

**CONSUMERS' PERCEPTIONS, ATTITUDES AND
WILLINGNESS TO PAY TOWARDS CHEMICAL FREE
VEGETABLE IN NORTH SUMATERA**

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**Master of Science
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WILLINGNESS TO PAY TOWARDS CHEMICAL FREE
VEGETABLE IN NORTH SUMATERA**

By

HADRIMAN KHAIR

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

January 2004

**This thesis dedicated to my beloved mother, father, and wife
Hj. Hasniah Lubis S.Ag, Drs. H. Chairuman Pasaribu,
and Dessy Fathia SP.**

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

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Chairman : Professor Mad Nasir Shamsudin, Ph.D.

Faculty : Agriculture

This study was aimed to determine consumers' perceptions, attitudes and willingness to pay (WTP) towards chemical free vegetable (CFV) produce in North Sumatra Province. A total of 2080 respondents were interviewed using a close-ended questionnaire. Collected data was analysed using descriptive analysis, factor analysis and contingent valuation method (CVM). The results indicated that more than half of the respondents have consumed CFV. The result showed that lack of knowledge of CFV and the place to purchase CFV were the main reasons for consumers not consuming CFV. Nutritional value was an important factor that influences consumers' preferences in purchasing CFV, followed by desire, freshness, health effect and taste.

The factor analysis identified nine factors that influenced the purchase of CFV among North Sumatra Province consumers. The factors were government involvement, health consciousness, consumer influence to purchase, product

availability, awareness of chemical use, product appearance, information awareness, market potential and consumer awareness to consume.

Contingent Valuation Method was used to estimate consumers' WTP for CFV. A logit and probit model was used to determine consumers' WTP a premium for CFV. The results indicate that gender, household income, price level, marital status and household member below 17 years old were the most important and significant factors that influenced and determined the amount of premium that a consumer is willing to pay for CFV.

Based on the study, it was found that at present, CFV market is still a niche market, catering only to a small segment of the whole vegetable market in North Sumatra Province. Generally, North Sumatra Province consumers' have the potential to purchase CFV produce. Thus, there is a need for the proper development of an effective CFV market and the establishment of standards and certification program for CFV.

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

**TANGGAPAN, SIKAP DAN KESEDIAAN MEMBAYAR PENGGUNA
TERHADAP SAYURAN BEBAS BAHAN KIMIA
DI SUMATERA UTARA**

Oleh

HADRIMAN KHAIR

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Pengerusi: Professor Mad Nasir Shamsudin, Ph.D.

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Kajian ini adalah bertujuan untuk menilai faktor-faktor yang menentukan persepsi, sikap dan kesediaan membayar pengguna terhadap keluaran sayuran bebas bahan kimia di daerah Sumatera Utara. Sejumlah 2,080 responden telah ditemubual menggunakan soal-selidik tertutup. Data yang telah diperolehi telah dianalisis menggunakan analisis deksriptif, analisis faktor dan kaedah penilaian kontingensi. Keputusan yang diperolehi menunjukkan bahawa sebahagian besar pengguna pernah membeli sayuran bebas bahan kimia. Keputusan yang didapati juga mencadangkan bahawa ketidaktahuan tempat untuk membeli dan kekurangan pengetahuan yang cukup sebagai faktor utama yang menyebabkan pengguna tidak membeli sayuran bebas bahan kimia. Faktor lain yang mempengaruhi pengguna dalam pemilihan sayuran bebas bahan kimia ialah nilai nutrien, diikuti dengan keinginan, kesegaran, kesihatan dan citarasa.

Keputusan yang diperolehi dari analisis faktor telah mengenalpasti sembilan faktor yang mempengaruhi pembelian sayuran bebas bahan kimia di kalangan masyarakat daerah Sumatera Utara. Faktor-faktor tersebut ialah penglibatan kerajaan, kesedaran kesihatan, pengaruh pengguna untuk membeli, kebolehdapatan produk, kesedaran terhadap penggunaan bahan kimia, kerupaan produk, kesedaran informasi, potensi pasar dan kesedaran pengguna untuk membeli.

