

## APPROVAL AND DECLARATION

“I hereby declare that I have checked this project/thesis and in my opinion, this report is adequate in terms of scope and quality for the award of the degree of Bachelor of Technopreneurship (Honours)”

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THE CONSUMERS ACCEPTANCE TOWARDS GREEN FOOD PACKAGING  
TECHNOLOGY IN MELAKA MALAYSIA

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## DECLARATION

“I hereby declare that the work of this exercise is mine except for the quotations and summarize that have been duly acknowledge”

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## DEDICATION

I dedicate this research to my beloved father Shahril Bin Sarman, mother Ngaizah binti Fabali@Md Fadzali and siblings, thank you for raising me with affection and love and always support me from beginning until now. A special thanks to my supervisor Dr Haslinda binti Musa, panels and my friends for helping me throughout the project towards accomplishing my thesis.

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## ABSTRACT

The implementation of green 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 needs to change and improve the technology of food packaging to prevent the waste or disposal to the environment from non-biodegradable to biodegradable packaging. The issues of increasing the waste from food packaging will become the things that we should avoid the sustainability to the next generation. 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 main purpose of this study is to implement this green technology in all state of our country. Thus, this research is focus on the consumer readiness to adopt this technology in their place. This is because, if they are not ready for this technology, it is not possible to implementing it in our country. The survey through questionnaire was conducted by the researcher to collect respondent's answer and the data collected was analyzed by quantitative research method. A total of 150 questionnaires were coded and analyzed with statistical techniques. This research contributes to an understanding of how consumers look upon the adoption of green food packaging technology in their places.

## **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 daripada pembungkusan tidak biodegradasi kepada pembungkusan bersifat biodegradasi. Isu-isu peningkatan sisa dari bungkus makanan akan menjadi perkara-perkara yang kita harus cegah untuk kemampanan generasi akan datang. 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. Tujuan utama kajian ini adalah untuk melaksanakan teknologi hijau ini di seluruh negeri di negara kita. Maka, kajian ini fokus kepada kesediaan pengguna untuk menerima pakai teknologi ini di tempat mereka. Ini kerana, jika mereka tidak bersedia untuk teknologi ini, ia tidak mungkin untuk melaksanakannya di negara kita. Melalui kajian ini juga soal selidik telah dijalankan oleh penyelidik untuk mengumpul jawapan responden dan data yang dikumpul akan dianalisis dengan kaedah penyelidikan kuantitatif. Sebanyak 382 soal selidik telah dikodkan dan dianalisis dengan teknik statistik. Kajian ini menyumbang kepada pemahaman bagaimana pengguna melihat terhadap penggunaan pembungkusan makanan berteknologi hijau yang dilaksanakan di tempat mereka.*

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**LIST OF SYMBOLS**

$\alpha$	=	(Alpha) is the constant or intercept
%	=	Percent
<	=	Greater than
>	=	Less than
=	=	Equals

## LIST OF ABBREVIATIONS

TAM	=	Technology Acceptance Model
GHG	=	Greenhouse Gas
PLA	=	Poly lactide
LDPE	=	Low-density Polyethylene
HDPE	=	High-density Polyethylene
PEU	=	Perceive Ease of Use
PU	=	Perceive Usefulness
SPSS	=	Statistical Package for Social Science
PPMC	=	Pearson product-moment correlation coefficient

## LIST OF APPENDIX

- APPENDIX A = Survey Questionnaire
- APPENDIX B = Gantt chart Final Year Project 1 (Semester 7)
- APPENDIX C = Gantt chart Final Year Project 2 (Semester 8)

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.0 Introduction**

This chapter covers the background of the study, which defines what is green food packaging technology and how can it be usefulness. Then it is continued by a problem statement which states the problem that need to solve at the end of this research. Besides that, four main objectives of study as well as research questions have been clearly discussed in this chapter. Next, it is followed with scope of study, which describes about the range or scale of this research clearly. It is then further with the significant or important of this study and lastly it is concluded with brief summary of the overall chapter.

#### **1.1 Background of Study**

The implementation of green food packaging technology is one of the initiatives by the government especially the government state of Melaka to be in line as a green technology state. Food packaging industry particularly in a developing country such as Malaysia should be emphasized with the eco-friendly food packaging technology. The

Industry also not only encounters pressure in the terms of nutritional value and safety, but also for healthy and environment concern.

First of all, what is food packaging? Food packaging was packaging or protector for food which used different materials. Most materials currently used for food packaging are plastics, glass, metal, laminates and metalized films, tinfoil, polyesters, paper and paperboard. The materials used mostly are non-degradable, non-recycle or reused which generating environmental problems. Product quality, freshness and protection harmful from outside can be maintains by the right selection of packaging technology and materials. The environmental impact of a package from production to disposal is determining by the comprehensive analysis of the materials. According to Zakersalehi (2012), the combination of green and packaging would be a new choice of consumer developing market like Malaysia.

