRACK	vii
TABLE OF CONTENTS	viii
LIST OF TABLE	xi
LIST OF FIGURES	xiv
LIST OF ABBREVIATION	xiv

## CHAPTER 1 RESEARCH PROPOSAL

1.1	Introduction	1
1.2	Background of Study	4
1.3	Problem Statement	6
1.4	Research Objective	8
1.5	Research Questions	8
1.6	Research Approach	9
1.7	Scope of Study	10
1.8	Significant of Study	11
1.9	Expected Results	12
1.10	Operational Definition	13

## CHAPTER 2 LITERATURE REVIEW

2.1	Introduction	14
2.2	Environmental Management Systems (EMS)	15
2.3	ISO 14000 Environmental Management System Standards	20

2.4	MS ISO 14001:2004 Environmental Management Sysetm	24
	(EMS) In Malaysia	
2.5	Legislations On EMS	27
2.6	The Difficulties in Implementing Environmental	29
	Management System	
2.7	The Challenges And Barriers In Implementing EMS	30
2.8	Summary	33

## CHAPTER 3 RESEARCH METHODOLOGY

3.1	Introduction	34
3.2	Research Method: Nominal Group Technique (NGT)	35
3.3	Research Design	36
	3.3.1 Research Flow Chart	38
3.4	Sampling Process	40
	3.4.1 Population	40
	3.4.2 Sampling Frame	44
	3.4.3 Sampling Size	44
3.5	Research Instrument	45
	3.5.1 Face-to-Face and Emailing Questionnaires	45
3.6	Data Collection	46
	3.6.1 Questionnaire	46
3.7	Data Analysis	47
3.8	Summary	47
2.0		.,

## CHAPTER 4 DATA ANALYSIS

Introduction	48
Response Rate	49
Demographic Analysis	50
4.3.1 Size of Current Working Organization	50
4.3.2 Organization Operation Field	51
4.3.3 Working Experiences Towards ISO 14001	52
	<ul> <li>Response Rate</li> <li>Demographic Analysis</li> <li>4.3.1 Size of Current Working Organization</li> <li>4.3.2 Organization Operation Field</li> </ul>

4.4	Pilot Test	53
	4.4.1 Validating Questionnaire through E-mailing ISO 14001 Expert	53
	4.4.2 Pilot Test Reliability	54
	4.4.3 Reliability Test For Overall Data Collection	57
4.5	Categorize the Difficulties into Internal Challenges and	60
	External Barriers	
4.6	Compare the Level of Difficulties of Factors in Both	62
	Internal Challenges and External Barriers	
4.7	Summary	65

## CHAPTER 5 CONCLUSION AND RECOMMENDATIONS

5.1	Introduction	66
5.2	Conclusions	67
	5.2.1 Research Question 1: What are the Difficulties in Implementing ISO 14001?	67
	5.2.2 Research Question 2: Which Difficulties should be Categorized in Internal Challenges and which should be the External Barriers?	68
	5.2.3 Research Question 3: What is the Priorities of those Difficulties that need to be Focused on?	70
5.3	Limitations	72
5.4	Recommendation for Future Study	73
REFERENCES		74
APPENDICES		81
А	Project Gantt Chart	81
В	Questionnaire	83

#### xi

## LIST OF TABLE

Table No.	Title	Page
2.1	The framework of EMS indicators suitable for green hotel auditing in Taiwan	17
2.2	Summarized on ISO 14000 Environmental Management System	23
2.3	Summarized of difficulties in EMS implementation at different industry	32
3.1	Research design of this study in identifications the difficulties of ISO 14001 certification	36
3.2	The number of organizations certify with ISO 14001 at each state	40
3.3	This table shows that company have only one ISO 14001 department that dealing with all the documentation among the main and its subsidiaries company	41
3.4	This table have summarize up the total number of organizations that implementing ISO 14001 more than 3 years	43
4.1	Response rate	49
4.2	Size of organization	50
4.3	The organization working field	51
4.4	Working experiences towards ISO 14001	52
4.5	Reliability statistics for pilot study	54
4.6	Cronbach's Alpha if item is deleted	55
4.7	Reliability statistics for overall data collection	57
4.8	Cronbach's Alpha for overall data collection	57
4.9	Categorized of the difficulties into internal challenges and external barriers	60
4.10	Mean of each factors	62

