CONSUMER WILLINGNESS TO PAY FOR GREEN-LABEL PRODUCTS

TATTAYA KOSOONTARARAT

A THEMATIC PAPER SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION
(BUSINESS MODELING AND ANALYSIS)
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2011

COPYRIGHT OF MAHIDOL UNIVERSITY

Thematic Paper
entitled

CONSUMER WILLINGNESS TO PAY FOR GREEN-LABEL PRODUCTS

.....
Ms. Tattaya Kosoontaratat
Candidate

.....
Asst. Prof. Yingyot Chiaravuthi, Ph.D.
Major-advisor

.....
Lect. Nuntana Udomkit, Ph.D.
Co-advisor

.....
Prof. Banchong Mahaisavariya,
M.D., Dip Thai Board of Orthopedics
Dean
Faculty of Graduates Studies
Mahidol University

.....
Asst. Prof. Yingyot Chiaravutthi, Ph.D.
Program Director
Master of Business Administration
Program in Business Modeling and
Analysis
International College,
Mahidol University

Thematic Paper
entitled

CONSUMER WILLINGNESS TO PAY FOR GREEN-LABEL PRODUCTS

was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Business Administration (Business Modeling and Analysis)
on
March 5, 2011

.....
Ms. Tattaya Kosoontaratat
Candidate

.....
Assoc. Prof. Piriya Pholphirol, Ph.D.
Chair

.....
Asst. Prof. Yingyot Chiaravuthi, Ph.D.
Member

.....
Lect. Nuntana Udomkit, Ph.D.
Member

.....
Prof. Banchong Mahaisavariya,
M.D., Dip Thai Board of Orthopedics
Dean
Faculty of Graduate Studies
Mahidol University

.....
Assoc. Prof. Rassmidara Hoonsawat, Ph.D.
Dean
International College
Mahidol University

ACKNOWLEDGEMENTS

This research could not be completed without support, understanding, and patience from my advisor, Dr. Yingyot Chiaravutthi. Additionally, I have been receiving the guidance from my co-advisor, Dr. Nuntana Udomkit. I would like to express my appreciation and gratitude to both of you.

Thank you to my family. With their support, I was able to pursue the Master's program. I also had the opportunity to gain great friends, Nook, Jib, and Bee. Thank you for your friendship, encouragement, and caring.

Any faults, in any aspect of this paper, are my sole responsibility

Tattaya Kosoontararat

CONSUMER WILLINGNESS TO PAY FOR GREEN-LABEL PRODUCTS

TATTAYA KOSOONTARARAT 5138393 ICMA/M

M.B.A. (BUSINESS MODELING AND ANALYSIS)

THEMATIC ADVISORY COMMITTEE : YINGYOT CHIARAVUTTHI, Ph.D., NUNTANA UDOMKIT, Ph.D.

ABSTRACT

Increasing pollution and limited natural resources lead to environmental concerns throughout the world. This distress creates an opportunity for firms to utilize green marketing as a strategy to differentiate themselves from others. One of the marketing tools to communicate environmental-friendly commitment to consumers is a label attached to the product. As such, a label was initiated for this purpose. In 1994, Thailand Business Council for Sustainable Development established the "Green label" with the approval of the Ministry of Industry, Thailand Environmental Institute, and the Ministry of Sciences and Technology. The Green Label is the environmental certification for products or services that generate less negative environmental impact.

This research examines the willingness to pay for green-label products by adopting the *n*th price experimental method. Forty participants bid for two products, dishwashing detergent and printing paper, without and with the Green Label. The results reveal consumers are willing to pay a higher price of approximately 15% and 10% for the detergent and the paper, respectively. The experiment also included an information factor by allowing a group of participants to read the information about the Green Label prior to the auction. The evidence shows information makes no difference on consumers' willingness to pay.

KEY WORDS: WILLINGNESS TO PAY / GREEN LABEL / EXPERIMENTS / NTH PRICE AUCTION

34 pages

ความเต็มใจในการจ่ายของผู้บริโภคต่อสินค้าที่ได้รับการรับรองฉลากเขียว
CONSUMER WILLINGNESS TO PAY FOR GREEN-LABEL PRODUCTS

ทัตทยา กอสุนทรารัตน์ 5138393 ICMA/M

บธ.ม. (การวิเคราะห์และการสร้างตัวแบบธุรกิจ)

คณะกรรมการที่ปรึกษาสารนิพนธ์: ยิ่งยศ เจียรวุฑฒิ Ph.D., นันทนา อุดมกิจ Ph.D.

บทคัดย่อ

มลพิษที่เพิ่มขึ้นจากการปฏิวัติอุตสาหกรรม อีกทั้งทรัพยากรที่มีอยู่อย่างจำกัด นำไปสู่ความกังวลที่มีต่อสิ่งแวดล้อมทั่วโลก การตระหนักถึงผลกระทบต่อธรรมชาติสร้างโอกาสทางการตลาดแก่บริษัทที่เน้นการอนุรักษ์สิ่งแวดล้อม ซึ่งเป็นกลยุทธ์ที่บริษัทสามารถนำไปใช้เพื่อสร้างความแตกต่างจากบริษัทอื่นๆ โดยหนึ่งในเครื่องมือทางการตลาดที่ใช้สื่อสารกับผู้บริโภคได้ คือ การติดฉลากสินค้า ด้วยเหตุนี้จึงมีการสร้างฉลากเพื่อตอบสนองวัตถุประสงค์ดังกล่าว ในประเทศไทยโครงการฉลากเขียวได้ถูกริ่เริ่มในปี พุทธศักราช 2537 โดยกลุ่มธุรกิจไทยเพื่อการพัฒนาที่ยั่งยืน ได้รับการอนุมัติจากกระทรวงอุตสาหกรรม สถาบันสิ่งแวดล้อมไทย และกระทรวงวิทยาศาสตร์และเทคโนโลยี เพื่อคุณภาพที่ดีขึ้นของประชากร ฉลากเขียว คือ ฉลากที่ได้รับรองความเป็นมิตรต่อสิ่งแวดล้อมแก่สินค้าหรือบริการที่ส่งผลลบต่อสิ่งแวดล้อมน้อยกว่าเทียบกับสินค้าประเภทเดียวกัน

การวิจัยนี้ได้ศึกษาความเต็มใจในการจ่ายสินค้าที่ได้รับการรับรองฉลากเขียวโดยใช้การทดลองแบบปิดอาศัยวิธี *n*th price มีผู้เข้าร่วมวิจัยจำนวน 40 คนประมูลสินค้า 2 ประเภทคือ น้ำยาทำความสะอาดจานชาม และกระดาษถ่ายเอกสาร โดยสินค้าทั้งสองชนิดไม่มีการติดฉลากและมีการติดฉลากเขียว ผลการศึกษาพบว่าผู้บริโภคไทยยินดีจ่ายเงินเพิ่มขึ้นประมาณร้อยละ 15 และร้อยละ 10 ในน้ำยาทำความสะอาดจานชามและกระดาษถ่ายเอกสาร การทดลองแบบปิดพิจารณาประเด็นการให้ข้อมูลฉลากเขียวเพิ่มเติมด้วย โดยได้แบ่งผู้เข้าร่วมการวิจัยออกเป็นสองกลุ่ม กลุ่มหนึ่งได้รับข้อมูลเพิ่มเติม ในขณะที่อีกกลุ่มไม่ได้รับ ผลการวิจัยพบว่า การได้รับข้อมูลเพิ่มเติมไม่มีผลต่อความเต็มใจในการจ่ายของผู้บริโภค

34 หน้า

CONTENTS

CONTENTS (cont.)

