

THE DRIVEN FACTORS OF ECO-INNOVATION IN AUTOMOTIVE COMPANIES IN
MALAYSIA

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APPROVAL

I/ we admit was read this report and on my view this report is sufficient from scope and quality for purpose the certificate Bachelor of Technology Management (High Technology Marketing)

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This report is submitted in partial fulfillment of the requirements for the Bachelor Degree
with Honour of Technology Management and Technopreneurship (High Technology
Marketing)

Faculty of Technology Management and Technopreneurship
Universiti Teknikal Malaysia Melaka

JUNE 2014

DECLARATION

I, Meor Noor Zainal Ideham bin Meor Noor Azami, (I/C Number: 911008-10-5673)

“I hereby declare that the work of this research is mine except for the quotations and summaries that have been duly acknowledged.”

Signature :

Name :

Date :

DEDICATION

First of all, I would like to show my gratitude to Allah for showing and guiding me the most correct path in completing this research. This research paper is lovingly dedicated to my respective parents who have been my constant source of inspiration. They have given unconditional support with my studies. I am honored to have their as my parents. Thank you for giving me a chance to prove and improve myself through all my walk of life. To all my family thank you for believing me for allowing me to further my studies. Lastly to my friends, who are always stay by my side providing me useful help in order to complete this research.

ACKNOWLEDGEMENT

In the name of Allah SWT, The Most Gracious and The Most Merciful, I would like to express my highest gratitude to Him for His guidance to be on the right path in completing this academic project. Without His blessing, I could have never proceeded with this Project Sarjana Muda (PSM). Besides that, I would like to express my sincere gratitude and appreciations to all people who had given me a valuable contribution throughout conducting this project.

Firstly, I would like to thank my supervisor, Dr. Norfaridatul Akmaliah binti Othman, for always provide guidance and encouragement to me to complete this task. Without her, there are no other means for me to complete this research as best as I can.

In addition, I would also like to thank my parents for give me full support and encouragement for me to complete this task. My parents also had a lot of help in financial aspects of my expenses when it completing the task.

Finally, I would like to express my profound gratitude to all my friends who have helped and assisted me when completing this task. They have sacrificed much time and energy to guide and help me in which I will remember them always. I would like to thank all those involved directly or indirectly in completing this task. I hope this project paper can give benefits not only to me, but also for others in the future for reference.

ABSTRACT

Innovation is a crucial instrument for a company to create competitive advantage that lead to the success of the company. However at the same time, the company also try to reduce the environment pollution through eco-innovation. This research will explore the driven factors of eco-innovation in automotive industry in Malaysia, how the driven factors lead to the implementation of eco-innovation and how the eco-innovation able to improve business performance in the industry. An interview have been conducted with the top management of Proton Holdings Berhad to get the real situation regarding the eco-innovation. From the interviews, 3 driven factors have been identified which are the public awareness, competitors and government regulation, incentive and policy. These driven factors have led local automotive companies to the implementation of eco-innovation through product innovation, which is the development of hybrid car and process innovation, which are dissemination of eco-innovation information and the management of natural resources and wastes. These eco-innovation implementations enable the automotive companies to improve its performance by reduce the cost of production processes the gaining of side income from the sales of recycled materials. Eco-innovation also allow companies to increase the availability of their cars in the market and also improve the image and the sentiment toward their brands. From there, the eco-innovation implementation in automotive industry in Malaysia has proved that the eco-innovation not only able to reduce the environmental harm, but also improve its business performance.

