

**Antecedences and consequences adoption of OHSAS 18001 management
system**

A study of Malaysia industry

BY

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Article submitted in partial fulfillment of the requirement

for the degree of

Master in Business Administration

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DECLARATION

I hereby declare that the project is based on my original work except for quotations and citation which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at USM or any other institutions.

(Signature):

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Date: 16 DEC 2011

DEDICATION

This dissertation is dedicated with gratitude and affection to my family. Thank you for being there every time when I lose faith in balancing work and study. My family has gave me the strong support, insight, motivation, overwhelming love, patience and encouragement that had greatly aided the completion of this challenging hard work.

In addition, a note of appreciation also goes to my employer and fellow classmate in USM. I was fortunate to have a great family members and friends who supported me throughout the entire period of studies.

ACKNOWLEDGEMENT

First and foremost, I would like to express my deepest gratitude and appreciation goes to my greatest supervisor, Dr Tan Cheng Ling and co-supervisor Dr Fathyah for their constructive guidance and support throughout the duration of completing this dissertation. I was highly respected to their professional expertise and insightful comment that had contributed in producing this dissertation on better work.

I also wish to thanks Ms. Dewi (coordinator of SIRIM QAS) for her kind support and wonderful support in this research.

Apart from that, my gratitude also goes to all respondent from participating companies who had given their cooperation in completing the survey. Last but not least all people who has provided me moral support guidance, encouragement and friendship. I will be forever indebted in you.

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ABSTRAK

Tujuan kajian ini adalah untuk a) memeriksa faktor yang mempengaruhi penggunaan system engurusan OHSAS 18001, (b) mengkaji kesan-kesan akibat penerimaan system pengurusan 18001 dan (c) menyiasat pemangkin keadaan kerja industri berisiko tinggi atau industri berisiko rendah sebagai kesan atas faktor yang mempengaruhi system pengurusan OHSAS 18001. Factor OHSAS terdiri daripada 8 dimensi iaitu komitmen pengurusan, penguatkuasa undang –undang, penglibatan pekerja, latihan keselamatan and kesihatan, analysis tapak kerja, motivasi pengiktirafan insentif dan pengakuan, tekanan daripada pengeluaran dan tempat kerja dan kawalan pengurusan. Kesan penggunaan pengurusan OHSAS terdiri daripada 4 dimensi iaitu kesan kemalangan dan kejadian hampir berlaku, tindakan pembetulan and pencegahan yang berkesan, komunikasi yang lengkap dan berkesan dan pencegahan serta kawalan yang berkesan. Ketiga-tiga hubungan ini diuji dengan menggunakan sampel 411 syarikat-syarikat yang disahkan OHSAS. Daripada analysis ang dilakukan ia menunjukkan bahawa antecedences factor iaitu factor seperti komitmen pengurusan, penguatkuasa undang-undang, analisis tapak kerja dan motivasi, pengiktirafan insentif menunjukkan hubungan yang positif dan signifikan dengan penggunaan system pengurusan OHSAS. Implikasi penggunaan pengurusan OHSAS mempunyai kesan positif ke atas kesan kemalangan and kejadian hampir berlaku, tindakan penbetulan dan pencegahan yang berkesan, komunikasi yang lengkap dan pencegahan serta kawalan yang berkesan. Walau bagaimanapun, keadaan tempat kerja didapati mampu mengukuhkan...hubungan antara komitmen pengurusan dan penglibatan pekerja semasa penggunaan sistem pengurusan OHSAS.

