PERCEPTION AND BUYING BEHAVIOR OF THAIS PEOPLE TOWARD BRANDS USING GREEN MARKETING

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A THEMATIC PAPER SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF MANAGEMENT
COLLEGE OF MANAGEMENT
MAHIDOL UNIVERSITY
2019

Thematic paper
entitled

PERCEPTION AND BUYING BEHAVIOR OF THAIS PEOPLE TOWARD BRANDS USING GREEN MARKETING

was submitted to the College of Management, Mahidol University
for the degree of Master of Management
on
September, 7 2019

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ACKNOWLEDGEMENTS

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ABSTRACT

This research aims to study the perception and buying behavior of Thai people toward brands using green products and what are the important factors that persuade their buying decision and trigger their purchasing intention effectively. This study using quantitative method on online survey from 120 Bangkokians, focusing on green consumers who had experiences on buying green products. The findings of the study showed the significant number of attitudes on green consumer factor that people believe in news and social media that they perceived. So, it can describe that News and social media of polluted world was driven their attitude which influences to green purchasing. Environmental knowledge significantly influences to people who has age range between 25-35 more than 36-45 years old. Eventually, differences among educational level above bachelor's degree can be influenced by attitude on green purchasing, environmental knowledge and social responsible consumption behavior

KEY WORDS: Green consumer/ Green Marketing/ Buying behavior

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CHAPTER I
INTRODUCTION

According to the rapid global climate change and global warming situation, many factors produce toxic that changes the rhythms of climate which effect to all living things including human on earth. Nowadays, plastic bags, foam boxes or any synthetic container become big issues because it produces greenhouse gases, methane, and ethylene when it was degraded by sunlight and significant effect on the world. Earth's long-term temperature rise in recent decades, ice sheets in Greenland and Antarctica are melting and sea levels continuously rising. Disgracefully, Thailand is in the top 10th rank in the world which caused to Great Pacific Garbage Patch. It's time to consider and reduce all of these things to save our planet.

Regarding past studies, green marketing can be defined as the effort by a company to design, promote, price and distribute products in a manner which promotes environmental protection (Polonsky, 2011). Green marketing and green consumer became the biggest opportunity for enterprise and invention the industrial world has ever seen (Cairncross, 1992: 177) and it can identify as opportunities by business firms as opportunities to improve their marketing niche. Moreover, there are some past studies said that environmental messages in advertisements and product labeling influence the purchasing decision of 70 percent of the respondent (Chase and Smith, 1992). Some study in Korea said that experience with green marketing influencing green product consumption which effects to future perception and action. Besides, demographic factors including age, gender and education levels have an impact towards attitude and intention of the consumer. Lastly, (Jacob Cherian & Jolly, 2012) the studied of showed the relationship among consumer's attitudes and behavior when purchase green products and the effective advertising strategies can be increased willingness to pay a premium price for green consumption pattern.

1.1 Problem statement

As we know that green marketing is one of the key communication ways to consumers but the problem is some of them has a perception that they have to pay more on products with green labels and some of the consumer still ignore on green product. Although, green marketing is increasing to wider industries and become a commitment of many companies it seems not to impact enough to consumers' purchase intention.

1.2 Purpose of study

This research will focus on perception and buying behavior of Thai people toward brands that using green products and what is the important factors persuade their buying decision and trigger their purchasing intention effectively.
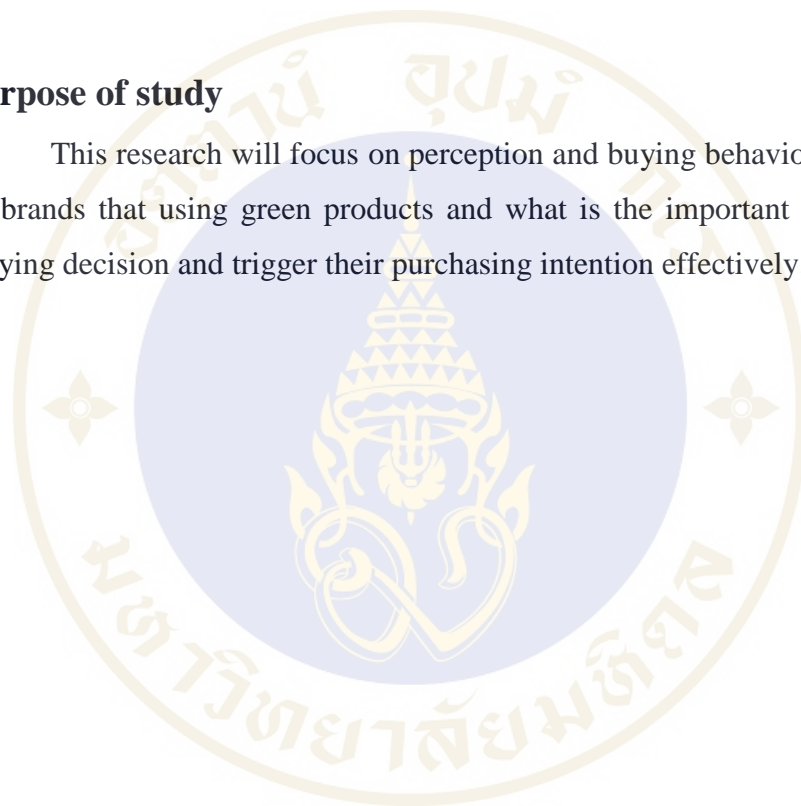
CHAPTER II
LITERATURE REVIEW

Green consumers (SOURCE: MIT Sloan management review, Fall 2004):

Definition of green consumers is people who aim to protect themselves and environment with their purchasing power (Boztepe, 2012). Other past studied, (Boztepe, 2016) defined as people who willing to adopts environmentally friendly behaviors and/or who pay for green products over the standard. According to public opinion polls, roper survey said 41% of consumers answered that they did not buy green products because they worried about the diminished quality of eco-friendly versions. The polls try to segment on green customers for marketers to divide into five groups of consumers as following;

True Blue Greens as 9%: they are concerned in environmental values and try to drive the world to be better and this group is four times higher rate to stay away from companies that are not environmentally concerned.