LIST OF TABLES

LIST OF FIGURES

CHAPTER I
INTRODUCTION

1.1 Effect on Environment from Industrialization

Thailand was ranked in the top 20 in the 2000 world water pollution (World Bank, 2004) and has been penetrated by the industrialization revolution, as other countries. Industrialization has destroyed the environment, degraded life quality, and damaged human wellness, through deforestation, pollution in water and air, resulting in global warming (United Nations Environment Program, 2002). Every action potentially generates negative consequences, not only to society but also to ecology (Handfield et al., 2004).

One poll, conducted by Thailand Development Research Institute (TDRI) (Thailand Development Research Institute, 2008), stated that 64.7% of Thailand's population believes that environmental and natural resources are critical and which should not be wasted by economic activities. Hence, developing countries should concern over the natural resources and developments too. This fear leads to the significant increase in interest over sustainable development in the past decades. The concept of the sustainable development engages the components to fulfill current generation's needs with no compromise to fit the requirements of future generation (World Commission on Environment and Development, 1987). Producers and manufacturers can adopt and apply this sustainable value throughout the whole supply chain, from seeking raw materials to delivering products to consumers' hands.

1.2 Green Marketing

Green marketing is product marketing, concentrated on environmental concern (Green Trade and Development, 2008). Green marketing was also defined as strategies to promote products by embedding environment statement about the policies and processes of the company that manufacture or sell them (Prakash, 2002).

By the late 1980s, integration of the green marketing became one of the new strategic moves that some businesses adopted since neither differentiation nor low-cost strategy was sufficient to sustain the competitive advantage (Reed, 2003). The potential influences towards the customers' perception of green products are packaging, marketing, ingredients, and labeling (D'Souza, Taghian, Lamb, & Peretiatkos, 2006). This study emphasizes on the product labeling or environmental labeling. Environmental labeling has been investigated to see behavioral reactions of the consumers by a few studies (see Whitson and Henry, 1996). Nevertheless, studies from Ippolito and Mathios (1990, 1994); Levy and Strokes (1987) and Jensen and Kesavan (1993) revealed that information from label benefits the firms on a principle basis, not particularly on the environmental content.

The environmental labeling, through symbol and sign, is one of many alternatives which has been accepted, by consumers making purchasing decisions, that that product with the environmental label is safe to the environment. That label is expected to urge and change buying behavior, since the consumers would search for the environmental content on the products in order to perceive a better understanding before purchasing the products. (Carlson et al, 1993). The environmental label would also help customers understand specific usefulness and safety claim more effectively. This information is prepared and provided at the decision making stage (D'Souza, Taghian, Lamb, & Peretiatkos, 2006).

1.3 Eco-Label

The eco-label is the label that displays the environmental favor of products and services, which are based on the life cycle of the product. The independent party grants this environmental preference so the eco-label is an alternative which assists buyers recognize the product with better environmental performance (Global Ecovillage Network, 2004).

In 1978, Germany was the first nation which set up the eco-label scheme. By the start of 1990s, multi-national and national eco-label programs were launched around the world (Kern et al. 2000, 2001, Organization for Economic Co-operation and Development, 1999, Umwelt Bundes Amt, 1997). As estimated by German Blue Angel Scheme, over 30 percent of all environmental issues relates to the existing

consumption trend (Umwelt Bundes Amt, 1991). Green consumerism grows to trigger the recognition of unsustainable consumption trend.

According to Table 1.1 and figure 1.3, they support both the increase of consumer perception and environmental awareness not only national but also manufacturer levels. Table 1.1 provides the chronological sequences of the national eco-labeling program establishment. In 1994, Thailand launched the eco-labeling program, known as "Thai Green Label". Figure 1.1 illustrates number of eco-labels licensed by producer country. Italy has the greatest number of eco-label license holders with 336 licenses. France, Spain, and Germany follow Italy with more than 60 license holders.

Table 1.1 Major national eco-labeling programs

Year	Country	Programs of Environmental Labeling
1978	Germany	Blue Angel
1988	Canada	Environmental Choice
1988	Sweden	Good Green Buy
1989	Japan	Eco Mark
1989	Countries of the North	White Swan
1990	New Zealand	Environmental Choice New Zealand
1991	Austria	Austrian Eco-Label
1991	India	Eco Mark
1991	Korea	Environmental Labeling
1992	European Union	EU Eco-Label
1992	USA	Green Seal
1992	France	NF- Environment
1992	Singapore	Green Label Singapore
1992	The Netherlands	Stichting Milieukeur
1992	China	Taiwan - Green Mark
1993	Croatia	Environmental Mark
1993	Hungary	Hungarian Eco-Labeling Program
Year	**Country**	**Programs of Environmental Labeling (Cont')**
1993	Spain	AENOR-Medio Ambiente
1993	Brazil	The Brazilian Qualidad Ambiental eco-label
1994	Thailand	Thai Green Label
1996	Slovakia	Environmental Product Friendly
1999	Sweden	TCO
2000	Hong Kong	Green Label Scheme
2001	Philippines	The Green Choice Philippines

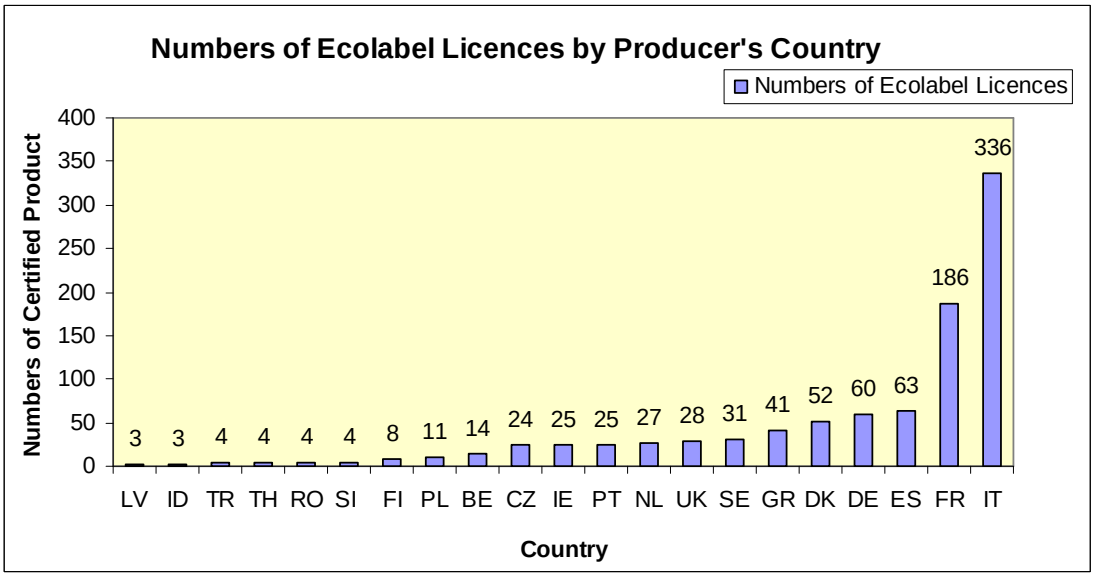

Figure 1.1 Number of certified producers by country

This study focuses on the four major environmental-labeling schemes, which are Blue Angel Label from Germany, Green Seal from North America, European Flower from European countries, and Green Label from Thailand. For a clearer understanding, Table 1.2 illustrates background of each eco-label what each program is about and Table 1.3 indicates comparative details among these four-label schemes

Table 1.2 Introduction to label information

Introducing Eco-Labels	
	Blue Angel: The Blue Angel program is an elective labeling scheme. For more than 3 decades, the Blue Angel program has been granted to 3,700 products. The Blue Angel is assigned to goods and services, which benefit to the environment and reach premium standard of safety and usage objective.
	Green Seal: Green Seal is classified a voluntary organization, which assists institutional purchasers to identify environmentally preferable products across several categories. Green Seal criteria reflect the potential environmental effects across the entire life-cycle of the product and are multi-attribute. Products certified by Green Seal have been independently audited to validate their conformity to criteria.

