



UNIVERSITI PUTRA MALAYSIA

**CONSUMERS' WILLINGNESS TO PAY FOR BIODEGRADABLE SHOPPING
BAGS IN SELECTED HYPERMARKETS IN SELANGOR, MALAYSIA**

FATIMAH AZ ZAHARAH SUBAHIR

FEP 2014 10



**CONSUMERS' WILLINGNESS TO PAY FOR BIODEGRADABLE
SHOPPING BAGS IN SELECTED HYPERMARKETS IN SELANGOR,
MALAYSIA**

By

FATIMAH AZ ZAHARAH SUBAHIR

**Thesis Submitted to the School of Graduate Studies,
Universiti Putra Malaysia, in Fulfilment of the
Requirements for the Degree of Master of Science**

May 2014

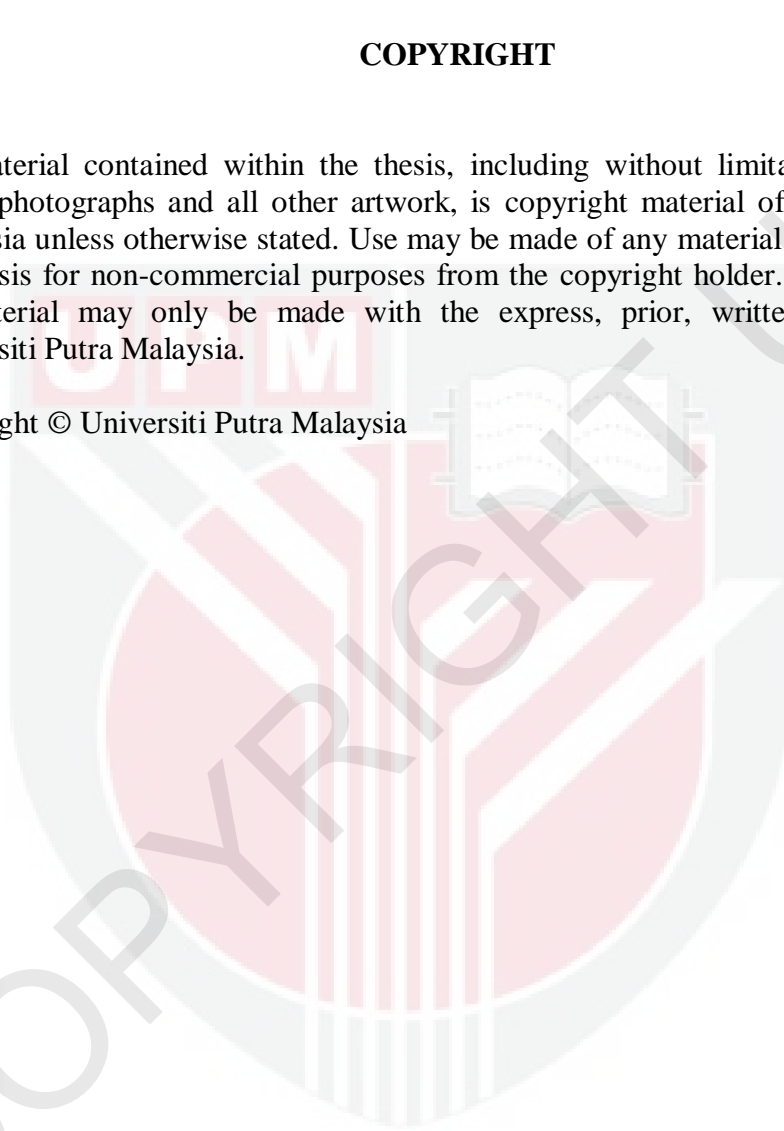
COPYRIGHT

All material contained within the thesis, including without limitation text, logos, icons, photographs and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia



COPYRIGHT



Abstract of thesis presented to the Senate of University Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