ABSTRACT

The purpose of this study were to: (a) examine the antecedences of adoption of the OHSAS 18001 management system, (b) the effects of the consequences of the adoption of the OHSAS management system and (c) to investigate the moderating effects of the working condition (high risk/ low risk industries) as a moderating effects on the antecedences of the OHSAS 18001 management system. Antecedences adoption of the OHSAS consists of 8 dimensions namely management commitment, enforcement of rules and regulation, worker involvement, safety and health training, worksite analysis, motivation incentive recognition and accountability, pressure from production and workplace and supportive environment and consequences of adoption of the OHSAS management consists of 4 dimensions namely effective accident / incident, near miss case reporting, effective corrective and preventative action, effective communication and constant feedback and effective hazard prevention and control. Three broadly hypnotized relationships were tested using a sample of 411 OHSAS certified companies. From the analysis done using the regressions, it shows that antecedences factors namely management commitment, enforcement of rules and regulation, worksite analysis, motivation incentive recognition and accountability were found to be positive associated with the adoption of the OHSAS management system. An implication of the adoption of the OHSAS management system has positive effects on consequences namely accident or incident and near miss case reporting, effective corrective and preventive action, effective communication and constant feedback and effective hazards prevention and control on the adoption of the OHSAS management system. However, working condition strengthen the relationship between management commitment and worker involvement during the adoption of the OHSAS management system.

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter introduces the research outline of the study. It begins with highlighting the background of the study and the problem statement followed by research objectives and research question. Definition of key terms of major variables will also be included to enhance understanding. This chapter ends with the significance of the study.

1.2 Background of study

The Malaysia industries have made tremendous progress in recent years as a significant contributor to the national development. These industries play important roles in meeting the high demand of national development while aligning with government's objective which is to achieve high income economy under the 10th Malaysia Plans (10MP) by Prime Minister Datuk Seri Najib Tun Razak. However safety issue from industries seems to be an unresolved one as there are many ongoing work related accidents, incident and near miss cases recorded. The number of fatalities encountered in this sector is alarming. Out of the total of 55,186 industrial accidents reported to Social Security Organization (SOCSO) in the year 2009, 4,108 were recorded in the construction industry. Almost 2.8 percent or 116 cases resulted in death, while 23.8 percent or 977 cases permanent disabilities (www.perkeso.gov.my).

The high number of incident of injury and fatality in construction industry are generally due to nature of work which involves various work hazards and weather condition. Some of the high risk working conditions are climbing tall building, moving of machinery,

electrical work and exposure to excessively loud noise. This would be likely leading high number of accident in the industry of Malaysia if there are no proper safety and health program implemented.

The underlying causes for the high number of incidents are attribute to lack of trained workers and experience site supervisors on occupational safety and health matters, flow down of the health and safety information, training toward new technology, lack of communication between top management and workers lack of understanding of safety protection and tools, and poor information channel cascaded from top management and misunderstanding that occupational safety and health protection is an unnecessary expenditure that can be saved (Mazlan, 2010). High numbers of incidents are attributed to lack of trained workers, lack of site supervisors who are experienced on occupational health and safety measures.

Lots of company currently adopting safety programme, which aims to reduce and overcome the accident rate and work related accidents. Several safety programmes have been developed and disseminated over the past 20 years (Zakaria, Zaliha, Nazni & Zuriawati, 2010). An effective Occupational Safety and Health (OHSAS) 18001 can significantly reducing accident rate because it can help management to build up safer operation and create a safer working environment for the worker. In addition, the OHSAS management system would then bring the safety awareness of the management to be more alert on the safety issue during their daily job function.

The concept of occupational health and safety management system has been incepted in 1994 (Zakaria et al., 2010). Occupational safety and health are affecting the whole organization in term of their performance. In business world today, the most efficient method

for organization to achieve cost efficiency is through providing a safer and healthier work place for their employee (Zakaria et al., 2010).

However in Malaysia, the law and regulation of health and safety are quite general. The enforcement of adopting occupational health management system is not mandatory by the government. The implementation of such management system is at the mercy of management decision of the companies. Nowadays Malaysia government is continuing to monitor accident rate and each of the accident will be recorded and published in the official webpage. Public are encouraged to visit to webpage to further understand the investigation report carried out through Department of Operation Safety and Health (DOHC). This would serve as very good case studies to evaluate the antecedences and consequences adoption of the safety management system for Malaysia industry.

The reduction of the accident rate does not solely depend on government enforcement the support of the organization and attitude of worker are even more crucial in curbing safety incident at workplace. Effective collaboration between government and company will ensure a successful integration of the OHSAS system into the organization (Mazlan, 2010).

