

I hereby confirm that I have examined this project paper entitled:

THE STUDY OF CONSUMER AWARENESS OF ENVIRONMENTAL FOOD
PACKAGING TECHNOLOGY IN MALACCA CITY.

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THE STUDY OF CONSUMER AWARENESS OF ENVIRONMENTAL FOOD
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Report submitted in fulfillment of the requirement for the Bachelor Degree of
Technology Management(Technology Innovation) with Honours.

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June 2015

“I declare that this project is the result of my own research except as cited in the references. The research project has not been for any degree and is so no concurrently submitted in candidature of any other degree.”

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DEDICATION

This research paper is lovingly dedicated to my parents, En Azmi Bin Saidin and Puan Sarina Binti Hashim, who have been my constant source of inspiration, they have given unconditional support with my studies. I am honoured 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 especially to my brother, sister and my youngest brother that always support and believing me for allowing me to further my studies. Lastly to all who are involved either directly or indirectly in this project.

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ABSTRACT

The implementation of environmental food packaging technology is one of the criteria that have to be emphasized by the food packaging industry particularly a developing country such as Malaysia. The food industry encounters pressure not only in terms of nutritional value and safety, but also from environment concerns. Malaysia need to change and improve the technology of food packaging to prevent the waste or disposal to the environment. The most recently compiled waste generation statistics indicated that 245.7 million tons were generates in 2005. In the product categories, containers and packaging represent mainly waste from packaging such as drink cans, milk cartons and plastics. Furthermore the issues of increasing the waste from food packaging will became the things that we should avoid the sustainability to the next generation. The research is focus on the implementation environmental technology in food packaging industry with the consumers concern. Besides that, this research investigate the relationship between the factor that influence the consumers buying the food packaging product between the environmental food packaging. The environmental food packaging also will develop the consumers green awareness. However food packaging technology must balance food protection with other issue, including material usage, environmental consciousness and strict pollutions and pollutants and disposal of food packaging waste. The survey through questionnaire was conducted by the researcher to collect respondent's answer and the data collected was analyzed by quantitative research method. The finding showed that there was significant relationship between independent variable promotion and green product with consumer awareness of food packaging technology. However, there was three variables that was not significant with consumer awareness of food packaging technology which is price, brand loyalty and quality and safety.

ABSTRAK

Pelaksanaan teknologi pembungkusan makanan yang mesra alam sekitar adalah salah satu kriteria yang perlu ditekankan oleh industri pembungkusan makanan terutamanya sebuah negara membangun seperti Malaysia. Penekanan penemuan industri makanan bukan sahaja dinilai dari segi pemakanan dan keselamatan, tetapi juga dari kebimbangan alam sekitar. Malaysia perlu mengubah dan meningkatkan teknologi pembungkusan makanan untuk mencegah peningkatan sisa atau pelupusan kepada alam sekitar. Statistik menunjukkan bahawa 245700000 tan penjanaan sisa ialah dijana pada tahun 2005. Dalam kategori produk pembungkusan bekas makanan penyumbang kepada sisa pembuangan dari bungkusan seperti tin minuman, karton susu dan plastik. Tambahan pula isu-isu peningkatan sisa dari bungkusan makanan akan menjadi perkara-perkara yang kita harus cegah untuk kemampuan generasi akan datang. Kajian ini memberi tumpuan kepada pelaksanaan teknologi alam sekitar dalam industri pembungkusan makanan dengan kebimbangan pengguna. Selain itu, kajian ini juga mengkaji hubungan antara faktor yang mempengaruhi pengguna membeli produk pembungkusan makanan dengan pembungkusan makanan yang mesra alam sekitar. Bungkusan makanan alam sekitar juga akan membangunkan kesedaran pengguna terhadap teknologi hijau. Walau bagaimanapun teknologi pembungkusan makanan mesti mengimbangi perlindungan makanan dengan isu lain, termasuk penggunaan bahan, kesedaran alam sekitar dan pencemaran dan bahan cemar serta pelupusan sisa pembungkusan makanan. Melalui kajian ini jug soal selidik telah dijalankan oleh penyelidik untuk mengumpul jawapan responden dan data yang dikumpul akan dianalisis dengan kaedah penyelidikan kuantitatif. Dapatan kajian menunjukkan bahawa terdapat hubungan yang signifikan di antara pembolehubah bebas iaitu promosi dan produk hijau dengan kesedaran pengguna teknologi pembungkusan makanan. Walau bagaimanapun, terdapat tiga pembolehubah yang tidak signifikan dengan kesedaran pengguna teknologi pembungkusan makanan iaitu harga, kesetiaan jenama dan kualiti dan keselamatan.

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CHAPTER 1

INTRODUCTION

1.1 Background of the Research

The environmental technology in food packaging has become main constrains in the selection of food product. The purpose of food packaging are looking on cost effective way, maintain food safety and control or avoid the bad impact of the material use for food packaging to human body and minimize environment impact by using recyclable or reused material. The changes in consumer behavior, environmental concern, marketing, distribution, globalization and technology have turned effective packaging design became the external influences on package design (Rundh, 2009).