CONSUMERS' WILLINGNESS TO PAY FOR BIODEGRADABLE SHOPPING BAGS IN SELECTED HYPERMARKETS IN SELANGOR, MALAYSIA

By

FATIMAH AZ ZAHARAH SUBAHIR

May 2014

Chair : Associate Professor Mohd Rusli Ya'cob, PhD
Faculty : Economics and Management

Malaysia is facing critical pollution and environmental deterioration issues as a result of massive consumption of plastic- since it takes more than 300 years to be disposed. Introduction of biodegradable shopping bag (BSB) as a greener alternative is deemed as the best substitute for plastic bags, due to its disposability nature in order to preserve the environment, thus, preventing environmental distortion or environmental problem.

The general objective of this study is to determine the consumer awareness and estimate their willingness to pay for BSB. On the other while, the specific objectives of this study are; i) to determine the consumer awareness towards the environment and biodegradable shopping bag, ii) to determine the dimension of consumer perception towards the usage of biodegradable shopping bag, and iii) to estimate consumer willingness to pay for BSB. Data are obtained through face to face interviews by using closed ended and multiple categories questionnaire. A sample of 300 respondents is randomly chosen at selected hypermarkets in Selangor in September to November 2012.

Data are analysed using descriptive analysis, factor analysis and Contingent Valuation Method (CVM). Four factors that significantly influence consumers to use BSB are found through the factor analyses, namely; behaviour and lifestyle concern, environmental concern, knowledge of BSB and negative attributions toward environment. The results obtained from the analysis indicate that price of BID, AGE, GENDER (MALE) and INCOME are significant in influencing the consumers' willingness to pay for BSB.

The result of the survey also reveals that consumers are willing to pay an additional premium of RM 3.53 per unit of BSB. In this regards, findings from this study are believed to provide some guidance for the policy makers and business operators to revise the BSB price introduced to consumers. Increase in consumers' demand for BSB and their environmental awareness may lead to subsequent reduction or

elimination of the plastic shopping bags usage, and ultimately make our environment healthier by reducing environmental degradations and distortions.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

**KESANGGUPAN PENGGUNA MEMBAYAR UNTUK BEG MEMBELI
BELAH BIODEGRADASI (*BIODEGRADABLE*) DI PASARAYA TERPILIH
DI SELANGOR, MALAYSIA**

Oleh

FATIMAH AZ ZAHARAH SUBAHIR

May 2014

Pengerusi : Professor Madya Mohd Rusli Ya'cob, PhD

Fakulti : Ekonomi dan Pengurusan

Malaysia kini berhadapan masalah pencemaran yang kritikal dan kemerosotan alam sekitar sebagai kesan sampingan terhadap penggunaan plastik dan bahan buangan yang melampau kerana produk terbabit memerlukan lebih dari 300 tahun untuk dilupuskan. Pengenalan beg membeli-belah mesra alam (BSB) adalah dilihat sebagai pengganti terbaik kepada beg plastik kerana ia dapat memelihara alam sekitar di samping, mencegah sebarang gangguan atau masalah alam sekitar.

Objektif umum kajian ini adalah untuk menentukan kesedaran pengguna dan kesiediaan membayar mereka untuk beg membeli-belah mesra alam (BSB). Manakala, objektif khusus kajian ini merangkumi; i) menentukan kesedaran pengguna terhadap alam sekitar dan beg membeli-belah mesra alam, ii) menentukan persepsi pengguna terhadap penggunaan beg membeli-belah mesra alam, dan iii) menganggar kesanggupan membayar pengguna untuk BSB. Data diperolehi melalui soal selidik dengan menggunakan format soalan tertutup dan pelbagai pilihan. 300 responden telah dipilih secara rawak di pasaraya yang terpilih dari September sehingga Oktober 2012.