Greenback Green as 6%: The difference of this group of consumers and the above group is they are not taking the time to be active environmentally conscious but they are more willing than the average to decide to purchase eco-friendly products.

Sprouts as 31%: One of the big group of customers that they believe in the cause of environmentally but in practice they would not buy if they have to pay more. On the other hand, Green products can persuade them by appealed to appropriately.

Grousers as 19%: They feel that cost of green products is higher.

Basic Browns as 33%: They do not care about environmental and social issues.

2.1 Theoretical Framework

Past research in India shows the relationship between eco-labeling is one of the important factors for green purchase intention and trust through customer information and knowledge. Moreover, eco-label seems to impact on green purchase intention proven by (D'Souza, 2004) purchase intention from green consumers can trigger the product level and (Amos et al., 2014) shows the helpfulness of eco-labels on products. Some research proved that customer's trust in eco-label and eco-brand. Moreover, the purchase behavior was significant influencing by their positive perception towards eco-brand (Rahbar, 2011). There are some past consistent findings of perceived consumer effectiveness (PCE) effect to the insight into ecologically conscious consumer behavior (Robert D, 1999)
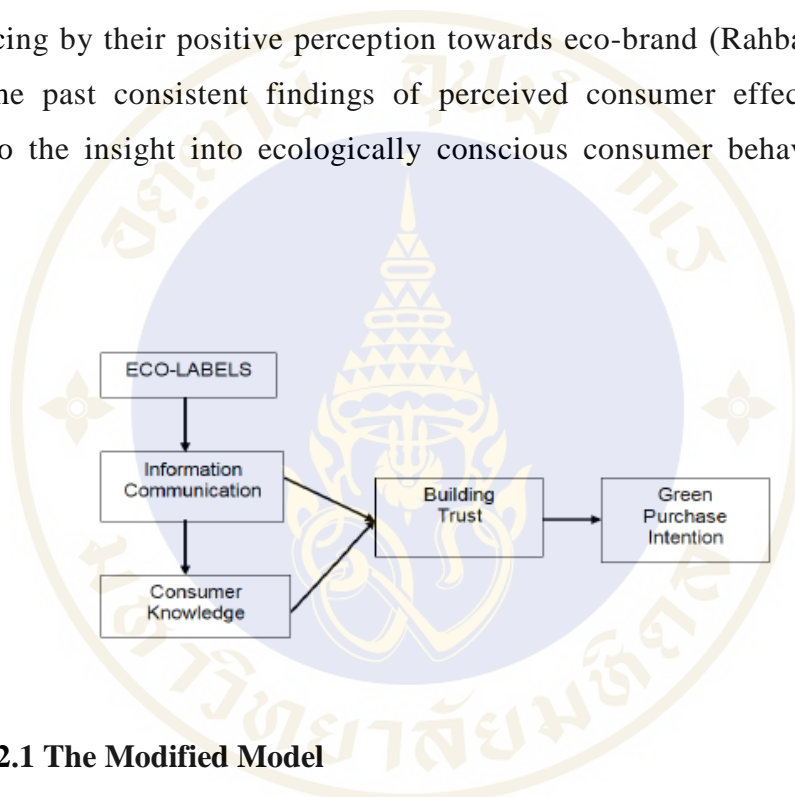
Figure 2.1 The Modified Model
Source: Nagendra Kumar Sharma, 2019

Some past study in Australia reported about the perception of customers on green advertising of eco-friendly FMCG, 29.6% of respondents were influenced by advertisements of green products and in this research reported by respondents who have a high level of awareness and empathy towards environmental issues. On the other hand, 25.9% of the respondents ignore the advertisements of green products (Hassan, 2016).

2.2 Research Factors

2.2.1 Environmental knowledge

Environmental knowledge stated as in impact factor through consumers' decision making process. People who have environmental knowledge defined as the people who have awareness and knowledge about environmental problems and also solutions to those problems (Zsóka et al., 2013, pp.127). Factual knowledge of environment is the measurement in this study to see the relationship between the factual knowledge of environment and the action-related knowledge (Tanner & Kast, 2003).

2.2.2 Environmental Awareness

Environmental awareness is the first step to bring off the responsive behavior. Defined as an individual's attitude, values and necessary skills to solve the problems related to the environment, not only having environmental knowledge. (Sengupta *et al*., 2010). People who using the word "Go Green" means that they are practicing environmental awareness, it represented being mindful of the natural environment and making economic choices that aren't harmful to the earth.(https://study.com/academy/lesson/environmental-awareness-definition-history-importance.html). Past study showed the positive relation between the awareness of green product and green purchase intention and behavior (Abid and Atif, 2015; Ali and Ahmad, 2012; Aman et al., 2012; Chaudhary and Bisai, 2018) while environmental concern can't predict green purchase intention and behavior. Moving to other past study which proven by (Suki, 2013) which confirm the finding of (D'Souza *et al*., 2016), consumers' environmental concern and awareness of green product have not influence on their purchasing decision contrast to their knowledge of that products.

2.2.3 Eco-label

According to eco-labels communication is one of the ways to pass the information through consumers and leads to the knowledge of consumer (Houston, 2012). Move to (Brecard, 2014) also said in the same way that the eco-labels is the best communication for environmentally conscious consumers but there are some doubts from consumers' side that eco-labels are costly affairs due to certifications becomes subject to cost and they have to repay for it. However, consumers' decision on an environmentally concerned and reasoned decision can be influenced by eco-labels which providing appropriate and accurate information.