ABSTRAK

Inovasi adalah instrumen penting bagi syarikat untuk mewujudkan kelebihan daya saing yang membawa kepada kejayaan syarikat. Walau bagaimanapun pada masa yang sama, syarikat itu juga cuba untuk mengurangkan pencemaran alam sekitar melalui eko-inovasi. Kajian ini akan meneroka faktor-faktor yang mendorong kepada eko-inovasi dalam industri automotif di Malaysia, bagaimana faktor-faktor didorong membawa kepada pelaksanaan eko-inovasi dan bagaimana eko-inovasi dapat meningkatkan prestasi perniagaan dalam industry. Satu temu bual telah dijalankan dengan pihak pengurusan atasan di Proton Holdings Berhad untuk mendapatkan keadaan sebenar mengenai eko-inovasi. Dari temubual tersebut, 3 faktor didorong telah dikenal pasti yang merupakan kesedaran awam, pesaing dan peraturan kerajaan, insentif dan dasar. Faktor-faktor ini telah membawa didorong syarikat-syarikat automotif tempatan untuk pelaksanaan eko-inovasi melalui inovasi produk, yang merupakan pembangunan kereta hibrid dan inovasi proses, yang penyebaran maklumat eko-inovasi dan pengurusan sumber-sumber semula jadi dan bahan buangan. Ini pelaksanaan eko-inovasi membolehkan syarikat-syarikat automotif untuk meningkatkan prestasi dengan mengurangkan kos dalam proses pengeluaran yang semakin pendapatan sampingan dari jualan bahan kitar semula. Eco-inovasi juga membolehkan syarikat-syarikat untuk meningkatkan ketersediaan kereta mereka di pasaran dan juga meningkatkan imej dan sentimen ke arah jenama mereka. Dari sana, pelaksanaan eko-inovasi dalam industri automotif di Malaysia telah membuktikan bahawa inovasi eko bukan sahaja dapat mengurangkan bahaya alam sekitar, tetapi juga meningkatkan prestasi perniagaan.

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LIST OF ABBREVIATION & SYMBOL

R & D

Research and Development

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B	White, M.A. & Bruton, G.D. (2007). The Management of Technology and Innovation: A Strategic Approach. Natorp Boulevard Mason, OH: South-Western Cengage Learning. Printed	85
C	Mohr, J. J., Sengupta, S., & Slater, S. F. (2010). <i>Marketing of high-technology products and innovations</i> . Upper Saddle River, NJ: Pearson/Prentice Hall. Printed.	86

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter starts with an introduction of the background this research. This is then followed by an explanation of the problem that is to be investigated. Succeeding this are sections that emphasize the objective and the questions to be answered in this research. The scope of the research and also the limitation of the research are also discussed.

1.2 Background of Study

“Innovation is the specific instrument of entrepreneurship...the act that endows resources with a new capacity to create wealth”. This quote is said by Peter Ferdinand Drucker, who is contributing in writing the philosophical and practical foundation of the modern business corporation. This research assume that Drucker emphasizes innovation is one of specific instrument that lead to the success of a company. Through innovation, a company able to create new things, such as product, that will drive the company in creating wealth. Then, the wealth will allow the company to improve and establish itself becoming a strong company and able to compete fairly with other established competitors in an industry.

Take Apple Inc. innovation strategies for example. Apple is widely considered as no.1 innovative company in the world. (Kotelnikov, n.d.). The company has done several types of innovation at once when creating new products under an innovative business model led by the late Steve Jobs. While focusing on the product innovation on the iPhone and iPod products, Jobs also wanted the company to concern on the new way to create, deliver and capture the value of the customers. From the effort, the iPhone and iPod are able to integrate with iTunes and App Store, giving valuable experience to the customers. With such dare move, the company's products become well-received by the customers all around the world. From the example, it provides a clear picture of how important an innovation effort for an organization, especially organization that having a fierce competition among its rivalries in an industry.

However, while most of companies focus on the innovation development, their responsibilities toward the environment become less important. For companies founded in developing countries, they are seldom contributing in preserving the environment. These companies think that focusing their effort on preserving the environment do not give any benefits to the company, but revenue loss. Plus, the companies never realize the contribution of preserving environment effort to their business performance. According to Mohr et al. (2010), developing countries emit just over a third of the world's greenhouse gases in 2004 and anticipated that these countries will emit 2 to 3 times as much as the developed countries in 2100.