5.1	Summary of the difficulties in implementing ISO 14001	67
5.2	Categorized of those 22 difficulties into internal challenges and external barriers	68
5.3	The priority of difficulties in descending order	70

#### LIST OF FIGURES

Figure No.	Title	Page
2.1	The seven s model and the correlation with the discussed categories	19
2.2	MS ISO 14001:2004 Certification Process and Cycle	24
3.1	Research flow chart	38
4.1	Size of organization	50
4.2	The organization working field	51
4.3	Working Experiences towards ISO 14001	52

#### LIST OF ABBREVIATION

ACB	Accreditation of Certifications Body
BS 7750	British Standard 7750
DASN	National Policy on the Environment
DOE	Department of Environment
EIA	Environmental impact assessment reports
EMAS	European's Eco-Management and Audit Scheme
EMS	Environmental Management System
MS	Malaysia Standard
NGT	Nominal Group Technique
QMS	Quality Management System
RSAGH	Regulatory Standard for accrediting green hotel
SME	Small and medium enterprise
SPSS	IBM Statistical Package for the Social Science
VSME	very small and medium enterprises

# THE BARRIERS AND CHALLENGES OF ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM IMPLEMENTATION IN MALAYSIA INDUSTRY

LEE LI FEI

# THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF INDUSTRIAL TECHNOLOGY MANAGEMENT WITH HONORS

# FACULTY OF INDUSTRIAL MANAGEMENT UNIVERSITI MALAYSIA PAHANG

JANUARY 2016

#### ABSTRACT

As the environmental issues that cause by human activities are getting concerned by the society, it is not only the responsibility of the government to support and conserve on the environment, but the organizations, entrepreneurs and people who live, occupy and involve in those activities for a better lifestyle should responsibility toward the earth. This article has fully summarized out the internal challenges and external barriers in implementing the Environmental Management System (EMS) ISO 14001 within organizations in order to raise the concern from organizations and government towards the environment. Total of 22 difficulties have been listed out through the literature review from previous researched. The data was successfully collected from 51 respondents at organizations that implement ISO 14001 that more than 3 years, those data have been analysed and successfully categorize 16 out of 22 difficulties into internal challenges and 6 difficulties as external barriers. Besides, all of those difficulties in both categorized were lay under the important factor level that should give an equal treatment and solutions to overcome those challenges and barriers with the mean that lay in between 2 to 3. These results provide a guideline for organizations and government to concern on the action should be taken in order to increase and maintain the number of organization in implementing ISO 14001. It is not that easy to implement EMS ISO 14001, however, the support and action taken in implementing EMS ISO 14000 from both the government and organizations may promote the success in achieving the ISO 14000 objectives and bringing the benefits for both parties and the earth.

#### ABSTRACK

Aktiviti manusia yang menyebabkan isu-isu alam sekitar yang serius semakin masyarakat. dibimbang dan diprihatin oleh Selain kerajaan perlu vang bertanggungjawab untuk menyokong dan memulihara alam sekitar, organisasi, usahawan dan manusia yang tinggal, menduduki dan melibatkan dalam aktiviti-aktiviti mencapaikan gaya hidup yang lebih industri untuk baik juga perlunya bertanggungjawab terhadap bumi. Artikel ini telah meringkaskan sepenuhnya cabaran dalaman dan halangan luaran dalam melaksanakan Enivonmental Management System (EMS) ISO 14001 dalam organisasi bagi meningkatkan keprihatinan daripada organisasi dan kerajaan terhadap alam sekitar. Sebanyak 22 kesukaran telah disenaraikan melalui kajian literatur. Data telah berjaya dikumpulkan daripada 51 pakar di organisasi yang melaksanakan ISO 14001 lebih dari 3 tahun, data tersebut telah dianalisis dan berjaya mengkategorikan 16 kesukaran ke dalam cabaran dalaman dan 6 kesulitan halangan luaran. Selain itu, semua kesukaran dalam kedua-dua kategori adalah terletak di dalam kategori faktor penting dan perlunya memberi layanan dan penyelesaian yang sama rata untuk mengatasi cabaran-cabaran dan halangan dengan mean yang terletak di antara 2 hingga 3. Keputusan ini menyediakan satu garis panduan bagi organisasi dan kerajaan prihatin tentang tindakan yang perlu diambil bagi meningkat dan mengekalkan bilangan organisasi dalam melaksanakan ISO 14001. Walaupun proses untuk melaksanakan EMS ISO 14001 pernuh dengan cabaran, sokongan dan tindakan yang diambil dalam melaksanakan EMS ISO 14000 daripada kerajaan dan organisasi boleh menggalakkan kejayaan untuk mencapai ISO 14000 objektif dan membawa manfaat bagi kedua-dua pihak dan bumi.