2.2.4 Price

Surprisingly, some past research prove by (Ma et al., 2013) that price contrast to green purchase intention and behavior. It means that high price doesn't effect. Contrastingly, there were a lot of studies show that price is matter. The price acts as a barrier to buy green products (Connell, 2010). Therefore, the lower the price the higher of green purchase intention (Eze and Ndubisi, 2013). However, there was a past research found the significant relation between the awareness of price and consumers' purchasing decision. (Suki, 2013)

2.2.5 Social norms

As we know that Thai are collectivist (Buriyameathagul, 2013). So, social norms might be one of factors either positive or negative relation to green purchase intention. Refer to 53 article reviews of (Joshi & Rahman, 2015) between 2000 to 2014 about the attitude and behavior inconsistencies in the context of green purchasing, they show 11 studies said social norms have a positive correlation with green purchase intention and actual purchasing. Moreover, some of past studies said that social norms have a stronger influence on green purchase decision-making process of green consumer. (Lee, 2010; Salazar *et al*., 2013; Tsarenko et al., 2013).

2.2.6 Socially responsible consumption behavior (SRCB)

(Berkowitz & Lutterman, 1968) described the origins of socially responsible consumption (SRC) in a sociological construct which relates to social consciousness. People who are socially responsible consumers, they are not concerned only environmental but also social well-being (Engel & Blackwell, 1982). On the other hands, socially responsible consumption (SRC) has the same meaning to socially conscious consumption, socially responsible consumer behavior and ethical consumption. Research of (Ertz, 2016) shown the attitude toward SRCB, anticipated emotions, and frequency of past SRCB influence on SRCB desired, frequency of past SRCB also induce the intention of SRCB and becoming a SRCB which lead them to perceive self-actualization and identity expression. Different demographics are not as effective as attitudes. Although, many past researches showed that sex variable is often insignificant but females are consistently more socially responsible than males (Pedrini & Ferri,2014; Luchs & Mooradian, 2014; Cherian & Jacob, 2012). (Robert, 1995) defined SRC as the purchase of products and services perceived to have a positive (or less negative) influence on the environment which aims to effect positive social changes. Extended definition of socially responsible consumer by (Mohr et al., 2001), a person based on their acquisition, usage and disposition of products on craving to reduce or eliminate any harmful effects and try to increase the beneficial impact on society in the long run (Webb et al., 2008). Moreover, (Gerard Paul Prendergast and Alex S.L. Tsang, 2018) indicated significant predictors of SRC from attitude towards the behavior, subjective norms and perceived behavioral control.

CHAPTER III
RESEARCH METHODOLOGY

3.1 Research design

This research focus on Bangkokian who had experiences on green purchasing of fast-moving consumer goods such as water with a biodegradable bottle, products that use material alternatives to plastic or recycled material. We defined green purchasing as the intention and behavior to purchase of environmentally friendly products and keep away from products which damage the environment (Chan, 2001). We can say that green consumer who takes into account the public consequences of their private consumption and willing to use their purchasing power to bring world change (Moisander, 2007).

This research will be conducted by quantitative method on online survey. The aim of questionnaire is to study about which factors are effects to consumers' perception and behavior of green purchasing and how much the gaps between green products and conventional products that acceptable for green customer and person who willing to adopt to green purchasing.

3.2 Sample size

The sample size will be 100 respondents from green consumers and consumers who willing to be a green consumer in Bangkok.

3.3 Questionnaire design

The survey questionnaire was developed from past studies about green marketing and green consumer. The questionnaire contains 4 variables which effect green product purchasing intention. The questionnaire separated into 4 parts which contain questions as below;

Part I: Screening Questions to select only green consumers into this research.

Part II: General Questions by using ordinal scale including 2 questions, to see which green products categories that green consumers purchased and still buying.

Part III: Specific questions by using interval scales for 16 questions and four point likert scales from 1 to 4 represented as strongly disagree, disagree, agree and strongly agree.

Part IV: Demographic questions including gender, age, monthly household income and education level.

3.4 Data analysis

This study will be analyzed by statistical package for social sciences (SPSS) program software for calculate and test the variables that are related to the topics.

This research uses measurement tools as follows:

1.Descriptive analysis

CHAPTER IV
RESEARCH FINDING

4.1 Demographic result

In this research collected data by online survey which targeted on Thai green consumers. 120 respondents in this research including 93 green consumers who had experience on buying green products with/without eco-label and 27 persons are non-green consumers which eliminated from this research.

Green consumers including 62 females, 30 males, and one person were alternative sex. The majority in this research are the people who have age range between 25-35 which account for 81.7%, following by 7.5% of people who are between 19-24 years old, 6.5% of people who are between 36-45, 4.3% of respondents who are above 45 years old and none of people who are below 18. Moving to monthly household salary, most of respondents have salary more than fifthly thousand Thai baht which account for 59.2%. Lastly, 88.8% are people who had an education level equal or higher than bachelor's degree.
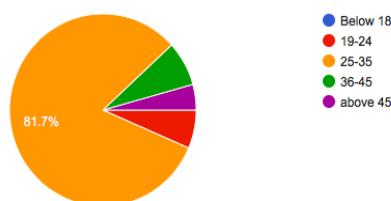
Figure 4.1 Age

What is your monthly household income ?
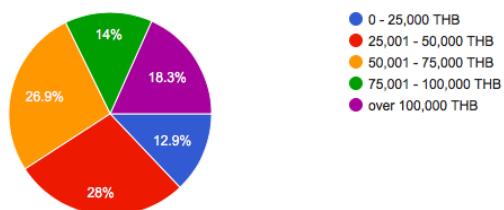
Figure 4.2 Monthly household income