Although the relationship between the safety program and the actual safety culture has been studied broadly, minimal effort has been bonded to study the factor contributing to the success of the implementation of the OHSAS. Hence this research is intended to reveal the key factors that drive the Malaysia industry to adopt OHSAS standard and how OHSAS help to improve company's performance by Booth, R.T. (1995).

A successful OHSAS program is not only able to save lives and prevent human injuries, but also to minimize the damage to the company equipment and infrastructure. Loss of market competition will in turn reduce the project delays and losing customer due to safety incidents. It will help company gain customer satisfaction by delivering quality projects within the schedule (Pablo & Imanol, 2009).

1.3 Research Problems

Following the global economy meltdown in 2009, Malaysia has been on the healthy recovering stage towards high development of infrastructure and a high economy nation Najib, M (2010). This correlated demand and growth in various industries will pound a huge pressure on work accident metrics. Rapid development of employment market means there will be a tough challenge in tracking the problem of rising accident cases at workplace. Hence best practices in occupational safety and health (OSHAS) should be practiced at all work premises to achieve zero accidents goal. By ensuring the safety and health practises at workplace is to ensure a conductive and productive workplace.

In the past, although industries in Malaysia had their various safeties program to reduce the work related accident and injuries, the standard being deployed and practised might not be meeting minimum required standard. The quality and standard of the safety program might differ from one another. Further, there had not been good enforcement imposed by Malaysian government. With the introduction of OHSAS 18001 the proper guide line has been established and served as a proper procedure to be followed by companies.

Evidently, in 2003 number of accident was 4654 of which 95 death cases whereas in 2005 number of accident dropped to 3150 with 77 death cases (Zakaria et al, 2010) This

shows that how the OHSAS adopter was benefited from adoption of the OHSAS management system.

Most of the previous studies had only focused the OHSAS in construction industry and omitted other industries namely chemical industry, manufacturing and transportation industry. Based on researcher Duongsamorn (2008), he only focus on the safety programs among businesses in the Thai construction industry and similar approached have been carried out by (Zakaria et al., 2010) whereby they also study the accident rate for the construction industry in northern region This probably might due to the high accident rate reported by the construction industry (Construction Industry Development Board Malaysia, 2000). However there are many Malaysia industries are contribute to accident, fatalities and near miss cases. Therefore, it is worthwhile to study the adoption of the OHSAS 18001 management system across all the Malaysia industries.

This study intends to construct a framework which bridge the gap identified previously by conceptualizing the antecedences and consequences of the adoption of OHSAS management system at the organization level. This study also bridges the literature gap of exploring working condition moderates the adoption of OHSAS management system among industries. Previous study conducted by researcher (Duongsamorn, 2008) was not taking into working condition as the moderator on the factors and consequences of the adoption of the management system. Working condition must be clearly stated in the worksite policy of providing on safety and healthy working environment. So that all personnel from different working condition namely from high or low risk industries can fully understand the priority and important of safety and health protection.

Therefore it is worthwhile to conduct a research that focuses on investigating the key factors influencing the success implementation of the 18001 OHSAS management program and the consequences of OHSAS deployment by the Malaysia industry.

1.4 Research Questions

This study attempts to answer the following research question:

1. Do management commitment, enforcement of rules and regulation, worker involvement, safety and health training, work site analysis, motivation incentive recognition and accountability, pressure from production and work place and availability of the supportive environment influences the adoption of the OHSAS management system?
2. Does adoption of the OHSAS management system affecting accident or incident and near miss case reporting, effective corrective and preventive action, effective communication and constant feedback and effective hazards prevention and control?
3. Does working condition (high risk or low risk industry) moderates the relationship between the antecedences factors and adoption of the OHSAS management system?

1.5 Research Objectives

From the research questions, the objectives of the study are:

1. To examine the extend of OHSAS practises by Malaysia industry
2. To examine management commitment, enforcement of rules and regulation, worker involvement, safety and health training, work site analysis, motivation incentive recognition and accountability, pressure from production and work place and

availability of the supportive environment influences the adoption of the OHSAS management system.

3. To examine the effects of adoption of the OHSAS management system on accident or incident and near miss case reporting, effective corrective and preventive action, effective communication and constant feedback and effective hazards prevention and control.
4. To examine working condition (high risk or low risk industry) moderates the relationship between the antecedences factors and adoption of the OHSAS management system?