Introducing Eco-Labels	
	European Flower: The European Flower is a non-profit program formulated to aid business to offer more environmentally preferable products and services. Also, the European Flower works to assist European consumers – both private and public purchasers – to easily identify such products and services. Products and services must apply for inclusion into the program and be certified against criteria in the accredited paper of communities in Europe.
	Green Label: The Green Label is a certification to particular products and services, which concern on the environment in collation with other same product category. The symbol signifies environmental conservation. This program is non-compulsory basis of participation. Product and services, which undergo through all Thai label criteria will receive awarded the Thai Green Label.

Table 1.3 Comparison of four major eco-labels

A Comparison of Eco-label Characteristics				
	Blue Angel	Green Seal	European Flower	Green Label
Number of Certified Product Categories	80	40	28	17
Number of Certified Products	3,700	800	Roughly 1,000	247
Type of Environmental Impact	• Use of water and energy in production ineffectively • Shrinking forestry	• Dangerous organic ingredients • Ozone depletion potential • Corrosion • Toxicity to humans • Aquatic toxicity	• Dangerous organic ingredients • Toxicity to humans • Dyes & coloring agents • Human health effects • Biodegradability	• Detrimental impact on the environment • Toxicity to humans • Dyes & coloring agents
Certification Process	• Close mentoring	•Certification Criterion	The EPA evaluates a	•Producers/ distributors

A Comparison of Eco-label Characteristics				
	Blue Angel	Green Seal	European Flower	Green Label
	with producers and manufactures. • The criteria of the adoption of the label is decided by independent Environmenta l Label Jury. •The certification will be reviewed every 2 years.	Documents (CCD) are peer-reviewed and scrutinized. • A life-cycle based approach is used to develop each CCD. • Certification includes on-site audit performed by an impartial third party and an examination of quality assurance and control.	product based on the following criteria: • Pollution prevention • Life-cycle analysis • Magnitude of impact • Local conditions • Competition	apply for the green label to Thai Environment Institute (TEI). TEI scrutinizes all documents in order to assure completion of applications. • TEI dispatches the documents for Thai Industrial Standards Institute (TISI)'s perusal of criteria requirement • TEI granted the green-label as a contract •Applicants are allowed to put the green-label.
Fee	• Handling Fee: new applicants 250 Euro (plus 19% German VAT) 150 EUR for extension. • Annual fee	• Evaluation: $ 3500 • Monitoring: $ 2500 The fee will be varied based on total annual sales	• Application fee: 200 - 1200 Euro - For developing countries and SME pay maximum of 600 Euro - For micro enterprise, maximum fee is 350 Euro	• 1000 Baht for application fee to all applicants. • Annual fee

A Comparison of Eco-label Characteristics				
	Blue Angel	Green Seal	European Flower	Green Label
	is based on annual sales in million euros. For instance, up to 0.25, will be charge 270 EUR. If 0.25 to 1, will be charged up to 540 EUR.		• Annual fee: 1500 Euro - SME and developing countries pay for 750 Euro - For Micro enterprise, maximum fee is 350 Euro	is 5,000 Baht
Period of obtained certification	3-4 years	3 years	3-5 years	2 years
Credibility	• The first and most famous eco-label with leading credibility. 80% of interviewers knew the Blue Angel Scheme • The Blue Angel criteria are adopted widely, such as bidding for procurement	• Introduced in 1992 • Green Seal has third-parties, industry, government, academia and the public, to ensure transparent standards.	• Introduced in 1992. • Formed by the environmental agencies of all of the member nations of European Union.	• Thailand Environment Institute (TEI) was officially established in August 1994 with association with Ministry of Industry • In 1993, Mr. Anand Panyarachun was in charge of Thailand Business Council for Sustainable Development (TBCSD)

Figure 1.2 displays examples of products, which are awarded the Green Label. Various types of products receive the guarantee from Thailand Environment Institute and in the approaching future the committee considers to grant more product types and simplify approval process.

Figure 1.2 Examples of brands obtaining the green label

1.4 Objectives of the Study

The purpose of this paper is to study consumers' behavior, in particular, their willingness to pay for products with Thai Green Label. Moreover, the study extends the scope to analyze factors, which impacts Thai people's consumption behavior.

The investigation includes barriers to adopting Thai Green Label and policy recommendation, which can be used as a guideline to facilitate manufacturers in planning and increasing awareness of the importance of Thai Green Label.

1.5 Scope of the Study

The scope of the study is the experimental study of 40 people separated into 2 sessions. The first session examined the willingness of consumers to pay, between product with and without Thai Green Label. The second session examined the willingness to pay, between uninformed and informed consumers, for Thai Green Label. The experiment was conducted during December 2010. The respondents were Thai consumers over 20 years old.

1.6 Benefits of the Study

This study is beneficial to firms in term of crafting strategy. Firms can use this strategy to promote their products as environmental friendly.

The study is to design appropriate policies regarding to the Thai Green-Label since the environment is treated as the critical composition in developing countries.

CHAPTER II
LITERATURE REVIEW

2.1 Consumer Willingness to Pay

The price effect on consumers' quality perception was widely investigated. According to Rao and Bergen (1992), buyers may be willing to pay in order to assure product quality over time. Maintaining good quality of the products and services became an incentive for suppliers, creating a good relationship with consumers, sustaining additional profit by one critical factor.

Green marketers face a dilemma in balancing green-product price setting with consumer's cost sensitivity and willingness to pay more for environmental-friendly products (Chase, 1991 and Jay, 1990). Chase (1991) indicates that in other industrialized countries, environmental concern is not a recent phenomenon. The difference is that high numbers of consumers recognize that their consumption activities lead to the environmental degradation. From this consequence, citizens are willing to alter their purchasing behavior to improve environment though price is higher. Jay (1990) stated that from a 1988 New York Time news poll found that 80% of the participants felt that environment protection is important no matter how much it costs.

D'Astous et al. (1997) evaluated purchasing intention and perception of the product value by using the proposed conceptual model and verifying their results from surveying households in Australia. Their conclusion stated that the component of environment signifies the relationship of purchasing intention and perception of the product value as well as increases the need of product.

From a consumer behavior perspective in the cost and quality content, several companies apply high-priced strategies as a tool to signal perceptions of deluxe quality. In addition, extensive marketing research has indicated that the consumers may use price to infer to quality (Simonson and Tversky, 1992).

Monroe and Petroshius (1981) recommend that price sensitivity have not only a behavioral measurement, but also an attitude element. “Scotch” people basically prefer low-price product, rather than considering other factors, such as quality and long-term usage. In contrast, the more cognitive person may buy another option that is more expensive in the short run, but it is cheaper in the long run.