What is your gender?
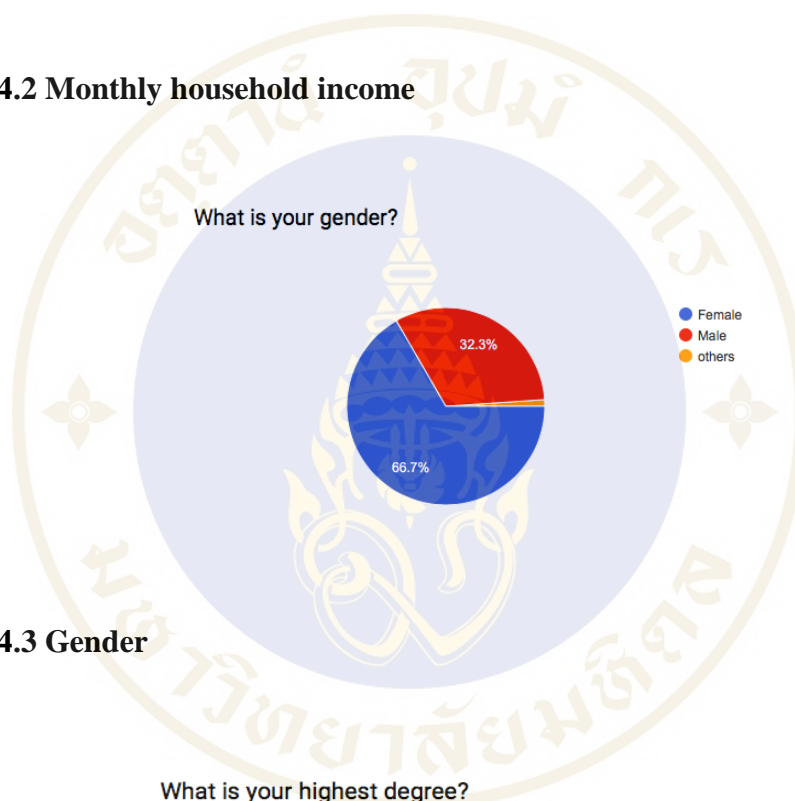
Figure 4.3 Gender

What is your highest degree?
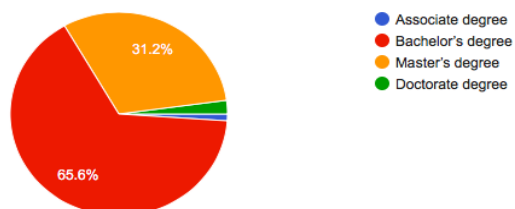
Figure 4.4 Educational level

Main findings

Firstly, this research found that if people had experiences to purchased green products. They would continue to buy in the same product category. On the other hand, data shown 4% of green consumers would not continue buying green products.

The top rank of product categories that green customers had experienced was food and beverage such as water with biodegradable bottles or paper straw which account for 58.1%. Following by skincare, hair care and oral care product. The third rank was household products such as fabric wash, laundry soaps and powder with green packaging equal to 22.9% and 13.5% respectively.
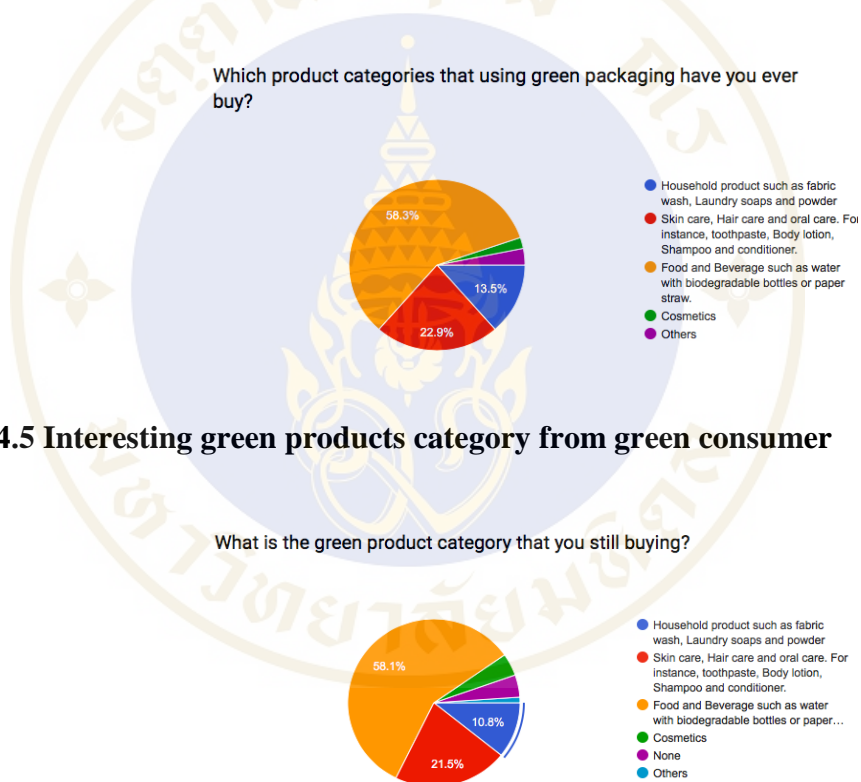
Figure 4.5 Interesting green products category from green consumer

Figure 4.6 Repeated green products from green consumer

4.2.1 Environmental Knowledge

The survey shown mean score of environmental knowledge is 3.49 although there are 3 from 4 questions which respondents strongly disagreed to knowledge of plastic problems, climate change and substitutes of plastic. The majority of them had a high level of environmental knowledge which related to past studies

(Taufique et al., 2016) adapted from (Polonsky et al., 2012) said that this knowledge level influence on making environment friendly consumption decision.

4.2.2 Environmental awareness

In this factor I used environmental attitudes scales (EAS) to measure their awareness. In this research showed the data that respondents have environmental awareness lower than their environmental knowledge which account for 2.45. In this study, data revealed that environmental awareness factor is the lowest concern.

4.2.3 Eco-label knowledge

Some of question in this factor that I selected from (Taufique et al., 2016). Mean score showed as 3.34 which is quite high nearly environmental knowledge. Most of them said that they know the meaning of recycled, biodegradable and they know the symbol when they saw through eco-label.

4.2.4 Price

According to Price is the attribute which reflect when consumers are making a green-purchasing decision. Most of respondents answer in this survey that "they are willing to pay more for green products in order to buy less environmentally harmful product" which mean score represent as 3.17. 40.9% of respondents will accept the additional charged if it's not over than 5% and 44.1% accept the higher additional charged which is not over than 10%. Some of them could accept additional charged that higher than 10% which are equal to 12.9%. On the other hand, result show 18.3% of green consumers disagree to pay more for green products. The result of this study similarly to (Dunlap and Scarce, 1991; Lung, 2010) said that more than 80 percent of Thai, Malaysian and Korean who are willing to pay premium price to buy green products without trade off quality

4.2.5 Social norms

The data shown that 62.4% respondents were not agreed that "I feel uncomfortable when friends buy green products while I don't" but 67.7% of green consumers agreed that they would buy green products when friends, family or

colleague tell them to buy green products align with peer pressure from surrounding people. Lastly, the advertisement about pollution issues also impact to their mind to purchase green products.