Different situation happened in the developed countries. They are realizing that every new products or processes conducted by their industries give bad affects towards the surrounding. Because of that, they try to find ways on how preserve the environment while maintaining their business process to create profits. For instances, EU proposed the Deep Renovation in area housing, an effort to refurbish old building to ensure maximum use of recyclable building materials and minimum energy input into production of building material (Bleischwitz et al, 2009). All the ways can be combined into one term generally known as 'eco-innovation'.

Eco-innovation can be defined as an innovation that consists of new or modified processes, practices, systems and products which benefit the environment

and contribute to environmental sustainability (Rennings, 2000). Eco-innovation is not only specific to products, but also practices, management and system within a company or country that able to reduce the harm to the environment.

The implementation of eco-innovation in any company gives lots of benefits, a part of to reduce the harm to the environment and preserve it for future generation. Some other benefits mostly involve the company's operations and performances, such as the reduction in operational costs, improve company's business performance and also increase the company's profits.

As conclusion, this research will aim on finding the driven factors of eco-innovation in automotive industry in Malaysia, the implementation of eco-innovation by the local automotive companies and its contribution on the company's performance.

1.3 Problem Statement

It is generally acceptable that eco-innovation plays a crucial role for sustaining the environment and creates competitive advantage to improve business performance for a company. Despite its crucial role however, it is not clear under what is the causes that stimulate a company to implement eco-innovation. The eco-innovation term is only known in the academic level only. However, the academic level is only focusing on the product and process innovation. Companies from various industries, in the other hand, are still not aware of this term, especially in developing countries like Malaysia. They do only have little or no information of the term. Companies do not view environmental initiatives as distinct for their normal innovation process.

As eco-innovation is meant to be applied by firms in various industries especially automotive industry, however, clear view of the conditions that stimulate the application is not well-known. A company will not implement the eco-innovation as long as they do not able to determine its driven factors. While most of global car

manufacturer have implement the eco-innovation, these manufacturers must have found the factors that drive them to implement eco-innovation. So, the question arise is what are the factors that lead automotive companies to implement eco-innovation. From the question, several driven factors lead to the eco-implementation in automotive industry in Malaysia can be determined clearly. The driven factors identified by the automotive companies can be the main forces for them to implement eco-innovation.

From the driven factors of eco-innovation, most of global carmakers have implemented the eco-innovation within their processes in various ways. The eco-innovation is implemented guided by the driven factors identified. The question here is what kinds of eco-innovation need to be implemented by the automotive firm guided by the driven factors and how to implement it within the companies. It is important for this research to understand clearly what and how to implement the eco-innovation guided by the driven factors identified. The companies need to implement eco-innovation that is able to fulfil the demand from the driven factors identified by the companies.

Eco-innovation aim is to reduce or eliminate the pollution that leads to environment sustainability. However, at the same, it is also enable companies to improve its business performance. How the implementation of eco-innovation that the main purpose is to reduce the pollution, able to improve business performance of automotive companies? This research need to understand how the implementation of eco-innovation is able to improve the business performance of the automotive industries. The effort of reducing or eliminate the hazardous substances emitted by the firm not only be able to preserve the environment from potential harm, but also improve the performance of the companies in other way around.

This research aim is to identify what are the driven factors for the automotive industry in Malaysia implement the eco-innovation. Then, this research will determine how the driven factors found by the automotive companies guide the implementation of eco-innovation. Lastly, this research will identify how the eco-innovation improve the business performance of the automotive companies.

1.4 Research Objectives

1. To determine the driven factors of eco-innovation in automotive industry in Malaysia.
2. To investigate the implementation of eco-innovation in automotive industry in Malaysia based on the driven factors.
3. To identify automotive company's business performance improvement through eco-innovation.

1.5 Research Questions

1. What are the driven factors of eco-innovation in automotive industry in Malaysia?
2. How the driven factors lead to the implementation of eco-innovation practice in automotive company in Malaysia?
3. How the implementation of eco-innovation in automotive industry able to improve automotive company's business performance?