Some contradictory findings show that some consumers are not willing to pay a premium price on green products so there is no such niche market for this product (Graviria, 1995). McGougall (1993) claimed that consumers might not truly reveal their intention to purchase the green products as they care for their image when responding to environmental issue and social responsibility. In addition, there is no proof showing that their actions do not result in paying higher for the green products (Bennett, 1992). The significant factors to purchase include product value, price, and convenience (Roberts, 1996). Consumers would not compromise on the price and product quality (Berger, 1993). The researchers explicitly consider real purchasing decision and found that it related to many variables, rather than ecological look of the firm (Henion, 1972).

2.2 Environmental Perception

According to Schwepker and Cornwell (1991), the relationships between product purchasing and environmental attitudes have been studied. They conducted the survey to determine which factors are used to differentiate groups, between those willing and not willing to pay for ecological products. Their findings show that demographic and personality characteristics are the factors that make people willing to pay for the ecological products. Their studies recommended that, in the end, when people became more aware of the problem of solid waste, their attitudes and purchase pattern changed correspondingly.

Berger (1993) thought the customers’ value perception is influenced by the physical look and feel. In psychology, reasonable actions are influenced by planned actions. According to this theory, if people evaluate the suggested behavior as positive and treated this as the norm, people tend to pay higher intention and are more likely to do so.

The more customers are involved with the environment, the more interest they have in green products (Schuhwerk and Lefkokk-Hagius, 1995). They also

clarified in term of advertising towards purchasing power that green advertising was defined as corporate green-image advertisement. Baker et al (2002) support the concept that consumers perceived physical appearance as an information sources, just as price and quality. The service provider is influenced by environment assessment.

2.3 Green Marketing

Green marketing describes itself in the environmental friendliness at promotion, price, distribution, and design of the firm (Pride and Ferrell, 1993). Lamb et al., (1994) also indicated that the less-toxic products are recyclable and more durable in term of usage. The life cycle is longer, compared to other products in the same category.

Fotopouls and Krystallis (2002) elaborate that environment and health issues became significant reasons why people are aware of the eco-label products. Nevertheless, the barrier to the eco-label consumption is that the consumers need to pay fare more than for conventional alternatives (Davies et al., 1995).

2.4 Eco Labeling

Eco-labeling has a bigger impact on manufacturers since they are responsible to produce products based on the following factors: environmental concern, price, and quality. From consumer perspective, eco-labeling would be effective when it draws consumers' acceptance and awareness, which consists of trust and understanding. For eco-labeling initiatives to be broadly accepted, the issue of labeling must be prominent so consumers will energetically look for the labels. This requires the labeling program to play another role in education as well. Moreover, acceptance also requires a creditable source awarding labeling (Environmental Protection Agency, 1998).

Manufacturers are able to improve perception of company's environmental performance, which supports the product sales and company's image. The label will be beneficial for those companies which include socially environmental responsibility in strategy planning, by merging environmental, social, and personal value altogether. Consumers may alter their purchasing behavior since they search for the

environmental details from products and read the labels. The eco-labeling is claimed on as “social responsibility” in environment in corporate justification claims (Carlson et al., 1993).

Additional study, from collecting surveys on factors influencing the green products’ purchases, shows that low quality and at a premium price of green is something that customers do not tolerate. Other variables, such as green-marketing perception, organic ingredients, and green label, do not effect on consumer’s tendency to purchase green products (D’Astous et al., 1997).

Loureiro and Lotage (2005) identified that people from developed countries are willing to pay higher for eco-product than developing.

West (1995) commented that label was misleading labels can imply a product is eco-friendly, while only a minor qualifies. A survey (Chase and Smith 1992) found that 70% of respondents thought that the eco-label could not be credible claims. The result of poll implied that consumers are not convinced on the environmental product as they question the product claims. Zinkhan and Carlson (1995) identified three problems of environmental marketing, which are poor environmental claim assessment, past negative experiences, and misleading advertisement.

CHAPTER III
METHODS AND DATA

3.1 The *n*th Price Auction

In order to disclose the consumer's willingness to pay, we selected an experimental price auction. The auction we chose is called the random nth-price auction, which avoids the problems of the bidders bidding far below or above market price, ensuring true preference of consumers is revealed (Huffman et al., 2003).

The random nth-price auction is conducted as follows: out of k bidders, individual bid on the prepared goods. Then the bidding price is ranked respectively from the highest to the lowest bid. We randomly select one number as a random number, which is n of the nth price auction. The random number can be between 2 and k. The auctioned price is at the nth price and n-1 highest bidders require to purchase the good.

For instance, the randomly selected number equals 3 (n=3), the two highest bidders are required to purchase one unit of the product per person at price of the third-highest bid. From the example, it clearly displays that the low-valuation bidders cannot set the price as lower as planned since the market price is randomly determined. The auction enhances higher opportunity cost to the insincere bidders (Shogren et al. 2001). Additionally, the bidders who bid higher than the randomly number imply their willingness to pay by revealing their preference to purchase the goods rather than keeping money to themselves (Becker, Degroth, and Marashak, 1964).

3.2 Experiment Steps

Our auction was conducted in a closed room at Mahidol University, Salaya. The researchers posted posters, leaflets, and notices around the university area and Salaya market opposite to Mahidol University. The interested participants contacted the researcher via telephone or email. Confirmation via telephone was

conducted one day before experiment. The first-come-first-serve basis applied in order to avoid the excessive numbers of sample population. Too many participants in the experiment might impact on the full participation of the subjects. Thereby, total participants were 40 persons.

Forty participants were divided into 4 sessions. Each session consisted of 10 participants. In this experiment, we analyzed two major factors, which involved in consumer's willingness to pay. First factor is to consider whether the green label has an impact on the willingness to pay. Second factor is to analyze whether the information of the green label given to the consumers before experiments effects on their willingness to pay or not. Therefore, the design of experiment was separated into 2 groups, which were first group of first 2 sessions with information of the green label and second group of later 2 sessions without information of the green label according to table 3.1 below.

Table 3.1 Design of experimental sessions

Session	Detail
Group 1	Session 1 and 4: Auction of consumers without the green-label information before auction.
Group 2	Session 2 and 3: Auction of consumers with the green-label information before auction.

Each session contained 4 rounds, including 2 trial rounds and 2 actual rounds. The difference and details of each session could summarize by table 3.2 as follows:

Table 3.2 Chronological rounds of the experiment

Round	Detail
Trial 1	Auction for the packaged bottle of sunflower oil
Trial 2	Auction for a pack of battery and a bag of sugar
Actual 1	Auction for dishwashing detergent and printing paper without green label
Actual 2	Auction for dishwashing detergent and printing paper with green label

The practice rounds did not change any package of the product. The actual rounds were different as the researcher repackaged the products. In the actual 1 round was attached general label without the green label while the actual 2 round was

attached with the green label. The examples of the label for each round could be found according to figure 3.1 and figure 3.2.