Whereas, food packaging technology that used non-biodegradable materials has led to change to Green Food Packaging technology in the approaches used for the manufacture of materials by the food packaging industry due to advances in food processing and the growing consumer demand for healthier products that do not lead to human health and environmental issues. The adoption of this technology became main constrains in the selection of food product. The green food packaging's purpose are looking on cost effective way that maintains food safety, satisfies industry requirements and consumer desires, minimize environment impact, and avoid or control the bad effect of the material used for food packaging to human body by using reused or recyclable material. All of the changing from consumer behavior, marketing, health and environmental concern, distribution and technology became influences on turned the packaging design.

Consumers are who act as purchaser or users that purchases or uses the products for personal use or others. Consumers also can make the decision whether want or not to purchase or use the products and can be influenced by marketing, regulation and

advertisement. Whatever it is, the fundamental reason for purchasing or using the products is due to its ease-to-use or usefulness for the consumer. Hence, in order to implement the green food packaging technology in every state in Malaysia, it is important to study about is there consumers are ready or can accept this technology.

The focus of this research is about to study which factors that contributed consumer's acceptance towards green food packaging technology in their places. Four factors have been identified as an attribute of this study which is innovativeness, eco-friendliness packaging, convenience and environmental consciousness of adoption green technology of food packaging. There are many factors that may contribute to the consumer's acceptances but these four factors are more suitable for this study. This is because, the implementation of this technology is still new and consumers were not aware that the enforcement had begun (The Star Online, 2016). Therefore, this research is mainly being conducting to find out what is green food packaging technology and how the factors; innovativeness, eco-friendliness packaging, convenience and environmental consciousness of adoption of green technology for food packaging will gives impact towards consumer's decision to accept this technology.

## **1.2 Problem Statement**

According to Free Malaysia Today Online (2013), the average Malaysian throws away 1.64kg of waste per day. At this rate, the waste production of Malaysians would increase by a drastic 65% from 10,000 tons per day in 2010 to 17,000 tons per day by 2020. Unfortunately, according to Clean Malaysia Online (2015), Malaysians produce an average of 30,000 tons of waste every day and only 5 percent of it is recycled. These statistics were revealed by the national Ministry of Urban Wellbeing, Housing and Local Government, and they're causing enormous problems for Malaysia especially on air pollution, health problems for communities and bottlenecks to economic growth. This

shows that the wastes are not disposal and all of the problems due to their non-biodegradability.

As the initiatives to handle the problems, the implementation of using green technology for food packaging by using biodegradable materials by Melaka government has started on January 2016. Consumers in Melaka have to bring their own shopping bags for goods or food packaging after the state of government declares a total ban on plastic bag and polystyrene containers made from non-biodegradable materials at all premises in Melaka or the cash counters will supply them with biodegradable bags made of plant-based materials.

However, from a Bernama survey conducted at several business areas in the state found that consumers were not aware that the enforcement had begun and they had to carry their purchased items without plastic bag or packaging (The Star Online, 2016). Thus, in order implementing the green technology for food packaging in Malaysia, it is necessary to study the acceptance of the consumers towards this technology in their places. Although the ban of polystyrene food containers is a laudable move, but there must be an alternative packaging first and figure out whether or not the consumers are willing to pay for the extra costs incurred if the polystyrene is being replaced by a slightly more expensive paper-based container (Malaysian Digest, 2015). This is because, the knowledge and awareness of consumers in Malaysia towards the new invention of environmental food packaging technology is still at an early stage and many do not realize of the reasons of implementation of this technology and its usage

The consumer's perception and knowledge are also varying and influenced by multi opinions. In short, this research was focused on investigating about what is green technology in food packaging and its usefulness and the willingness of the consumers in Melaka in accepting the implementation of this technology in their location.

### 1.3 Research Questions

Research question that are related to the study are stated as follow:

- 1) What is the relationship between innovativeness of green food packaging technology and consumer acceptance towards green food packaging technology in Melaka?
- 2) What is the relationship between the eco-friendliness packaging of green food packaging technology and consumer acceptance towards green food packaging technology in Melaka?
- 3) What is the relationship between the convenience of green food packaging technology and consumer acceptance towards green food packaging technology in Melaka?
- 4) What is the relationship between the environmental consciousness of green food packaging technology and consumer acceptance towards green food packaging technology in Melaka?

### 1.4 Research Objectives

The aim of the study is to study the consumer acceptance towards green food packaging technology. There are four objectives arise in the study based on the problem statement above where state as below:

- 1) To examine the relationship between innovativeness of green food packaging