1.6 Research Scope

In Chapter 1, this research will focus on the introduction of this research. It focus on the current situation of eco-innovation in general. Then, the problems of implementing the eco-innovation, research objectives, research questions, limitations, key assumptions, research contribution and summary have been pointed out.

In Chapter 2, it will highlight the literature review of the research. In this chapter, a theory is chose to work with the thesis. Firstly, we will review all the existing literature to reveal the true meaning of eco-innovation. The factors driven to eco-innovation in Malaysian automotive industry, how to implement it and how the

eco-innovation improves the automotive companies' performances also will be investigated. Later, the three questions will be combined in the conceptual model.

Chapter 3 will explain briefly about the method used in this research. The perspective and interpretation will lay out. The explanation of the chosen methodological approach and research techniques will also be included.

In Chapter 4, the data gained from the case company following the structure of the conceptual model in Chapter 2 will be presented. Then, the data will be analysed combine with secondary data elucidate accordingly.

Lastly, Chapter 5 will conclude and summarize the findings of the research questions in order to fulfil the purpose of this study.

1.7 Research Limitations

Due to the time limit of study, this research will only concentrate on three automotive companies. To be more specific, the company are local automotive based companies. Because of our research is to determine the factors driven of eco-innovation in automotive industry in Malaysia, the company has been chosen because of its relation with Malaysia's automotive industries and it's potential in implementing the eco-innovation in the near future.

As the researcher also has monetary limitations, the research only conducts in Malaysia's automotive industry that located in Malaysia. The fact that the result of this research, it may has some limitations to generalize to other companies on an international level or any other industrial factors, thus it should be taken into due consideration.

1.8 Key Assumption

This research assumes that several convincing driven factors of eco-innovation implementation in automotive industry can be found. The implementation of eco-innovation based on the driven factors also assumes to be found so that the relationship between the driven factors and the eco-innovation implementation can be identified from this research. Lastly, there is an assumption that this research can determine how the eco-innovation able to improve business performance in automotive industry in Malaysia.

Researcher also assumes that by conducting this research, the relationship between the driven factors of eco-innovation, the implementation and its contribution towards business performance improvements in automotive industry in Malaysia can be clearly identified.

1.9 Research Contribution

This research will answer all the research questions briefly in order to fulfil the objective of this research. Firstly, this research will investigate the factors driven of eco-innovation implementation in Malaysian automotive industries. From the investigation, we are able to find out the best reasons to be suggested to local automotive companies to implement the eco-innovation.

The factors driven are not enough to convince the automotive companies to carry out the eco-innovation within their companies yet without showing to them how to apply the eco-innovation correctly. This research will also explain briefly on how to implement the eco-innovation correctly based on the driven factors so that the main objective of the implementation able to receive by the companies.

Later, this research will explain the result of the implementation of eco-innovation within the automotive companies. With the correct implementation of eco-innovation, the performance of the companies will be able to improve. The result

is really important as if the anticipated result can be achieved, the main objective of this research will be fulfilled.

All the contribution stated above will be supported with literature review. Then, the primary data will be gained from the case company to support the contribution above. The analysis of both primary and secondary data will be produced in order to show that the contribution of this research is valid.

1.10 Summary

Most of the companies agreed that innovation can provide them competitive advantages in their fierce competitive market that they pursue. However, they also implement the eco-innovation not only because of their concern towards the global environmental issues, but also to improve their business performance. This research is aim to identify what is the driven factors of eco-innovation in automotive industry in Malaysia, how to implement the eco-innovation based on the identified driven factors and lastly to determine how the implementation of eco-innovation lead to business performance improvement in the industry. The research scope is done to provide guidance on how to build this research accordingly. Because of several limitations, this research will be conducted on 3 automotive companies that are located in Malaysia only.

From this research, it is assumes that convincing driven factors of eco-innovation in automotive industry in Malaysia can be identified in order to encourage its implementation and able to determine how the implementation able to improve automotive companies' business performance. This research can contribute to the knowledge and the understanding of driven factors that encourage the implementation of eco-innovation, the implementation of eco-innovation and its contribution towards the business performance in Malaysian automotive industry.