4.2.6 Socially responsible consumption behavior

Using SRCB scale (Antil, 1984) to measure green consumers, result shown the overall of mean score is 3.09 from 4. The majority of respondents agreed that "Manufacturers should be forced to use recycled material in their manufacturing and processing operation" and "I would be willing to stop buying products that caused of pollution even though it might be inconvenient." Contrastingly, people concern on benefit of products that they will get than the pollution which result from their production and use.

To be sum up, environmental knowledge is the most important factor which related to green purchasing, the more they have environmental knowledge, the more they adopted to be green consumers. According to mean score of environmental awareness shown as 2.45, which is the lowest, it means that high level of environmental knowledge doesn't relate to level of environmental awareness. Eco-label means something to green consumers because the mean score shown as the second important factor following by price which included the question "I willing to pay more for green products in order to buy less environmentally harmful product". The majority of respondents tend to agree to strongly agree in this point with condition if the mark up price is not over 5-10%. Surprisingly, social norms which proven by (Lee, 2010; Salazar et al., 2013; Tsarenko et al., 2013), it's a factor that has a stronger influence on green purchase decision-making process of green consumer contrasted to this study, data from this research shown as it might not influence on green purchasing.

Table 4.1 mean score of each question. (Highest – lowest mean score)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I know the meaning of recycled (Taufique et al.,2016)	93	2	4	3.66	0.561
I know very well about plastic problems that we are facing	93	1	4	3.65	0.619
I know very well about climate change	93	1	4	3.54	0.652
I know very well about global warming means	93	2	4	3.46	0.635
Manufacturers should be force to use recycled material in their manufacturing and processing operation.	93	2	4	3.44	0.634
I know substitutes of plastic	93	1	4	3.3	0.719
I prefer to buy green products when I see the products with eco label	93	1	4	3.23	0.782
I willing to pay more for green products in order to buy less environmentally harmful product	93	1	4	3.17	0.775
I know the meaning of Biodegradability. (Taufique et al.,2016)	93	1	4	3.14	0.962
I've change my mind to be green consumer because of a lot of contents or advertisement about pollution issues.	93	1	4	3	0.921

Table 4.1 mean score of each question. (Highest – lowest mean score) (cont.)

	N	Minimum	Maximum	Mean	Std. Deviation
I would be willing to stop buying products that caused of pollution even though it might be inconvenient.	93	1	4	3	0.821
The benefit of modern consumer products are more important to the society than the pollution which result from their production and use.	93	1	4	2.97	0.961
I would buy green products if commercial advertising mention the ecological disadvantages of products.	93	1	4	2.96	0.806
I would buy green product when friends, family or colleague tell me to buy green products.	93	1	4	2.83	0.916
It is meaningless to buy a higher price for green packaging instead of plastics packaging given lower price in the market.	93	1	4	2.67	1.004
News and social medias about polluted seas, rivers and lakes are exaggerated	93	1	4	2.51	1.148
I don't think that recycling packaging worth as their claim	93	1	4	2.17	0.94
I feel uncomfortable when friends buy green products while you don't.	93	1	4	2.14	0.951
I don't care about peer pressure and I wouldn't purchase green product.	93	1	4	2.14	1.069
I could accept green products if the price is higher but not over than ____ (%), please specify.	93	1	4	1.76	0.758
Valid N (listwise)	93				

Table 4.2 mean score of each factor. (Highest – lowest mean score)

	N	Minimum	Maximum	Mean	Std. Deviation
Environmental knowledge	93	2	4	3.49	.494
Eco-label knowledge	93	2	4	3.34	.579
Price	93	1	4	3.17	.775
Social responsible consumption knowledge	93	2	4	3.09	.467
Social norms	93	1	4	2.53	.590
Environmental Awareness	93	1	4	2.45	.790
Valid N (listwise)	93				

Factor Analysis

      Moreover, the study analyzed research factors, after eliminated unnecessary data to be clear and clean then I re-named group to attitude on green purchasing, environmental knowledge, impact of surrounding environment, social responsible consumption behavior, eco-label knowledge and price.

Table 4.3 result of factor analysis

	1	2	3	4	5	6	Re-named
			Component				
News and social medias about polluted seas, rivers and lakes are exaggerated	.842						Attitude on green purchasing
I don't care about peer pressure and I wouldn't purchase green product.	.797						
It is meaningless to buy a higher price for green packaging instead of plastics packaging given lower price in the market.	.637						
The benefit of modern consumer products are more important to the society than the pollution which result from their production and use (Reverse question	.617						
I know very well about climate change		.830					Environmental Knowledge
I know very well about plastic problems that we are facing		.805					
I know very well about global warming means		.635					
I would buy green product when friends, family or colleague tell me to buy green products.			.798				Impact of surrounding environment
I would buy green products if commercial advertising mention the ecological disadvantages of products.			.756				
I've change my mind to be green consumer because of a lot of contents or advertisement about pollution issues.			.697				
Manufacturers should be force to use recycled material in their manufacturing and processing operation.				.799			Social responsible consumption bahavior
I would be willing to stop buying products that caused of pollution even though it might be inconvenient.				.662			
I know the meaning of Biodegradability. (Taufique et al.,2016)					.879		Eco-label knowledge
I know the meaning of recycled (Taufique et al.,2016)					.707		
I could accept green products if the price is higher but not over than _____ (%), please specify.						.795	Price
I willing to pay more for green products in order to buy less environmentally harmful product						.674	

Rotated Component Matrix[a]

One-way ANOVA

When it comes to one-way ANOVA to see the difference between group of gender, we found out the difference between group of gender only in the attitude on green consumer factor, which is "News and social medias about polluted seas, rivers and lakes are exaggerated." Moving to age range of respondents, there is the difference that showed Sig. below 0.04 of "I know very well about plastic problems

that we are facing". Look deep into *Bonferroni,* it showed the difference between group of age range which is 25-35 years old and 36-45 as Sig. equal to 0.023. We found the most difference are significant and taken into consideration between group of education level, the first point is "I know very well about plastic problems that we are facing", Sig. equal to 0.010. The second is "News and social media about polluted seas, rivers and lakes are exaggerated" which showed significant number at 0.023 and the last is "I'm willing to stop buying products that caused of pollution even though it might be inconvenient." showed Sig. as 0.032. However, there is no difference among the varieties of monthly household income.