Type of Product: 80-gram Printing Paper **Size**: A4 (210 X 297 Millimeters) **Quantity**: 100 Sheets **Instruction**: Open the package. The product is ready for usage. **Warning**: Please do not keep the paper in wet/or humid place **Manufactured in**: Jan 2010	**Type of Product**: Dishwashing Detergent **Size**: 250 Milliliters **Instruction**: 1 drop on a wet foam, rinse dishes and plated gently, and clean with water. **Warning**: Keep away from children, food, and pets **Manufactured in**: Jan 2010

Figure 3.1 Label used in the actual round 1 without the green label

Type of Product: 80-gram Printing Paper **Size**: A4 (210 X 297 Millimeters) **Quantity**: 100 Sheets **Instruction**: Open the package. The product is ready for usage. **Warning**: Please do not keep the paper in wet/or humid place **Manufactured in**: Jan 2010	**Type of Product**: Dishwashing Detergent **Size**: 250 Milliliters **Instruction**: 1 drop on a wet foam, rinse dishes and plated gently, and clean with water. **Warning**: Keep away from children, food, and pets **Manufactured in**: Jan 2010

Figure 3.2 Label used in the actual round 1 with the green label

On the experiment date, participants were appointed to arrive and wait in front of the experiment room about 15 minutes in advance. The research prepared chairs to facilitate the participants during waiting. While waiting, the researcher

handed the Informed Consent Form to participants to read and sign. During 15-minute considering time, the participant might withdraw if they would not wish to participate in the experiment. Throughout the appointed time, each subject was invited to the closed experiment room and rewarded for 500 Baht, signing a receipt once the compensation was received for future reference.

In the experiment room, each table contained papers, a calculator, and a pen to facilitate during the auction. The participants pulled random identical number, "ID" from a sealed box. The selected ID was used to conceal himself/herself during the experiment. The researcher instructed the participants on the auction methods, including the example of price ranking in the whiteboard. Before trial auction, questions could be asked to ensure that participants fully understood how the auction worked.

The first practice auction featured the bottle of sunflower oil. The researcher presented the oil and allowed time for the participants examine the product. After the participants finished bidding on the oil, the researcher demonstrated how the auction is conducted. Practice session 1 was over. During the auction, the participants did not know what the future products would be as the auctioned products were covered with the sheets.

The second practice auction contained of two products, the pack of battery and the bag of sugar. The participants examined and bid on these two items. This time, the researcher elaborated more on how the auction performed. To conclude, after two practice sessions were finished, the practice bidding round and bidding nth price were disclosed. The bidding prices were ranked from the highest to the lowest in the whiteboard and the nth price was highlighted. The participants knew at once how much they had to pay and on which item(s) they won the bidding.

With two practice sessions were completed and the participants fully understanding how the auction works, the actual session started straight away. The participants bid two products, the dishwashing detergent and the printing paper, for both rounds. Each round had different labeling (see Figure 3.1 and 3.2 respectively). The selected biding round and the bidding nth price were chosen. The winners were notified and they were requested to complete the questionnaire, which inquire into the consumers' behavior towards the green label and their demographic information.

Regarding additional information of the green label given to the participants, the information sheet can be seen in the Appendix A. The information sheet was given to group 2, session 2 and 3, before the actual auction started. The participants were given 15 minutes to read it thoroughly and the auction was conducted same as above. The winners were required to purchase the goods by their awarded money. The bidders who did not win could leave the experiment room after completing the questionnaire (see the Appendix B).

3.3 Demographic Data

In the experiment, we recruited consumers, over 18 years old, since the auctioned products we used could be found easily in supermarkets, grocery stores, or stationary stores. We preferred adults, as it was a better reflection of the main shopper. From the collected questionnaire as shown in Table 3.3, the averaged age is 31.53 years old (Between 23 to 45) and they were skewed to female. In term of education and income, they are quite qualified (equal to or over Bachelor Degree) and in the middle-class of population (from 10,000 to 24,999 Baht). Most of them rated themselves as the main shopper (0.63 out of 1). In term of analysis of consumer behavior, we found that they prioritized importance of the Green Label as high before making a purchasing decision (3.68 out of 5). Also, they mostly read the label before making a purchasing decision (4.23 out of 5). The green label information is moderately known among the participants (2.13 out of 3).

Table 3.3 Demographic Data of People participating in the experiment

Variable	Description	Mean [SD]
Age	Age of the participants (Years)	31.53 [4.89]
Sex	Male = 1, Female = 0	0.28 [0.45]
Education	Bachelor degree or higher = 1, Otherwise = 0	0.88 [0.33]
Income	Below Baht 5,000 = 1, Baht 5,000 - 9,999 = 2, Baht 10,000 - 24,999 = 3, Baht 25,000 - 49,999 = 4, Baht 50,000 - 99,999 = 5, Over Baht 100,000 = 6	3.03 [0.69]
Household	Number of members in the household	4.75 [1.79]
Shopper	Main shopper = 1, Otherwise = 0	0.63 [0.48]
The important of the Green Label when purchasing the goods	The most important = 5, Very important = 4, Important = 3, Less important = 2, Not important = 1	3.68 [0.61]
The interest of the consumers in reading the label before purchasing the products	Always = 5, Often = 4, Sometimes = 3, Rarely = 2, Never = 1	4.23 [0.76]
Level of the green label knowledge of the participants	Knowing well= 3, Knowing fairly= 2, Not knowing= 1	2.13 [0.46]

CHAPTER IV
RESULT AND DISCUSSION

4.1 Analysis of the Green Label and Consumer Willingness to Pay

Table 4.1 and 4.2 display the consumer's willingness to bid on the green-label products, compared to the general-label products. According to the Table 4.1, 67.50% of participants bid more on the green-label detergent. Nevertheless, 17.50% of the participants bid less for the green-label and 15.00% of bidding pattern remains unchanged. Most consumers reveal their strong preference of the environmental-friendly product. With regard to Table 4.2, it reported that 60% of the subjects are willing to bid more on the green-label printing paper. This absolutely supports a favorable lean toward the green-label products. Both the detergent and paper go in the same direction.

Table 4.1 Comparison of number and percentage of the participants in the dishwashing detergent auction

Description	Number	Percentage
Bidding more for the green-label detergent	27	67.50%
Bidding less for the green-label detergent	6	15.00%
Bidding same as the general-label detergent	7	17.50%
Total numbers of bidding	40	100.00%

Table 4.2 Comparison of number and percentage of the participants in the printing paper auction

Description	Number	Percentage
Bidding more for the green-label paper	24	60.00%
Bidding less for the green-label paper	6	15.00%
Bidding same as the general-label paper	10	25.00%
Total numbers of bidding	40	100.00%

Table 4.3 provides the average price, standard deviation, minimum price and maximum price for both products, in 2 actual rounds: the detergent without the green label versus the detergent with the green label, and the paper without the green label versus the paper with the green label. The table reflects that the participants are willing to purchase both products with the green label at higher price by approximately 2 Baht/set as shown in a figure 4.1. With the comparative data of price change percentage in the figure 4.1, the dishwashing detergent accounts for approximately 15% of increase while the printing paper gains for 10% premium price.