Data analisis menggunakan metod analisis deskriptif, faktor analisis dan kaedah penilaian kontigen (CVM). Empat faktor yang mempengaruhi kesanggupan pengguna membayar terhadap penggunaan BSB diperolehi melalui kaedah faktor analisis, yang terdiri dari; tingkah laku dan gaya hidup, keprihatinan terhadap alam sekitar, pengetahuan mengenai BSB dan sifat-sifat negatif terhadap alam sekitar. Hasil dari model logit regresi menunjukkan harga BID, UMUR, JANTINA (LELAKI) dan PENDAPATAN adalah signifikan dan mempengaruhi kesanggupan membayar pengguna untuk BSB.

Hasil kajian turut mendedahkan bahawa pengguna sanggup membayar peningkatan premium sebanyak RM 3.53 untuk setiap unit BSB. Oleh itu, dapatan daripada hasil kajian ini dipercayai dapat membantu pihak penggubal dasar dan pengusaha perniagaan untuk menyemak harga BSB yang diperkenalkan kepada pengguna. Peningkatan permintaan pengguna untuk BSB dan kesedaran mereka terhadap alam

sekitar dapat membawa kepada pengurangan kebergantungan terhadap beg plastik yang berterusan atau penghapusan penggunaan beg plastik dan seterusnya menjadikan alam sekitar lebih sihat dengan pengurangan kemerosotan dan gangguan alam sekitar.



© COPYRIGHT UPM

ACKNOWLEDGEMENTS

First and foremost, my praise to Allah SWT, blessed me with patience, courage consistency and good health during this study. I am very honoured to be supervised by my supervisor, Assc. Prof Dr Mohd Rusli Ya'cob and my supervisory committee member Assc. Prof Dr Alias Radam for their invaluable advice, guidance and encouragement throughout process and my thesis writing.

My special thanks to responsible staff at Giant Kelana Jaya, Carefour Kepong and Mutiara Damansara Tesco for their cooperation and help in data of BSB consumer and also providing the necessary materials. My gratitude also goes to the friends (Mrs. Zunika, Sulaiman Haji Dhaudha and Nur Hizami Hassin for supporting me, offering a helping hand to advice and proofread my thesis. I would also like to express my sincere gratitude to my beloved husband, Mohd Abdullah Sakmah; my lovely son, Zara Mardiah; and my dearest family for their constant support, encouragement and love during my study.



I certify that a Thesis Examination Committee has met on 30 May 2014 to conduct the final examination of Fatimah Az Zaharah binti Subahir on her thesis entitled “Consumers’ Willingness to Pay for Biodegradable Shopping Bags in Selected Hypermarkets in Selangor, Malaysia” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

Members of the Thesis Examination Committee were as follows:

Zulkornain b.Yusop, Phd

Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Chairman)

Khalid b. Abdul Rahim, Phd

Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Internal Examiner)

Zaiton binti Samdin, Phd

Associate Professor
Faculty of Forestry
Universiti Putra Malaysia
(Internal Examiner)

Fatimah Kari, Phd

Associate Professor
Faculty of Economics and Administration Building
University of Malaya
Kuala Lumpur
Malaysia
(External Examiner)

NORITAH OMAR, PhD

Associate Professor and Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 18 August 2014

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

Mohd Rusli Ya'cob, PhD

Associate Professor
Faculty of Environmental Studies,
Universiti Putra Malaysia
(Chairman)

Alias Radam, PhD

Associate Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Member)

BUJANG KIM HUAT, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date:

DECLARATION

Declaration by graduate student

I hereby confirm that:

- this thesis is my original work;
- quotations, illustrations and citations have been duly referenced;
- this thesis has not been submitted previously or concurrently for any other degree at any other institutions;
- intellectual property from the thesis and copyright of thesis are fully-owned by Universiti Putra Malaysia, as according to the Universiti Putra Malaysia (Research) Rules 2012;
- written permission must be obtained from supervisor and the office of Deput Vice-Chancellor (Research and Innovation) before thesis is published (in the form of written, printed or in electronic form) including books, journals, modules, proceedings, popular writings, seminar papers, manuscripts, posters, reports, lecture notes, learning modules or any other materials as stated in the Universiti Putra Malaysia (Research) Rules 2012;
- there is no plagiarism or data falsification/fabrication in the thesis, and scholarly integrity is upheld as according to the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) and the Universiti Putra Malaysia (Research) Rules 2012. The thesis has undergone plagiarism detection software.