Conclusion

The influential factors shown on the analysis has ensured which factors should be highlighted. The significant number at attitude on green consumer factor showed that people believe on News and social media that they perceived. So, it can describe that News and social media of polluted world was driven their attitude which influences to green purchasing. Environmental knowledge significantly influences to people who has age range between 25-35 years old more than 36-45 years old. Eventually, differences among educational level above bachelor's degree can be influenced by attitude on green purchasing, environmental knowledge and social responsible consumption behavior.

Discussion

In this study described the top of influential factors which are knowledge of both environmental and eco-label, 93 of Thai green consumers had high environmental and eco-label knowledge with lower level of environmental awareness.

In terms of company, it would be easier to push green products into market, educate the meaning of green material to consumers to strengthen the value of products when you put eco-labeling on it. When they perceived the meaningful of their green purchasing, behavior would change their attitude to be more green consumers.

Moreover, awareness of brand image is significantly related to consumers' decision and awareness of brand image with green elements, it could trigger consumer to purchase green products (Suki, 2013). For marketers, it could help for promoting

green campaign to create awareness of brand and corporate image, and using positive emotion to influencing green buying behavior.

For government organization, should consider to be a leader of green behavior and promote with an intensive content targeting to consumers who are between 25-35 years old.

All in all, they knew that they pay a higher price for green products. So, marked up price should be one of consideration.

Limitations

Regards sample of this study, it might be too narrow to use for business plan. The findings came from only Bangkokian in Thailand who are above 18 years old with bachelor's degree as minimum level. Thus, the results might not be able to effectively represent the entire population.

For the further research, it would be useful if researchers can increase the scope of the study to be wider than just in Bangkok and more respondents with wider age range to see the perception in baby bloomer and young generation as well.

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APPENDICES

Appendix A Questionnaire

"Perception and buying behavior of Thai people toward brands using green marketing"

This survey is a part of the research for a consulting practice to fulfill the requirements for the degree of Master of Management at the College of Management, Mahidol University. The Topic is about Perception and buying behavior of green consumer on fast moving consumers goods. In this survey "green consumer" defined as people who willing to adopts environmentally friendly behaviors and/or who pay for green products over the standard. The survey will take about 10 minutes to complete.

Part I: Screening Questions

1. Do you ever buy green product with/ without eco-label?

    □ Yes

    □ No

Part II: General Questions by using ordinal scale including 2 questions

2. Which product categories that are using green packaging have you ever buy?

    □ Household product such as fabric wash, Laundry soaps and powder.

    □ Skin care, hair care and oral care. For instance, toothpaste, body lotion, shampoo and conditioner.

    □ Food and beverage such as water with biodegradable bottles or paper straw.

    □ Cosmetics

3. What is the green product category that you still buying?

    □ Household product such as fabric wash, Laundry soaps and powder.

    □ Skin care, Hair care and oral care. for instance, toothpaste, body lotion, shampoo and conditioner.

    □ Food and Beverage such as water with biodegradable bottles or paper straw.

    □ Cosmetics

Part III: Specific Questions by using interval scales for 16 questions, 1 to 4 represented as following:

1.Strongly disagree

2.Disagree

3.Agree

4.Strongly agree

No.	Statement	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4
1.	I know very well about global warming means				
2.	I know very well about plastic problems that we are facing				
3.	I know very well about climate change				
4.	I know substitutes of plastic				
5.	It is meaningless to buy a higher price for green packaging instead of plastics packaging given lower price in the market.				
6.	I don't think that recycling packaging worth as their claim				

No.	Statement	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4

No.	Statement				
7	News and social media about polluted seas, rivers and lakes are exaggerated.				
8	I know the meaning of recycled				
9	I know the meaning of Biodegradability.				
10	I prefer to buy green products when I see the products with eco label				
11	I'm willing to pay more for green products in order to buy less environmentally harmful product.				

12. I could accept green products if the price is higher but not over than

   □ 0-5%

   □ 6-10%

   □ 11-15%

   □ More than 15%

No.	Statement	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4
13.	I would buy green product when friends, family or colleague tell me to buy green products.				
14.	I feel uncomfortable when friends buy green products while you don't.				
15.	I would change my mind to be green consumer because of a lot of contents or advertisement about pollution issues.				

No.	Statement	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4
16.	I don't care about peer pressure and I wouldn't purchase green product.				
17.	Manufacturers should be force to use recycled material in their manufacturing and processing operation.				
18.	I would buy green products if commercial advertising mention the ecological disadvantages of products.				
19.	I'm willing to stop buying products that caused of pollution even though it might be inconvenient.				
20.	The benefit of modern consumer products is more important to the society than the pollution which is the result from their production and use.				