1.6 Significance of the Study

Practically, this study contributes to the safety management for Malaysia industry. This would then provide better understanding to the Malaysia industry how adoption of OHSAS would enhance the performance of the organization. The OHSAS management system is based on the nature of the legislation. It does encourage the organization to adopt more systematic approach OHSAS management system apart from fulfilling the general legal under occupational safety and health Act 1994 requirement.

Organization that adopts the OHSAS management system would be benefitted in terms of preventing accident or incident and near miss case reporting, effective corrective and preventive action, effective communication and constant feedback and effective hazards prevention and control and so on.

1.7 Definition of Key Terms

In order to share common understanding of the concepts and for better understanding of further discussion, the following key terms' definition were referred specifically.

1.7.1. OHSAS 18001 management system

OHSAS management system is a combination of the management organizational arrangements, including planning and review, the consultative arrangements, and the specific program elements that are combined to improve health and safety performance (Ahmadon, Rosli, Saidin & Hakim ,2006) Realizing the importance of OSHA, management in the organization, many organizations are adopting the internationally recognized safety system standards and guidelines. One such standard is the OHSAS 18001. The official introduction of OHSAS 18001 standard by SIRIM QAS forms a basis of the Occupational Safety and Health management system in Malaysia.

1.7.2 Antecedences of adoption of OHSAS 18001 management system

In this study, eight antecedences namely management commitment, enforcement of rules and regulation, worker involvement, safety and health training, worksite analysis, motivation incentive recognition and accountability, pressure from production and workplace and supportive environment of adoption of OHSAS 18001 management system were investigated.

The dimension was adapted from OHSAS 18001:2007 standard.

- Management commitment to establishing a thriving and pervasive safety management will determine, in large part, whether an organization achieves its corporate goals

(Tam C.M., Fung I.W, and Chan A.P, 2001). It should also be earned and driven by the very groups falling under its protection. In addition, the principles of strategic adoption of OHSAS management system, allows executives to become more entrepreneurial by encouraging them to think more systematically about the future and helping them to profit from emerging opportunities (Osama Abudayyeh, Tycho K. Fredericks., Steven E. Butt & Areen Shaar, 2006).

- Enforcement of rules and regulation are condition where occupational health and safety is a cross-disciplinary area concerned with protecting safety and health and welfare of people engaged in work or employment (Clarke, S. 1999). This definition promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupation and prevention amongst workers of departures from health caused due to working conditions (R.T. Gum, 1993).
- Worker involvement are condition where encouragement to employee involvement is based on the thinking that people involved in a process know it best, and on the observation that involved employees are more motivated to improve their performance (R.T. Gum, 1993). Regular participation of employees in (1) deciding how their work is done, (2) making suggestions for improvement, (3) goal setting, (4) planning, and (5) monitoring of their performance.
- Safety and health training define as a range of workshops, seminars and training courses available to help implement and assess occupational safety and health management system (Koehn & Surabhi, 1996), Safety and health training provide

training, awareness and competencies for the certified 18001 OHSAS management system.

- Worksite analysis defines as comprehensive worksite surveys to establish safety and health hazard inventories and update them periodically as changes occur (Clarke, S. 1999). Analyze planned and new facilities, processes, materials, and equipment; and perform routine hazard analysis of jobs, processes or varied phases of work (Cohen. A, 1977).
- Motivation, incentive, recognition and accountability refers to the initiation, direction, intensity and persistence of behavior (Cohen.A, 1977).Incentives on the other hand are external measures that are designed and established to influence motivation and behavior of individuals, groups or organizations. Incentive systems or structures are combinations of several more or less coherent incentives. Motivators include purposive incentives in the above sense but also all other external factors, which impact upon peoples or organizations motivation. Recognition means acknowledgment, cognizance, or confirmation of the particulars (amount, number, qualification, size, timing and validity) of an event, object, person, phenomenon, or right, before its acceptance. (Cohen. A, 1977).
- Pressure from production and workplace refer to put efficiency, output, or continued production ahead of safety has driven the adoption of the OHSAS 18001 for the Malaysia Industries (Koehn & Surabhi, 1996).