Signature: _____ Date: _____

Name and Matric No.: Fatimah Az Zaharah Subahir GS29264

Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Signature: _____

Name of
Chairman of
Supervisory

Committee: Assoc. Prof. Dr. Mohd
Rusli Ya'cob

Signature: _____

Name of
Member of
Supervisory

Committee: Assoc. Prof. Dr. Alias
Radam



COPYRIGHT



TABLE OF CONTENTS

	Page
ABSTRACT	i
ABSTRAK	iii
ACKNOWLEDGEMENTS	v
APPROVAL	vi
DECLARATION	viii
LIST OF TABLES	xiii
LIST OF FIGURES	xv
CHAPTER	
1 INTRODUCTION	
1.1 Introduction	1
1.2 Solid Waste and Environmentally-Friendly Product	2
1.3 Biodegradable	4
1.3.1 Biodegradable shopping bag.	4
1.3.2 Biodegradability of polymer	4
1.4 Problem Statements	5
1.5 Objective of Study	7
1.6 Significant of the study	8
1.7 Organization of Thesis	8
2 LITERATURE RIVIEW	
2.1 Solid Waste	10
2.1.1 Solid Waste Generation in Malaysia	11
2.1.2 Concept and Definition of Municipal solid waste (MSW)	13
2.1.3 The Composition of Municipal Solid Waste	15
2.2 Issue of Plastic Bag	16
2.2.1 Plastic Consumption and Problems	16
2.2.2 Action Plan for Reducing Plastic Bags in Other Countries	17
2.3 Introduction of Green Product (Environmentally Friendly Product)	19

2.3.1	The Introduction of Biodegradable Shopping Bag	19
2.4	Environmental Awareness Issue of Green Product	20
2.5	Knowledge	21
2.6	Attitude and behaviour	22
2.7	Lifestyle	23
2.8	Measurement of Non-Market Valuation Method	23
2.9	Welfare Measure	27
2.10	Contingent Valuation Method (CVM)	30
2.11	Advantage and Disadvantage of CVM	36
2.12	Related previous study	57
2.13	Summary	39
3	METHODOLOGY	
3.1	Introduction	41
3.2	Analysis	
3.2.1	Descriptive analysis	41
3.2.2	Factor analysis	41
3.2.3	Economic valuation analysis	42
3.3	Source of Data	44
3.3.1	Sample Size	45
3.3.2	Study area	45
3.4	Questionnaires design	47
3.5	Pilot Test	50
3.6	Willingness to Pay (WTP) Estimation	51
4	RESULTS AND DISCUSSIONS	
4.1	Descriptive Analysis	57
4.1.1	Profile of Respondent	57
4.1.2	Awareness and Knowledge toward Environment and Biodegradable Shopping Bag	59
4.1.3	Consumer Personal Attribution	64
4.2	Factor Analysis	68
4.2.1	Measurement by Kaiser-Meyer-Olkin (KMO) and Bartlett's Test	68

4.2.2	Communality	69
4.2.3	Eigenvalue Criteria and Variance Explained	70
4.2.4	Dimension of Consumer Perception Result	71
4.3	Reliability of Analysis	74
4.4	Result of Willingness to Pay	74
4.4.1	The Binary Logit Analysis	75
4.4.2	Mean Value of WTP	77
5	SUMMARY AND CONCLUSIONS	
5.1	Summary	79
5.2	Suggestion and recommendation	80
5.3	Conclusions	81
5.4	Limitation of the Study and Recommendation for Future research	82
	REFERENCES	84
	APPENDICES	102
	BIODATA OF STUDENT	111
	LIST OF PUBLICATIONS	112