Part IV: Demographic questions

1. What is your gender?

        □ Male

        □ Female

        □ Not Specify

2. What is your age range?

        □ Below 18

        □ 18 – 24

        □ 25 – 34

        □ 35 – 44

        □ Above 45

3. Monthly household income

        □ 0 - 25,000

        □ 25,001 – 50,000

        □ 50,001 – 75,000

        □ 75,000 – 100,000

        □ Over 100,000

4. Education

        □ Associate degree

        □ Bachelor's degree

        □ Master's degree

        □ Doctorate degree

Appendix B Result of factor analysis

Total Variance Explained						
Component		Initial Eigenvalues			Rotation Sums of Squared Loadings		
		Total	Variance	%	Total	Variance	Cumulative %
	1	3.198	19.987	19.987	2.273	14.208	14.208
	2	2.533	15.829	35.816	2.153	13.456	27.664
	3	1.734	10.835	46.651	2.075	12.971	40.635
	4	1.470	9.189	55.840	1.547	9.671	50.306
	5	1.099	6.872	62.712	1.542	9.635	59.941
	6	1.019	6.371	69.083	1.463	9.142	69.083
	7	.745	4.657	73.740			
	8	.727	4.544	78.284			
	9	.643	4.017	82.301			
	10	.573	3.581	85.882			
	11	.529	3.306	89.188			
	12	.483	3.019	92.207			
	13	.449	2.805	95.012			
	14	.328	2.048	97.059			
	15	.278	1.737	98.797			
	16	.193	1.203	100.000			

Appendix C Scree Plot of factor analysis
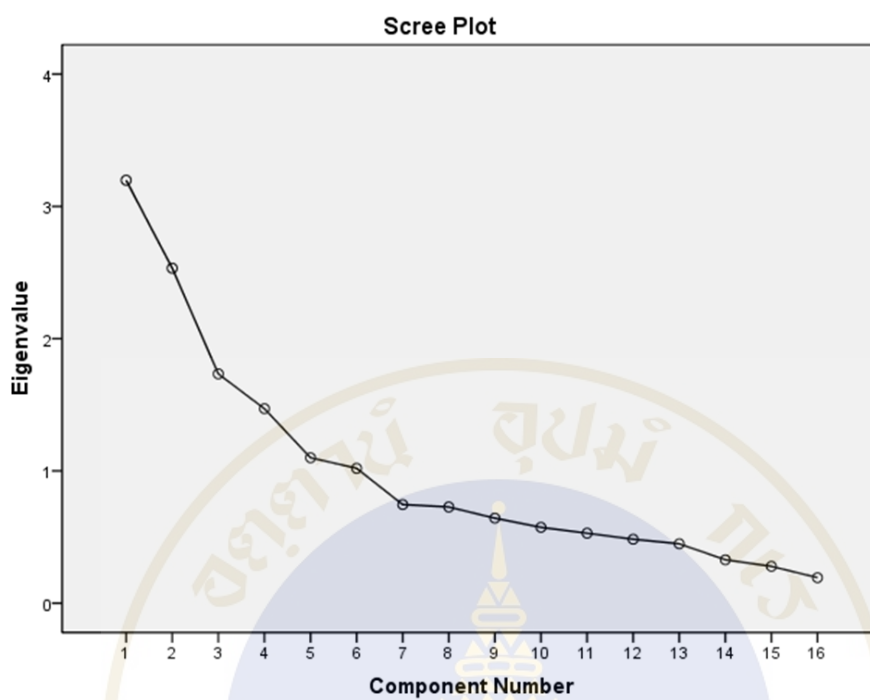
Appendix D One-way ANOVA (Age)

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
I know very well about global warming means	Between Groups	1.667	3	.556	1.395	.250
	Within Groups	35.451	89	.398		
	Total	37.118	92			
I know very well about plastic problems that we are facing	Between Groups	3.751	3	1.250	3.528	.018
	Within Groups	31.539	89	.354		
	Total	35.290	92			
I know very well about climate change	Between Groups	2.257	3	.752	1.816	.150
	Within Groups	36.862	89	.414		
	Total	39.118	92			
I know substitutes of plastic	Between Groups	.325	3	.108	.204	.893
	Within Groups	47.245	89	.531		
	Total	47.570	92			
It is meaningless to buy a higher price for green packaging instead of plastics packaging given	Between Groups	6.318	3	2.106	2.171	.097
	Within Groups	86.348	89	.970		
	Total	92.667	92			
I don't think that recycling packaging worth as their claim	Between Groups	1.217	3	.406	.451	.717
	Within Groups	80.031	89	.899		
	Total	81.247	92			
News and social medias about polluted seas, rivers and lakes are exaggerated	Between Groups	3.532	3	1.177	.890	.449
	Within Groups	117.715	89	1.323		
	Total	121.247	92			
I know the meaning of recycled (Taufique et al.,2016)	Between Groups	.865	3	.288	.912	.439
	Within Groups	28.125	89	.316		
	Total	28.989	92			
I know the meaning of Biodegradability. (Taufique et al.,2016)	Between Groups	.237	3	.079	.083	.969
	Within Groups	84.946	89	.954		
	Total	85.183	92			
I prefer to buy green products when I see the products with eco label	Between Groups	1.477	3	.492	.800	.497
	Within Groups	54.781	89	.616		
	Total	56.258	92			
I willing to pay more for green products in order to buy less environmentally harmful product	Between Groups	1.535	3	.512	.848	.471
	Within Groups	53.712	89	.604		
	Total	55.247	92			
I could accept green products if the price is higher but not over than ____ (%), please specify.	Between Groups	.462	3	.154	.262	.853
	Within Groups	52.333	89	.588		
	Total	52.796	92			
I would buy green product when friends, family or colleague tell me to buy green products.	Between Groups	.130	3	.043	.050	.985
	Within Groups	77.117	89	.866		
	Total	77.247	92			
I feel uncomfortable when friends buy green products while you don't.	Between Groups	4.402	3	1.467	1.658	.182
	Within Groups	78.781	89	.885		
	Total	83.183	92			
I've change my mind to be green consumer because of a lot of contents or advertisement about	Between Groups	6.554	3	2.185	2.721	.049
	Within Groups	71.446	89	.803		
	Total	78.000	92			
I don't care about peer pressure and I wouldn't purchase green product.	Between Groups	1.859	3	.620	.534	.660
	Within Groups	103.324	89	1.161		
	Total	105.183	92			
Manufacturers should be force to use recycled material in their manufacturing and	Between Groups	2.353	3	.784	2.019	.117
	Within Groups	34.572	89	.388		
	Total	36.925	92			
I would buy green products if commercial advertising mention the ecological disadvantages of products.	Between Groups	2.030	3	.677	1.042	.378
	Within Groups	57.798	89	.649		
	Total	59.828	92			
I would be willing to stop buying products that caused of pollution even though it might be inconvenient.	Between Groups	5.080	3	1.693	2.648	.054
	Within Groups	56.920	89	.640		
	Total	62.000	92			
The benefit of modern consumer products are more important to the society than the pollution which result from their production and use	Between Groups	1.593	3	.531	.567	.638
	Within Groups	83.310	89	.936		
	Total	84.903	92			