- In a supportive environment, employees feel that the organization they work for provides them with encouragement, opportunity, and rewards for healthy lifestyles (Booth, 1995). And the spirit that results is highly contagious. Employees who feel cared for are naturally more loyal and productive.

1.7.3 Consequences of adoption of OHSAS management system

Four consequences of adoption of OHSAS management system namely effective accident or incident, near miss case reporting, effective corrective and preventative action, effective communication and constant feedback and effective hazard prevention and control are defines as below:

- Accident or incident, near miss case shall be reported as per OHSAS rules and regulation regardless their potential and magnitude (R.T. Gum, 1993).
- Effective corrective and preventative action are the condition that improvements to an organization's processes taken to eliminate causes of non-conformities or other undesirable situations. Corrective actions are steps that are taken to remove the cause or causes of an existing nonconformity or other undesirable situation. Corrective actions address actual problems. In general, the corrective action process can be thought of as a problem solving process (Tam C.M., Fung I.W.H & Chan A.P.C, 2001)
- Effective communication and constant feedback means the return of information about the result of a process or activity for an evaluated respond. (Chia.F.C, Tin.C C & Hsiang.I.T ,2005)

- Effective hazard prevention and control measure health and safety risks, set suitable safety controls in place, and give recommendations on avoiding accidents to management and employees in an organisation. (Tam.C.M et a.l, 2001)

1.8 Organization of the Remaining Chapters

This study is structured in five chapters. The first chapter provides an introduction as well as an overview of this study. The second chapter presents the review of literature that outlines previous studies undertaken in relation to key factor for the adoption of OHSAS 18001 systems, theoretical framework and the consequences of the adoption of OHSAS management system. Chapter three will illustrate the data and variable in terms of research design, sample collection, measurement of variables, the method of data analysis and expected outcomes. Chapter four will outlines the result of the statistical analysis and finally chapter five presents the research finding, discussion and the implication of the studies.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter will present the previous literature that has been undertaken. As such, this chapter will give an overview of top management initiatives, corporate social responsibility, law and regulation, customer driven, horizontal competition, employee involvement, safety and health training and implication of accident and near miss case reporting , effective corrective and preventive action , effective communication and constant feedback and lastly the effective hazards prevention and control and the underlying theory. The theoretical framework and the hypothesis development will be presented towards the end of the chapter.

2.1.1 Adoption of Occupational health and safety system

Safety makes up one of the basic human needs, as claimed by Abraham Maslow, (1943) in his theory of needs hierarchy. Feeling safe at work ranks as a very important factor in job satisfaction (Kreitner, 2007). In order to satisfy this need certain organizations include policy thrusts, guaranteeing workers' safe work execution under a climate capable of enhancing the physical, mental, and emotional conditions. Organizational policy of this nature is often categorized under health and safety.

On the other hand, safety means freedom from the occurrence or risk of injury or loss (Aswathappa, 2004). He described industrial or employee safety as the protection of workers from the danger of industrial accidents. Safety can as well be referred to as the absence of

injuries due to the interaction of the employee and the work environment (Lucas, 2001). In general, safety means a condition of being safe from undergoing or causing hurt, injuries or loss.

Under work environment described employee health as the absence of illness or disease resulting from the interaction of employee and the work environment (Hall & Goodale, 1986). Health means a state of complete physical, emotional, mental, and social ability of an individual to cope with his environment, and not merely the absence of disease or infirmity (Hippocrates, 1981).

The OHSAS 18001:2007 standard is the most widely recognized Occupational Health and Safety Management System standard globally. This structured management systems approach enables organizations to identify hazards, assess and prioritize risks, and implement appropriate protective and preventive control measures to reduce the potential for occupational injuries, illnesses and fatalities.

2.1.2 Origin of OHSAS 18001

In 1984 a meeting of Association of Southeast Asian Nations (ASEAN), (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam) the ASEAN Occupational Safety and Health Network (ASEAN-OSHNET) was established to collect and disseminate information within ASEAN and to manage research training, and also to create standards for the improvement of working conditions and environments (ASEAN-OSHNET). OHSAS 18001: 1999 put together requirements from various sources into a specification and bringing about clarity towards OHSAS requirements.