Most of food packaging product are using material that are non recycle or reused. The example of the material that the food packaging industry use is plastics, glass, metal, laminates and metalized films, tinfoil, polyesters, paper and paperboard. The right selection of packaging materials and technologies maintains product quality, freshness and protect harmful from outside. Most of the materials that the food packaging industry use are difficult to recycle or reused. The comprehensive analysis of the materials determining the environmental impact of a package from production to disposal. The combination of green and packaging would be a new choice of consumer developing market like Malaysia (Zakersalehi, 2012).

Previous study shows the important roles of information on food packages in nutrients education, facilitating food choice and intakes dietary improved (Moriss et.al, 1993). Consumers use nutrition label information in food packaging as a their references in make a choice and show how effective consumers are at using the label of information. Most of 92 percent of customers simply glancing at the overall list of nutrients, 84 percent looked at amount of nutrients of particular interest, and only two-third looked at specific nutrients (Scott and Worsley, 1997). Now a day the customers demanding and concern about the quality of the food packaging because of they realize the impact of material that the food packaging industry use. Mintel, (2003) comments that consumers are became more demanding in terms of quality and choice and constantly seeking a product tailored to what they are want and need.

1.2 Problem Statement

There have three problems statement that researcher want to highlight. First is waste disposal from the food packaging will lead to a significant impact to the environment. Second is the low level of consumer awareness about the problem of disposal. Third is toward green technology in food packaging is not well treasured.

The selection of new technology and appropriate technology is very important to ensuring the consumers can safely use the food packaging. In food packaging industry most concerned about how easy it is to produce and how cheaply it can be done (Rundh, 2009).

It has been adopted by researcher such as Coles (2003) comments that the food packaging must have the principle roles which is protect food products from outside influences and damage, contain the food and provide consumers with ingredient and nutrition information. Furthermore the researcher find that the disposal like plastic waste from the food packaging will lead to a significant impact to the environment. The environment impact caused by the generation and treatment of waste are raising concern. (Eurostat, 2013) .According to Hunt el al. (1990) almost two-third of total packaging waste is food packaging accounts by volume.

The environment issue often associated with material that use in food packaging. The process of recycling plastic material from plastic material is more difficult and costly in comparison to other materials.(Eurostat, 2013). Moreover, a landfill space is needed for an increasing amount of packaging waste.(Salmi, 2013). Other than that the problems that the researcher want to highlight is the consumers concern about the green food packaging technology in purchasing food product. A consumer whose purchasing behavior is persuaded by environmental concerns is known as green consumer (Shrum et al. 1995).

Current efforts in this regard are more innovative in food packaging can solve the customers problem by using the new technology in packaging industry. Researcher conclude that the new technology must be created and used in food packaging industry must be more hygiene and high quality created by using the useful and eco –friendly material in food packaging like the containers that have the BPA free.

1.3 Research Question

The focus of this research is was to determine the relationship between the selection of food products in the package and how it affects consumers. Therefore, this research explores fundamental questions such as the following: There are three research question:

1. What are the factors that influence the consumers to choose the food packaging?
2. What are relationship between consumers awareness toward technology of food packaging?

1.4 Research Objective

The objective of the study basically is to investigate the relationship between the factor of price, brand loyalty, safety and quality, promotion and green product towards the consumers concern of green food packaging technology. The objectives of study are state as below :

1. To analyze the factors that influence the consumers to choose the food packaging.
2. To examine the relationship between consumers awareness toward technology of food packaging.

1.5 Scope of Research

This research only focused on consumer perception in the environment green technology in food packaging. Moreover, this research only covers the consumers of food packaging in Melaka city. In addition, this study is a comprehensive view of the factors that influence the selection and consumer awareness in the packaging of food product.

1.6 Limitation of Study

i. Sample Size

Sample size for the study is limited because the number of population in Melaka is small and the average respondent are working. Researcher have made a random selection of users in this city. Researcher have selected 100 respondents to answer this survey. Sample size for researcher get no response is difficult because researcher need to select the respondents were aged between 16 and 50 years of age. Respondents also must be a user who often buy food products contained in the package.

ii. Scope only for food packaging.

The limitation of information for this research because the researcher only determine and used the information that are related to food packaging only. To obtain information on food packaging technologies that researcher need to find the information or opinions from past research but somewhat difficult because green awareness in food packaging is a new issue.

iii. Time Constraints

Time constraints also affect the limitation of the study. This is because the time allotted is very limited and lead researcher cannot make observations in more detail. In addition, it is also time constraints for researcher to do the survey through questionnaires because most respondents was a worked and do not have time to answer the questionnaire.

iv. Lack of available and/or reliable data

Lack of data or data that can be trusted will require researcher to limit the scope of the analysis, the sample size, or it can be a major obstacle in finding trends and meaningful relationship. Researcher should not only describe these limitations but to offer reasons why researcher believe the data is missing or unreliable.

v. Lack of prior research studies on the topic

Due to the study of consumer green awareness is a new the researcher have difficulty in getting the views or past opinions to serve as a guide and reference for this study. Cites research studies before the foundation of the study of literature researcher and helped lay the foundation for understanding the research problems that researcher are investigating. Depending on the currency or the scope of research topic, there may be little, if any, prior research on topic.