Table 4.3 Average bids of each product in each round

Product	**Average Bid**	**Standard Deviation**	**Minimum**	**Maximum**
Detergent without the green label	13.43	6.20	0.00	27.00
Detergent with the green label	15.40	6.34	6.00	32.00
Paper without the green label	21.25	15.03	0.00	65.00
Paper with the green label	23.05	15.46	6.00	65.00

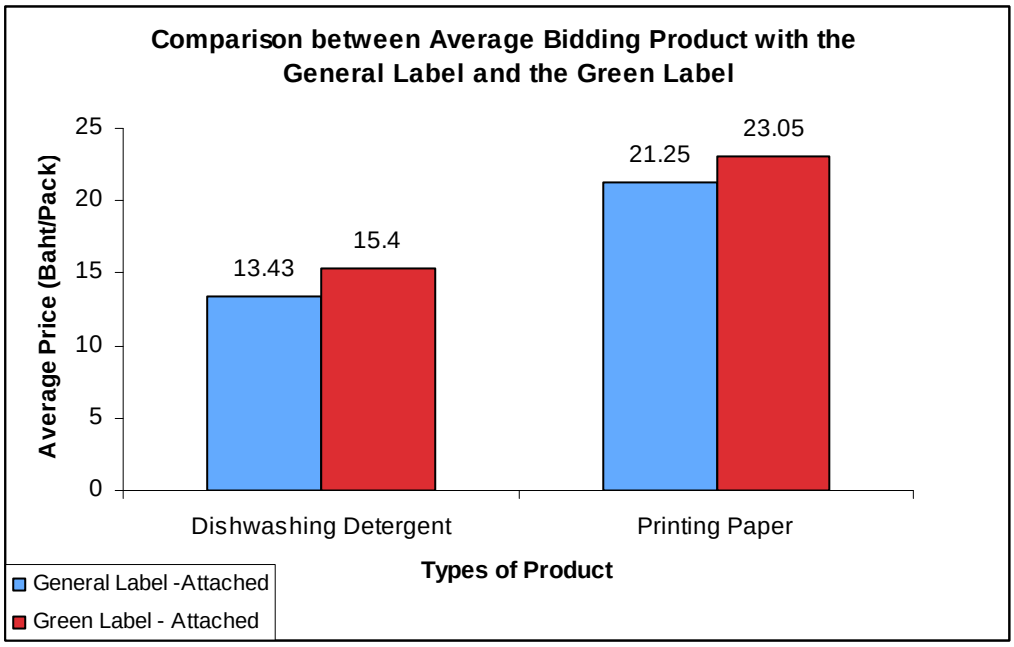

Figure 4.1 Comparative percentage change of bidding price

In the statistical analysis, Table 4.4 reflects that the null hypothesis of no difference between average bidding price of the non-green-label product and the green-label product for both products is rejected at all confidence levels, 90%, 95%, and 99%. The result of this analysis indicated that Thai consumers are willing to pay more on the green-label products.

Table 4.4 T-Test Statistics and P-Value of the products with and without attaching the green label

The difference of average bidding price between products with and without attaching the green label	**T-Test Statistics**	**P-Value**
Dishwashing Detergent	-3.839	0.000
Printing Paper	-2.438	0.019

*P-value < 0.01, **P-value <0.05, **P-value <0.10

4.2 Analysis of Consumer Willingness to Pay for the Green-Label Products and The Green-Label Information Sheet

The result from table 4.5 states that the participants who were informed about the green label information before the experiment begun are willing to pay higher for 6.78% while the uninformed group is willing to pay for the green-label product even higher than the informed group at 10.29%. This can conclude that given information does not positively impact on the willingness to pay for Thai consumers.

Table 4.5 Average price comparison of the dishwashing detergent between the informed group and the uninformed group of the green label information

Average Detergent Price of	No Green Label	Green Label	%Premium Price
Not Informed Participants	20.4	22.5	10.29%
Informed Participants	22.1	23.6	6.78%

However, according to figure 4.2, the participants who were informed about the green-label information tend to pay higher on both no-green label and green-label products. Thereby, we analyze the willingness to pay of Thai consumers through statistical means separately.

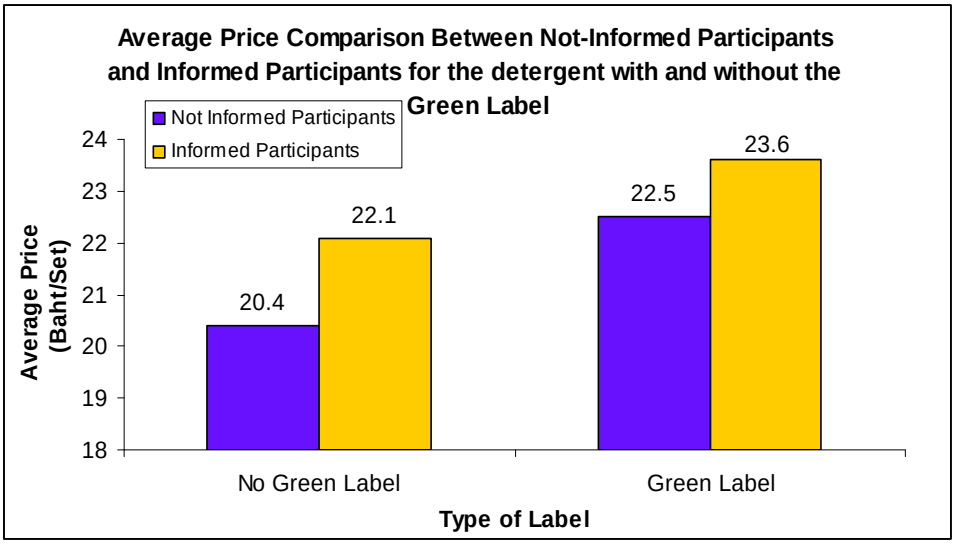

Figure 4.2 Average Price Comparison for no green label and green label detergent between the informed group of the green-label information and uninformed group of the green-label information

According to the table 4.6, it indicated that the participants who were not informed about the green label information pay higher price of the green-label paper rather than the informed participants (16.27% versus 13.33% respectively).

Table 4.6 Average price comparison of the printing paper between the informed group and the uninformed group of the green label information

Average Paper Price of	No Green Label	Green Label	%Premium Price
Not Informed Participants	12.6	14.65	16.27%
Informed Participants	14.25	16.15	13.33%

The premium price for both of the non-green label and the green label goes into the same direction as the detergent does. Again, the statistical analysis is provided in the table 4.7.

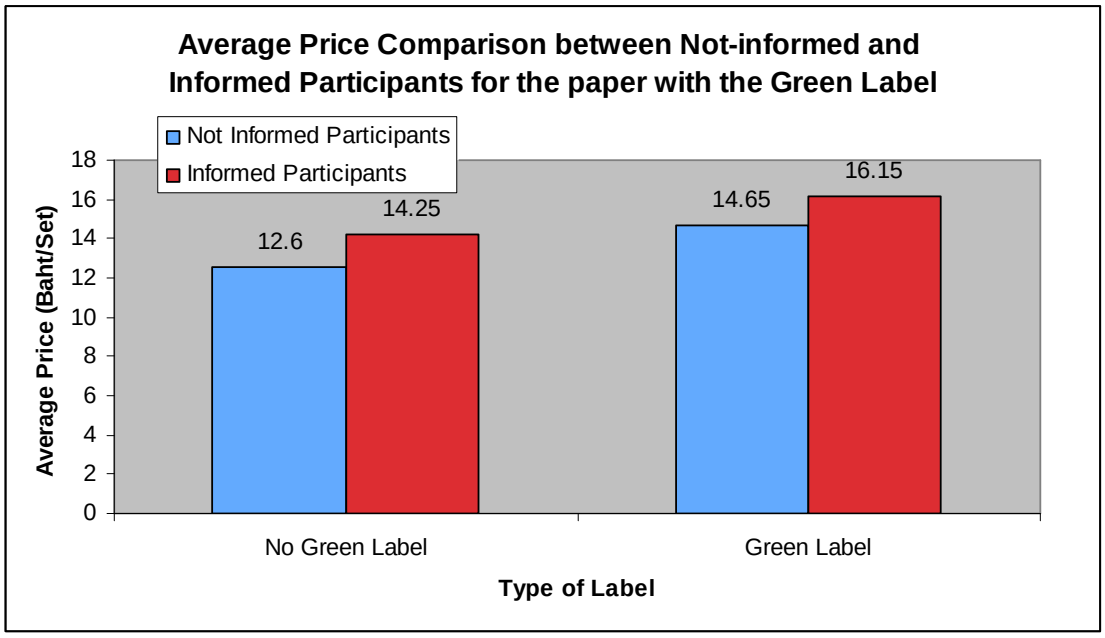

Figure 4.3 Average Price Comparison for no green label and green label paper between the informed group of the green-label information and uninformed group of the green-label information