The OHSAS was first introduced in year 1999; it was released only as a specification and not as a standard. It defines the fundamental structure and authority for the encouragement, regulation and enforcement of workplace health, safety and welfare.

This standard is reviewed and revised by the technical committee by making it more robust, introducing skill requirements and improving compatibility with other management system standards. The latest revision of OHSAS was reviewed in July 2008.

2.1.3 OHSAS in Malaysia

In Malaysia, law and regulations related to safety and health of worker are quite common as there is no specific guideline and standard must be followed by employer of the organization. The adoption of OHSAS is not mandatory. Nonetheless, since the introduction of the health and safety occupational act (OHSA) in 1994, the number of accident at Malaysia industry has shown reduction (Zakaria et al, 2010) nowadays, the government is active in monitoring the OHSA performance on industry to ensure compliance of the requirement and hence reduce the number of accident. Requirements for effective OHSAS imposed by government include (Mazlan, 2010):

- Setting up safety and health policy in the work place
- Establishing safety and health regulation at the construction site
- Creating a job position responsible for employee's safety and health.
- Committing the organization to full compliance with all relevant health and safety legislation
- Rolling out safety and health training program and campaign.
- Forming hazard prevention and control
- Forming worksite analysis

- Sub contractors safety program inspection and follow-up on the safety program
- Recording and analyzing all accidental injuries and fatalities
- Establishing first aid program Planning for emergencies
- Documentation

2.1.4 Theories associate with adoption of the occupational safety and health (OHSAS 18001 management system)

(a) Institutional Theory

Institutionalization involves “the processes by which social processes, obligations or actualities come to take on a rule-like status in social thought and action” (Meyer & Rowan, 1977). It also means a process which translates an organization's code of conduct, mission, policies, vision, and strategic plans into action guidelines applicable to the daily activities of its officers and other employees. It aims at integrating fundamental values and objectives in organization structures. To date, Tolbert, P.S. & Zucker, L.G. (1996) have suggested three basic stages of institutionalization of a management practice: pre-institutionalization, semi institutionalization, and full institutionalization.

Most of research has focused on the third or final stage. As in the emerging phase of an international management standard- OHSAS 18001, lack of social consensus on the practice may mark itself at the national level, or there may be differences in the interpretation of the standard across countries. Therefore, it is important to understand what constitutes the basis of the adoption of the OHSAS management in the organization structures.

The standard may be accentuated in some contexts, whereas the potential benefits may be stress in other national contexts. Even within the same national context, the value of a management standard may be contested by some constituent of the institutional occupational safety and health while others promote it. Therefore the standard established by the 18001 should be practises across all the Malaysia industry. This could ensure an egalitarianism OHSAS management system implemented and thus shape and guided Malaysia industries.

(b) Adoption theory

Roger (2003) defined the adoption process as “ the process through which an individual or other decision making unit passes from first knowledge of an innovation to a decision to adopt and implementing of new idea and thus to confirmation of this decision.

Adoption theories are aimed at understanding, explaining or predicting how, why, and to what extent individuals or organizations will adopt. According to the adoption theory, there are multiple factors involved in influencing adoption by an organization and theories of adoption recognize all these factors. Knowledge and experience of the prospective adopter, the degree of potential adopter involvement are just some examples of potentially influential factors in determining the rate and extent of adoption.

Hence by applying the theory of adoption, OHSAS management system can be leveraged and adopted by each organization Roger (2003).

2.2 The Antecedences of adoption of OHSAS management system

Table 2.1

Antecedences adoption of OHSAS management by scholars

Antecedences of Adoption of OHSAS	Customer requirement	corporate image	Management commitment	Meet international trend	Enforcement of rules and regulation	Pressure from production	Motivation incentive recognition and accountability	Worker involvement	Supportive environment	safety and health training	Worksite analysis
Chen, C.Y., Wu, G.S., Chuang, K.J., & Ma, C.M. (2009).	X	X	X	X	X	X	X				
Cadieux J, Roy M, Desmarais L. (2006)			X					X	X		
Zutsh.Ai & S. A. Sohal. (2004).	X		X		X	X		X	X		
Fun KF & Hui.IK. (2002)	X			X						X	X
T. Aksorn & B.H.W. Hadikusumo.(2008)	X			X			X	X		X	X
Zhang, G. and Zou, P.X.W (2007)	X		X				X	X		X	X

