

**UNIVERSITI TEKNOLOGI MARA**

**THE COST AND EFFECT OF  
OCCUPATIONAL HEALTH HAZARDS:  
A CASE STUDY OF PROTON  
MANUFACTURING PLANT MALAYSIA**

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Thesis submitted in fulfillment  
of the requirements for the degree of  
**Master of Science**

**Faculty of Business Management**

**December 2013**

## **AUTHOR'S DECLARATION**

I declare that the work of this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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## ABSTRACT

There are many hidden costs which management erroneously believe do not affect their cost calculation and profit performance as a well. It is actually can be broadly classed as insured and uninsured or hidden costs which arise after a safety and health issues takes place. This research is conducted to study the uninsured cost or hidden costs effect of occupational health hazards mainly focus for Perusahaan Otomobil Nasional Sdn Bhd PROTON manufacturing plant Malaysia. It is aims to determine the relationship between occupational health hazards in workplace with its cost implication (uninsured cost) by focusing on ergonomic, physical, chemical and biological hazards factor. It is measured in terms of working environment conditions, human error and management failure. Meanwhile, identified costs associated which are loss times, training cost, employees' morale and productivity cost are measured to determine the cost related due to workplace safety and health issues. Besides, it is intended to establish the uninsured cost estimation equation model that can be used in minimizing the cost implication due to major health hazards factor intervention in workplace. With several Occupational Safety and Health (OSH) programs implemented, this research also identified the relationship between those OSH practices with the safety and health issues in the company. A descriptive study is undertaken in order to ascertain and able to describe the major factors of occupational health hazards with the cost implication interest in a workplace situation. A comprehensive questionnaire was designed based on all determined issues and distributed to the employees' representative through self-administered method. To strengthen the findings gathered, semi-structured interview session was conducted with the Safety Manager of PROTON Malaysia in helping of elaboration and verification for further detail. It was revealed that, physical hazard factor is a most outstanding occupational health hazards followed by chemical hazard factor. Hence to end of this study, final estimated equation for minimize cost calculation due to physical and chemical hazard factors have been suggested ( $y = 3.745 + 0.409x_1 + 0.344x_2$ ). There are also some beneficial recommendations made in minimizing as well as eliminating the cost incurred resulted from the safety and health issues in workplace. Other than determining the major health hazards and its cost implication to the company, this study is also an attempt to motivate employers and employees to improve their health and safety performance as well as to guide them in measuring the costs implication due to health and safety failures.

## **ACKNOWLEDGEMENT**

First of all, I would like to thank the Almighty Allah S.W.T as with His mercy that I am able to complete this research entitled “The Cost and Effect of Occupational Health Hazards: A Case Study of PROTON Manufacturing Plant Malaysia” successfully. Conducting this research involves a great deal of collaboration with different people in various ways. For that reason, there are certain persons that I would like to thank for contributing to this thesis, each of them with his/her own individual and unique way.

I would like to express my profound gratitude to my supervisor, Prof. Madya Dr. Hajjah Ku Aziliah binti Ku Mahamad, for her invaluable support, encouragement, supervision and useful suggestions throughout this research work. Thank you for making it such a wonderful journey and fascination discovery. Not forgetting, all the panels and examiners who have given their moral support and continuous guidance that enabled me to complete my work successfully. Indeed, there have been so many people along the way and some came all the way to help and without the help of these people, the completion of this thesis would not be possible.

I’m indebted to all people from PROTON (Perusahaan Otomobil Nasional Sdn. Bhd) especially Mr. Mazlan bin Mohamad – Safety Manager in the Environmental, Health & Safety department of PROTON. His knowledge and guidance in the plant during the study has brought me to this extend.

I would like thank to those people who have been directly or indirectly involved, in giving me advices, continuously supporting and inspiring me. Members of family and friends who is my silent prayer, I believe they have never failed to pray for my success. To many other friends for their helps whose names I did not mention here, I thank you very much.

I also acknowledge UiTM (Universiti Teknologi MARA) under the Young Lecturer’s Scheme and the Higher Ministry of Education department for financially supporting my research and my master’s studies. Thank you.

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