Consideration in the statistics analysis, the below table indicates that the null hypothesis of no difference between the group who was informed about the green label information prior to the auction and the group who was not be informed about the green label for all 3 levels of confidence -90%, 95%, and 99% of confidence level is accepted. This reflects that the green label information does not support Thai consumer's willingness to pay for the environmental-friendly products.

Table 4.7 T-Test Statistics and P-Value of the informed Green Label participants and the uninformed green label participants

Average Price of Subjects who were informed of the Green Label Information prior to the experiment and those who were not informed	**T-Test Statistics**	**P-Value**
Dishwashing Detergent	0.402	0.690
Printing Paper	0.144	0.886

*P-value < 0.01, **P-value <0.05, ***P-value <0.10

CHAPTER V
CONCLUSION AND RECOMMENDATION

5.1 Conclusion

With the method of the n-price auction, we can summarize that Thai consumers are willing to pay a greater price for the green-label products. Their willingness to pay for the green-label dishwashing detergent and printing paper was at a premium of approximately 15% and 10% respectively. Static evidence supports that Thai consumers treat the products which attach the green label differently than the general label. According to the questionnaire about the consumer behavior, it also backs this conclusion as the consumers attached relatively high importance (4.23 of 5) on reading the label before purchasing. Moreover, they perceive the importance of the green label to be high (3.68 out of 5).

We also worked to discover whether information affects the consumer's willingness to pay. Surprisingly, the result shows that the subjects who were informed about the green-label information tend to pay less, compared to the uninformed subjects for both products. For the dishwashing detergent, the bidding price after being educated about the green label is discounted by 3.51% while the price for the printing paper is discounted by 2.94%. Consideration in term of statistics, it indicated that Thai consumers show no preference towards the non-green label and green-label even they were educated about the green label information.

5.2 Recommendation

Applying the green label scheme costs at least 6,000 Baht to the company, such as application fee, evaluation fee, annual fee, and so on. This factor may become a barrier for the firms to enter into this scheme. The companies need to evaluate the pros and cons; this results in the reluctant purchasing decision. This issue may be

resolved if the government will support to subsidy not only money but also education to the firm.

As the result shows, information given to the participants does not impact on Thai consumers' willingness to pay. This raises the concern to the responsible party who work for the green-label scheme. The public relations or information may be too difficult to understand. The government should improve on how they communicate to business and the consumers.

The environmental-schemes in other countries tend to be more successful and well-known, compared to Thailand. The government should research more on the strategies that other countries do in order to restructure Thailand's scheme. The examples of renewing strategy would be to restructure the approval label process to be more simple, reduce in complex criteria, and decrease program fees for first few years.

Future research may explore the robustness for Thai consumers' willingness to pay in other areas of the country and study more product categories. The premium price acceptance of the dishwashing detergent and the printing paper is surprisingly different. It would be beneficial to discover further why different types of products have different price acceptance.

REFERENCES

Baker, J., Parasuraman, A., Grewal, D. and Voss, G. (2002), ‘‘The Influence of multiple store environmental cues on perceived merchandise value and patronage intentions’’, *Journal of Marketing*,Vol. 66, April, 120-141.

Becker, G.M., Degroth, M.H., Marashak, J. (1964). Measuring Utility by a Single-Response Sequential Method. *Behavioral Science*, 9(2).

Bennett, S. (1992), “Green commitment: fading out?”, *Progressive Grocer*, Vol. 71 No. 12, pp. 4-7.

Berger, I. (1993), “The relationship between environmental attitudes and behaviour”, *Canadian Journal of Marketing Research*, Vol. 12, pp. 36-43.

Carlson, L., Grove, S. and Kangun, N. (1993), “A content analysis of environmental advertising claims: a matrix method approach”, *Journal of Advertising*, Vol. 22 No. 3, pp. 27-40

Chase, D. (1991), ``P&G gets top marks in AA survey", *Advertising Age*, Vol. 4, February, pp. 8-10.

Chase, D. and Smith, T.K. (1992), “Consumers keen on green but marketers don’t deliver”, *Advertising Age*, June, p. 63.

D’Astous, A., Ahmed, S.A., Valence, G. and Houde, F. (1997), “Assessing the impact of the ecological factor on consumer behavior: a multiattribute approach”, in Arnott, D., Doyle, D., Shaw, V. and Wensley, R. (Eds), Proceedings of the XXVIth Annual Conference of the European Marketing Academy,Vol. 1, Angleterre, Warwick, pp. 287-301.

Davies, A., Titterington, A.J. and Cochrane, C. (1995), “Who buys organic food? A profile of purchasers of organic food in Northern Ireland”, *British Food Journal*, Vol. 97, pp. 17-23.

D’Souza, C., Taghian. M., Lamb. P., & Peretiatkos,. R. (2006). “Green Product and Corporate Strategy: an Empirical Investigation”. *Social and Business Review*, Vol. 1 No. 2, pp. 144-157.

Environmental Protection Agency (EPA) (1998), *Environmental Labeling, Issues,* Policies and Practices Worldwide, Environmental Protection Agency 742-R8-009, EPA, Washington, DC.

Fotopouls, C. and Krystallis, A. (2002), "Purchasing motives and profile of the Global Ecolabelling Network (GEN), *Introduction to Ecolabelling*, July 2004, p.1.

Graviria, D. (1995), "Introducing the ecolabelling concept: experience of Colombia", *International Trade Forum*, Vol. 395, pp. 8-11.

Global Ecovillage Network. (html). Retrieved July 2004, http://www.gen.ecovillage.org/

"Green Trade & Development" (.html). Green Markets International, Inc. http://www.green-markets.org/context.htm. Retrieved January 2008.

Handfield, R., Sroufe, R. and Walton, S. (2004), "Integrating environmental management and supply chain strategies", *Business Strategy and the Environment*, Vol. 14, pp. 1-19.

Henion, K. (1972), "The effect of ecologically relevant information on detergent sales", *Journal of Marketing Research*, Vol. 9, pp. 10-14.

Huffman (2003), "Consumer willingness to pay for Genetically Modified Food Labels in a Market with Diverse Information: Evidence from Experimental Auctions", *Journal of Agricultural and Resource Economics*, 28(3), 481-502.

Ippolito, P.M. and Mathios, A.D. (1994), "Information, policy and the source of fat and cholesterol in the US diet", *Journal of Public Policy and Marketing*, Vol.13 No. 2, pp. 200-217.

Jay, L. (1990), "Green about the tills: markets discover the eco-consumer"', *Management Review*, Vol. 79, June, pp. 24-29.