1.7 Key Assumption of Study

The key assumption of this study is about the honesty of respondent to answer the survey questionnaire, the cooperation from the respondent or the public and this research to identify if this research is practical and useful to the industry.

1.8 Significant of Study

i. Green Technology

Green technology refers upon the development and application of products, equipment and systems to conserve the environment and natural resources and minimize or mitigate the negative impact of human activities (KeTTHA 2014). Green awareness is a platform that can bring Malaysia towards green technology in the production of food packaging products. The researcher find the green technology that can be produce by this research is like technology in Green Packaging Design.

Green Packaging Design material selection should be based on the following principles (KeTTHA, 2014).

- (1) Lightweight, thin, easy separation, packaging materials, high performance.
- (2) The packaging materials are recyclable and renewable.
- (3) Environmentally friendly packaging materials.
- (4) Use of natural resources in the development of packaging materials natural performance.
- (5) Using wrapping paper

ii. Innovation Way

Through this study researcher found that the existence of a innovation way to solve the problem in the food packaging industry. The researcher found innovative ways is to produce packaging products that can easily be recycled. Researcher also discovered through this study that all parties should cooperate to no longer think of a way to treat but prevent the existence of hard use recycled materials in food packaging. Researcher also found innovative ways in the

production of food packaging should be balanced with the needs of users and ecosystems. For example the production of food packaging products which are easily disposed even use plastic materials such as petroleum. Green consciousness capable of stimulating the economy in the areas of innovation and help protect the environment.

iii. Support Government in Halal Hub.

Based on the research that researcher have found that green awareness highlighted able to support government programs such as the Green City Program and the latest is Halal Hub Program. Halal Hub Program is one of government program that outlines the importance and safety in the food industry in Malaysia. Researcher found that studies of green awareness can help support the government in improving the quality in the food industry.

Prime Minister of Malaysia, Dato' Seri Mohd Najib bin Tun Abdul Razak said the Halal Hub programs will be realizing the large potential in business and the continuous unique position and Malaysia will has the strength position itself to became the Global Halal Hub.

iv. Green Awareness

According to Norazah (2013) green awareness influences human behavior in several ways e.g., reducing consumption, changing wasteful or harmful consumption patterns and raising preference for environmentally friendly products, selective waste collection or different forms of protest that may represent ecological sensibility . Green awareness needs to be applied within consumer in Malaysia. Green awareness is crucial in ensuring the environment is always protected. Through green awareness can also reduce the adverse effects of the use of plastic food packaging, especially for consumers. The extensive campaign of green awareness in Malaysia to promote green lifestyle by reducing the use of plastic

bags e.g., No Plastic Bag Day campaign on Friday and Saturday in hypermarket like Tesco.

v. Environment Protect

The environment impacts cause by generation and treatment of waste are raising serious concern. (Eurostat, 2013). This research can help to protect the environment from waste disposal that are continues to be threatened by the non-recycling waste. The waste disposal is increasing in Malaysia nowadays and have a shortage of places to placed the waste of disposal. More landfill space is needed for an increasing amount of packaging waste.(Salmi Mohd Isa,2013). Researcher found that, in order to expedite the disposal of waste, especially plastic will cost high because our country lacks technology in solid waste disposal industry. The process of recycling plastic material is more difficult and costly in comparison to other material. (Eurostat, 2013). According to Ismail Hanafi (2011) plastic food packaging waste mainly took almost hundreds of years to decompose. Plastic not only cause disposal problems but also affect marine life. Numerous studies show that there is life in the seas off because ingested plastic waste. Therefore, green plastic and environmentally friendly is needed to solve environmental problems.

vi. Reforms in the food packaging industry

Reforms in the industry food packaging can be seen with the development of products that are more environmentally friendly packaging. Environmental food packaging will be open up new opportunities for manufacturers in the food packaging industry. Through this study indicate that the food packaging industry in Malaysia in particular can produce safer food packaging and flexible for recycling. Production of products that are environmentally friendly food packaging can protect consumers from exposure to substances contained in food packaging such as plastic and cans.

1.9 Summary

In this chapter discuss about the background of the research and discuss about the problem statement that leads the researcher to achieve the objective in this research. This chapter includes basic information about the research such as introduction of food packaging technology in Malaysia. The purpose of doing this research also discussed in Chapter 1. In this chapter also tell about the scope that the researcher will cover the limitations. From the information that have in the chapter 1 the researcher will develop the framework for the research in Chapter 2.