Based on table 2.1, there are eight dimensions of antecedences of the adoption of 18001 OHSAS management system, which widely agreed by the scholar and received the consensus in their studies. There eight dimensions of adoption factors are namely management commitment, enforcement of rules and regulation, worker involvement, safety and health training, worksite analysis, motivation incentive recognition and accountability, pressure from production and workplace and supportive environment. The following subsection will discuss each dimension of antecedences factors in details.

2.2.1. Management commitment

Researcher Cascio (1995) said “commitment from top management is of most important factor to ensure a success of a system in an organization.” The top management plays vital and critical role in ensuring the success of the implementation of the OHSAS 18001 management system. Strong commitment and consistent support are definitely required. Commitment from the management can be as simple as being sincerely involved in reviewing safety work practices and showing its presence in any safety committee meeting. The management commitment is required to be more than passive state; it should be more to proactive involvement, understands what is right and has the willingness to correct what had gone wrong (Hansen, 1989). Top management must commit to provide financial support and resources in the development and implementation of the OHSAS management system (Godwin Iroroakpo, 2008). Company must allocate adequate fund and resources for the implementation of OHSAS management system.

In an effective program, management should make safety and health goals carry equal importance with other organization goals. Top management first need to be convinced that safety program will be beneficial to the company. Top management is made aware of the positive returns (for instance costs savings) from the implementation of OHSAS, as this will also help in justifying the dollars, time and other resources spent when adopting the OHSAS management system. Managers who are responsible for occupational health and safety issues shall conduct a cost-benefit analysis to justify the adoption of the OHSAS into the company. Zhang, G. & Zou, P.X.W (2007). As a responsible top management, they are obliged to look after the very interests of their stakeholders. The advantages of OHSAS adoption should be made clear to the internal and external stakeholders.

Commitment from management will unquestionably inject in motivation and encouragement to the workers in achieving and upholding the safety requirements. Decision made by top management should be effectively cascaded down to every worker in the organization via the company communication channels and forums. Directives and message should be clear and concise. In addition, the management should not only “talk the talk” but also “walk the talk”. Scheduled or random audits, walking-around-workplace and involvement in Safety campaign are essential to ensure a flawless implementation and hence it brings the company closer towards a hazardous free working environment.

Listed below are the ways in which top managers can make a positive impact on their organisations’ OHSAS implementation (Zutsh.Ai & S. A. Sohal. 2004):

- motivating the employee in different ways by making them believe that implementing OHSAS will be beneficial to them
- appointing a manager for overseeing the implementation and progress of the environmental issues and programs
- assisting the OHSAS implementation manager team in finalising realistic and achievable objectives and targets
- allocating time for communication, training, motivation, etc. during the OHSAS adoption stages
- providing adequate and timely resources for implementation of OHSAS system

With the establishing of the realistic goal between the top management and key stakeholders this would give a clearer picture, direction and objective when they are performing their day-to-day task (T. Aksorn & B.H.W. Hadikusumo, 2008)

2.2.2. Enforcement Law and Regulation

As for Malaysia industry, the adoption of the OHSAS 18001 management is not mandatory and it is applied purely based on the voluntary basis system Malaysia Occupational Safety and Health Act "OHSA" was introduced on 25th February 1994. It is an Act to make further provisions for securing the safety, health and welfare of person at work. This shows that government also taking the proactive way to ensure the safety and health of the employee. The employer obeys and follows the rules and regulation which serve as a minimum requirement to protect the welfare of the employee in the organization.

Based on analysis by researchers (T. Aksorn & B.H.W. Hadikusumo, 2008) the enforcement of the adoption by OHSAS 18001 by organization was not only out fear of legal penalties but also out of motivator. Therefore they suggested using the government as a facilitator to initiate the occupational safety and health program into the industries.