#### **CHAPTER 1**

#### **RESEARCH PROPOSAL**

#### **1.1 INTRODUCTION**

Environmental issues such as global warming, the greenhouse effect, air and water pollution and depletion of resources that caused by human activities have got attention since last few decades and receive greater highlight by recent generations. The full impact of those human activities felted by the environment since the industrial revolution whereby this was the major turning points that turned the human world toward the era of living and production (McLamb, 2011). These industrialization processes have increased the intensive use of natural resource such as coal, oil and natural gas that function as the source of power to support the industries production pace, increase the production capability and meets up with customers' demand (Environmental History Resources, 2009).

According to Hassam (2011), there have three main types of industries which includes primary, secondary and tertiary industry. Primary industry was the industry that extract raw material from natural resources and provide the basis for the others production industries such as agricultural industry, mining industry, fishing industry and forestry industry while secondary industry was the industry that converting the raw materials become a finished goods such as food industry, textile industry, automobile industry and construction industry. Lastly, the tertiary industry was the industry involved with public service sector such as government activities, finance, transportation and hospitality industry.

Today, service industry has become the most important industry whereby not only employment structure and economy was mainly depend on it but it also acts as an engine of global economic development. In Malaysia, service industry composes the largest percentage share toward the Gross Domestic Product (GDP) which is 55.4% from total of 100%, followed up by manufacturing industry that comprises 24.2% and sectors such as agriculture, mining and construction with 20.4% (Ministry of Finance Malaysia, 2013). In the report of GDP Fourth Quarter 2014, service sector has shown a growing rate of 6.4% that contributed toward the GDP (Department of Statistics Malaysia, 2015). As service sector was fruitfully an economic contributor, the government is putting greater emphasis on it and merges it in the economic planning. Therefore, it is very important that service sector voluntary adopt environmental regulations or program before ruin up the environment as industrialization process and at the same time increase its environmental performance. Besides of services industry, industries from the range of manufacturing and chemical industry that having a big impact toward the environment to the SMEs which have less impact toward the environment should also responsible to adopt EMS and conserve the environment .

Regulations such as international environmental management system (EMS) ISO 14000 can be adopted by service industries and use the standard specification of ISO 14001 as a guideline to review on operations and analyzes how company's actions affect the environment issues. According to L. Goetsch and B. Davis (2001), the general objective of ISO 14000 is to protect and prevent environment from pollution that cause by organization's activities, products or services in balance with socioeconomic needs. ISO 14000 does stop at what is required by the law and regulations, but it requires organizations to demonstrate and commit programs that continuously improve and beyond the requirements. Besides, Goetsch and Davis also mentioned that ISO 14000 is a ticket to go through the international market beyond the interest in protecting the environment. Therefore, numerous studies have been conducted on the motives of the organization to implement EMS, understand its benefits and impacts to the environment, social and other aspects. Besides of understanding its positive perspectives, the challenges and barriers of implementing EMS should also be concerned in order to overcome and reduce those negative perspectives through various incentive schemes.

This chapter have explain the background of study, problem statement, research objective, research questions, research approach, scope of study, significant of study, expected results and operational definition.