Jensen, H.H. and Kesavan, T. (1993), "Sources of information, consumer attitudes on nutrition, and consumption of dairy products", *The Journal of Consumer Affairs*, Vol. 27, Winter, pp. 357-376.

Kern, Kristine, Helge Jörgens and Martin Jänicke ((2000) 'Die Diffusion umweltpolitischer Innovationen. Ein Beitrag zur Globalisierung von Umweltpolitik', *Zeitschrift für Umweltpolitik*, 23, 507-546.

Lamb, C.W. (1994), Principle of Marketing, South-Western Publishing Co., Cincinnati., OH.

Levy, A.S. and Strokes, R.C. (1987), "Effects of a health promotion advertising campaign on sales of ready-to-eat cereal", *Public Health Reports*, Vol. 102 No. 4, pp. 398-403.

Loureiro, M. L., & Lotade, J. (2005). Do fair trade and eco-labels in coffee wake up the consumer conscience? *Ecological Economics*, 53 (1), April, 129-138.

McGougall, G. (1993), "The green movement in Canada: implications for marketing strategy", *Journal of International Consumer Marketing*, Vol. 5 No. 3, pp. 69-87.

Monroe, K.B. and Petroshius, S.M. (1981), "Buyers' perceptions of price: an update of the evidence", in Kassarjian, H. and Robertson, T.S. (Eds), *Perspectives in Consumer Behavior*, 3rd ed, Scott-Foresman, Glenview, IL, pp. 43-55.

Organisation for Economic Co-Operation and Development (1999), Working Party on Pollution Prevention and Control. Conclusions and Papers Presented at the International Conference: Green Goods V Eco-Labelling For a Sustainable Future (Berlin, 26-28 October 1998), Paris, Organisation for Economic Co-operation and Development.

Prakash A. (2002), Green Marketing, Public Policy and Managerial Strategies,*Wiley Interscience*, DOI: 10/1002/bse.338

Pride, W.M. and Ferrell, O.C. (1993), Marketing, 8th ed., Houghton-Mifflin, Boston, MA.

Rao, A.R. and Bergen, M.E. (1992), "Price premium variations as a consequence of buyers' lack of information", *Journal of Consumer Research*, Vol. 19, December, pp. 412-423.

Reed, P. (2003), Strategic Marketing Planning, Thomson Learning Australia, Melbourne. Reed, P. (2003), *Strategic Marketing Planning*, Thomson Learning Australia, Melbourne.

Roberts, J. (1996), "Green consumers in the 1990s: profile and implications for advertising", *Journal of Business Research*, Vol. 36 No. 2, pp. 217-231.

Schuhwerk, M.E. and Lefkokk-Hagius, R. (1995), ``Green or non-green? Does type of appeal matter when advertising a green product?", *Journal of Advertising*, Vol. 24, Summer, pp. 45-55.

Schwepker, C.H. Jr and Cornwell, T.B. (1991), ``An examination of ecologically concerned consumers and their intention to purchase ecologically packaged products", *Journal of Public Policy and Marketing*, Vol. 10 No. 2, Fall, pp. 77-101.

Simonson, I. and Tversky, A. (1992), "Choice in context: tradeoff contrast and extremeness aversion", *Journal of Marketing Research*, Vol.29, August, pp. 281-295

Thailand Development Research Institute. (2008). *TDRI Report*: Thai Environmental Poll Toward People's Attitude on Environments Issue.

Umwelt Bundes Amt (1991), The Environmental Label Introduces Itself, *Berlin*, Umweltbundesamt.

Umwelt Bundes Amt (1997), Nachhaltige Konsummuster und postmaterielle Lebensstile, Vorstudien, Text 30/97, Berlin: Umweltbundesamt.

United Nations Environment Programme (2002), Global Environment Outlook 3, *Earthscan*, London.

West, K. (1995), "Ecolabels: the industrialization of environmental standards", *The Ecologist*, Vol. 25 No. 1, January-February, pp. 16-21.

Whitson, D. and Henry, W. (1996), What's in a Label? Environmental Issues in Product Packaging, *The Haworth Press*, New York, NY, pp. 29-43.

World Bank (2004), Thailand Country Development Partnership Environment, World Bank, Bangkok.

World Commission on Environment and Development (1987), Our Common Future, Oxford University Press, Oxford.

Zinkhan, G.M. and Carlson, L. (1995), "Green advertising and the reluctant consumer", *Journal of Advertising*, Vol. 24 No. 2, Summer, pp. 1-6.

APPENDICES

APPENDIX A
GREEN-LABEL INFORMATION SHEET

Definition

Green-Label or Eco-Label is a label awarding to products or services, which pass required quality assurance and have less impact on environment, compared to the same product category. These products or services consist of several product categories except medicines, refreshment, and food because these 3 categories involve more in consumption safety rather than environment concern. Thereby, attaching the Green Label to these products may cause confusion among consumers.

Thailand Green Label Scheme

Thailand Business Council for Sustainable Development launched the Thailand Green Label in August 1994 with the approval of the Ministry of Industry, the Ministry of Science and Technology, and Thailand Environment Institute (TEI). TEI is an independent institute that provides information of environmental-friendly products or services to Thai people. This institute is creditable and involves directly to controlling environmental quality assurance by assigning the committee to prove the quality before granting the approval of the Green Label usage.

Purpose of Thailand Green Label

To develop Thailand sustainably, Thailand requires to develop both economics and protecting the environment.

APPENDIX B

QUESTIONNAIRE

---

(1) Age _____ years

(2) Gender ☐ Male ☐ Female

(3) Education ☐ Secondary School ☐ Vocational Certificate ☐ Diploma
☐ Bachelor's Degrees ☐ Master's Degrees ☐ Others

(4) Income (Baht/Month)
☐ Less than 5,000 Baht ☐ 5,000 – 9,999 Baht ☐ 10,000 – 24,999 Baht
☐ 25,000 – 49,999 Baht ☐ 50,000 – 99,999 Baht ☐ More than 100,000 Baht

(5) Employment
☐ Full Time ☐ Part Time ☐ Unemployed ☐ Student

(6) Size of family (including you) _____ persons

(7) Are you a main shopper? ☐ Yes ☐ No

(8) How much importance of the Green Label is it when purchasing the products or services?
☐ Most Important ☐ Very Much Important ☐ Fairly Important
☐ Less Important ☐ Not Important

(9) How often do you normally read the labels before purchasing?
☐ Every Time ☐ Often ☐ Sometimes
☐ Hardly ☐ Never

<u>Prior to Experiment</u>
(10) How much do you know about Environmental-Friendly Label or Green Label?
☐ Knowing it deeply ☐ Knowing it fairly ☐ Not knowing it before

BIOGRAPHY

NAME	Tattaya Kosoontararat
DATE OF BIRTH	FEB 29, 1984
PLACE OF BIRTH	Bangkok, Thailand
INSTITUTIONS ATTENDED	Thammasat University, 2002-2006 Bachelor of Arts (Economics) Mahidol University, 2009-2011 Master of Business Administration (Business Modeling and Analysis)
HOME ADDRESS	267/43-44 Soi. Narathiwat 22 Yannawa, Bangkok 10120 Tel. 02-678-3307 E-mail : suang__k@hotmail.com
EMPLOYMENT ADDRESS	1 Q-House Lumphini Sathorn Road, Bangkok 10120