Kaedah penilaian kontigensi telah digunakan untuk mengukur kesediaan membayar pengguna terhadap sayuran bebas bahan kimia. Kesediaan membayar pengguna diukur dengan menggunakan model logit dan probit. Keputusan kajian mendapati bahawa jantina, pendapatan keluarga, harga sayuran, taraf dan ahli keluarga yang berumur di bawah 17 tahun adalah merupakan faktor yang penting dan signifikan dalam menentukan kesediaan membayar pengguna.

Berdasarkan hasil kajian ini, sayuran bebas bahan kimia didapati merupakan bidang pasaran yang hanya mewakili sebahagian kecil segmen seluruh pasaran sayuran di daerah Sumatera Utara, Indonesia. Secara amnya, masyarakat Sumatera Utara, Indonesia memiliki potensi untuk membeli sayuran bebas bahan kimia. Justru itu, pembangunan pasaran sayuran bebas kimia yang efektif dan piawaian dan pensijilan untuk produk yang bebas bahan kimia adalah diperlukan.

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This thesis 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 are as follows:

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I certify that an Examination Committee met on 28 January 2004 to conduct the final examination of Hadriman Khair on his Master of Science thesis entitled “Consumers’ Perceptions, Attitudes and Willingness to Pay Towards Chemical Free Vegetable in North Sumatera” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

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DECLARATION

I hereby declare that the thesis is based on my original work except for quotation and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

HADRIMAN KHAIR

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TABLE OF CONTENTS

	Page
DEDICATION	ii
ABSTRACT	iii
ABSTRAK	v
ACKNOWLEDGEMENT	vii
APPROVAL	x
DECLARATION	xii
LIST OF TABLES	xv
LIST OF FIGURES	xvi
LIST OF ABBREVIATION	xvii
CHAPTER	
1 INTRODUCTION 1.1	
1.1 Back Ground of North Sumatra Province	1.1
1.2 Food Safety Issues	1.4
1.3 Vegetables Industry In North Sumatra Province	1.8
1.3.1 Vegetables Land Areas and Productivity	1.12
1.3.2 Consumption	1.13
1.3.3 Price	1.15
1.3.4 Vegetables Trade	1.16
1.4 Problem Statement	1.20
1.5 Objective of the Study	1.22
1.6 Significance of the Study	1.22
1.7 Structure of the Study	1.24
2 LITERATURE REVIEW 2.1	
2.1 Consumers' Perception and Attitudes on Chemically Free Produced Food	2.1
2.2 Methodological Framework	2.9
3 METHODOLOGY 3.1	
3.1 Conceptual Model and Approach	3.1
3.1.1 Descriptive Analysis	3.1
3.1.2 Factor Analysis	3.2
3.1.3 Contingent Valuation Method (CVM)	3.3
3.2 Data Sources	3.17
3.2.1 Sampling Area	3.18
3.2.2 Sampling Intensity	3.19
3.3 Questionnaire Designs	3.19

4	ANALYSIS OF RESULT	4.1
	4.1 Descriptive Analysis	4.1
	4.1.1 Socio-Economic Profile Respondents	4.1
	4.1.2 Attitude Analysis	4.6
	4.1.3 Perception Analysis	4.9
	4.2 Factor Analysis	4.15
	4.2.1 Measure of Sampling Adequacy and correlation Matrix Significance	4.15
	4.2.2 Communality	4.16
	4.2.3 Variance Explained	4.17
	4.2.4 Eigenvalue Criteria	4.18
	4.2.5. Results of Factor Analysis	4.19
	4.2.6 Reliability Analysis	4.24
	4.3 Willingness-to-Pay	4.26
5	SUMMARY, CONCLUSION AND RECOMMENDATION	5.1
	5.1 Summary	5.1
	5.2 Conclusion	5.3
	5.3 Limitation of the Study	5.4
	5.4 Recommendation for Future Research	5.5
	REFERENCE	R.1
	APENDICES	A.1
	Appendix A	A.1
	Appendix B	A.9
	Appendix C	A.15
	BIODATA OF THE AUTHOR	B.1