In addition, Cornes and Sandler (1986) also discussed the enforcement of law and regulation would then beneficial both employer and employee. They state:

Regulatory agencies facilitate cooperatives solution to repeat collective action problem to the extent that regulatory rules can reduce coordination problems and regulatory enforcement can reduce monitoring uncertainties of the relevant private parties, enabling them to achieve more efficient mutually beneficial solution

Government policies may play a similar facilitative role, for example during conflicts between a plant and surrounding community. Government involvement can resolve and support social cooperation. Even though the adoption of the OHSAS 18001 management

system is not mandatory in Malaysia. However it shows increasing trends that more and more Malaysia companies are acquiring for it. Statistics from the SIRIM QAS, dated on year 2010, shows a total of 411 organizations already certified with OHSAS 18001 management system (www.NOSH.com.my).

The long term goal of the OHSAS is to create a healthy and safety working culture in Malaysia industries. Regulations have the effect on detailing the specific requirements of the legislation. Regulations may prescribe minimum standards or have a general application or they may define specific requirements related to a particular hazard or particular type of work (Yang Miang, 2009).

In addition, non compliances to safety rules, which is violation, needs to be countered with enforcement. Management must therefore provide the means of enforcing workers, especially the violators, to obey the safety rules and regulations. Effective enforcement will reduce the number of violation. The organization is required to establish and maintain procedure as well as legal document and relevant requirement that are directly applicable to its business activities, products and service. Employee safety handbook, quality manual and corporate standard are some notable items (Chen. C.Y et al, 2009).

In order for an organization to continually maintaining the accreditation of OHSAS 18001, the enforcement of individual compliance to OHSAS standard is mandatory. The audit will be performed to make sure that organization practices are fully compliance with the OHSAS 18001 management system.

2.2.3. Employee involvement

Employee participation in the OHSAS 18001 management system refers to a system designed to integrate employee input into the program element. Employee involvement can be identified and expressed in three ways:

- Employee feedback system: with continuous program, suggestion boards, contest with awards system, accepted ideas must be implemented within a given time.
- Joint employee- management safety and health committees.
- According to (National Occupational Safety and Health) NOSH, employee involvement plays a very important element in seeing the success of OHSAS program. Promoting employee involvement is not only able to improve workplace condition but also rise up employee motivation level and hence job satisfaction. At the same time the problem- solving capabilities grow with greater work in organization (Lawler 1991 and Imada, 1991) .

Most of the Malaysia Industry acquires high demand in human capital and thus employee participation strategy is very critical to ensure success of the program. Employee involvement provides the means that employee expresses their own commitment to safety and health protection. Therefore each employee who really appreciates management's concern for the health and safety will understand the need for safety rules and put in effort to comply.

Without any participation and involvement of the employee, it will guarantee failure in the OHSAS implementation. Usually the employees are quite reluctant to accept the new system introduced by the management. Perception it that changes mean new things to learn and more workload for employee. Therefore, most of the employee will have "resistance to

change” towards the adoption of OHSAS. Some of human nature prefer “status quo” and comfort zone. The employee “resistance” can be eliminated once the employee understand the benefit that they would gain in the long run and will instead actively participate in the program roll-out.

In the process of implementing a safety program, there are various ways where commitment and support can be gathered. Some recommendations are described below:

- Clearly state the worksite’s Safe and Health policy. The policy should be made known to everyone and be ensured full comprehension(Zhang, G. & Zou, P.X.W, 2007).
- Workers should be given the opportunities to provide input into the design and implementation of safety programs such as being a member of the safety committee, reporting hazards and unsafe practices to supervisors, identifying training needs and investigating accidents. (Zhang, G. & Zou, P.X.W, 2007)

Employee involvement shows a “positive correlation with the improvement of business performance” (T. Aksorn & B.H.W. Hadikusumo, 2008). A successful safety program also results from placing the right person on the right job. The right person is defined as the person who are physically and mentally capable for carrying out the assigned tasks with the right knowledge, experience and skills (Mazlan, 2010). The employees are given opportunity to discuss with their supervisor in determining their job scope based on their area of expertise. This would then speed up the project delivery time as well as develop personal strength in the area they are currently engaged in.