Appendix E One-way ANOVA (Gender)

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
I know very well about global warming means	Between Groups	.832	2	.416	1.032	.360
	Within Groups	36.286	90	.403		
	Total	37.118	92			
I know very well about plastic problems that we are facing	Between Groups	.130	2	.065	.167	.847
	Within Groups	35.160	90	.391		
	Total	35.290	92			
I know very well about climate change	Between Groups	.410	2	.205	.476	.623
	Within Groups	38.709	90	.430		
	Total	39.118	92			
I know substitutes of plastic	Between Groups	.655	2	.327	.628	.536
	Within Groups	46.915	90	.521		
	Total	47.570	92			
It is meaningless to buy a higher price for green packaging instead of plastics packaging given lower price in the market.	Between Groups	1.796	2	.898	.889	.415
	Within Groups	90.871	90	1.010		
	Total	92.667	92			
I don't think that recycling packaging worth as their claim	Between Groups	1.506	2	.753	.850	.431
	Within Groups	79.741	90	.886		
	Total	81.247	92			
News and social medias about polluted seas, rivers and lakes are exaggerated	Between Groups	10.203	2	5.102	4.135	.019
	Within Groups	111.044	90	1.234		
	Total	121.247	92			
I know the meaning of recycled (Taufique et al.,2016)	Between Groups	.129	2	.065	.201	.818
	Within Groups	28.860	90	.321		
	Total	28.989	92			
I know the meaning of Biodegradability. (Taufique et al.,2016)	Between Groups	.963	2	.482	.515	.599
	Within Groups	84.219	90	.936		
	Total	85.183	92			
I prefer to buy green products when I see the products with eco label	Between Groups	.617	2	.309	.499	.609
	Within Groups	55.641	90	.618		
	Total	56.258	92			
I willing to pay more for green products in order to buy less environmentally harmful product	Between Groups	2.410	2	1.205	2.052	.134
	Within Groups	52.838	90	.587		
	Total	55.247	92			
I could accept green products if the price is higher but not over than ____ (%), please specify.	Between Groups	.625	2	.312	.539	.585
	Within Groups	52.171	90	.580		
	Total	52.796	92			
I would buy green product when friends, family or colleague tell me to buy green products.	Between Groups	1.442	2	.721	.856	.428
	Within Groups	75.805	90	.842		
	Total	77.247	92			
I feel uncomfortable when friends buy green products while you don't.	Between Groups	1.415	2	.708	.779	.462
	Within Groups	81.768	90	.909		
	Total	83.183	92			
I've change my mind to be green consumer because of a lot of contents or advertisement about pollution issues.	Between Groups	1.149	2	.575	.673	.513
	Within Groups	76.851	90	.854		
	Total	78.000	92			
I don't care about peer pressure and I wouldn't purchase green product.	Between Groups	3.829	2	1.915	1.700	.188
	Within Groups	101.354	90	1.126		
	Total	105.183	92			
Manufacturers should be force to use recycled material in their manufacturing and processing operation.	Between Groups	1.531	2	.766	1.947	.149
	Within Groups	35.394	90	.393		
	Total	36.925	92			
I would buy green products if commercial advertising mention the ecological disadvantages of products.	Between Groups	1.442	2	.721	1.111	.334
	Within Groups	58.386	90	.649		
	Total	59.828	92			
I would be willing to stop buying products that caused of pollution even though it might be inconvenient.	Between Groups	1.033	2	.517	.763	.469
	Within Groups	60.967	90	.677		
	Total	62.000	92			
The benefit of modern consumer products are more important to the society than the pollution which result from their production and use (Reverse question	Between Groups	1.753	2	.876	.949	.391
	Within Groups	83.151	90	.924		
	Total	84.903	92			

Appendix F One-way ANOVE (Monthly household income)

		Sum of Squares	df	Mean Square	F	Sig.
ANOVA						
I know very well about global warming means	Between Groups	2.191	4	.548	1.380	.247
	Within Groups	34.927	88	.397		
	Total	37.118	92			
I know very well about plastic problems that we are facing	Between Groups	.456	4	.114	.288	.885
	Within Groups	34.835	88	.396		
	Total	35.290	92			
I know very well about climate change	Between Groups	.863	4	.216	.496	.738
	Within Groups	38.255	88	.435		
	Total	39.118	92			
I know substitutes of plastic	Between Groups	2.720	4	.680	1.334	.264
	Within Groups	44.850	88	.510		
	Total	47.570	92			
It is meaningless to buy a higher price for green packaging instead of plastics packaging given	Between Groups	1.705	4	.426	.412	.799
	Within Groups	90.961	88	1.034		
	Total	92.667	92			
I don't think that recycling packaging worth as their claim	Between Groups	5.996	4	1.499	1.753	.146
	Within Groups	75.251	88	.855		
	Total	81.247	92			
News and social medias about polluted seas, rivers and lakes are exaggerated	Between Groups	5.191	4	1.298	.984	.421
	Within Groups	116.056	88	1.319		
	Total	121.247	92			
I know the meaning of recycled (Taufique et al.,2016)	Between Groups	.831	4	.208	.650	.629
	Within Groups	28.158	88	.320		
	Total	28.989	92			
I know the meaning of Biodegradability. (Taufique et al.,2016)	Between Groups	1.400	4	.350	.368	.831
	Within Groups	83.783	88	.952		
	Total	85.183	92			
I prefer to buy green products when I see the products with eco label	Between Groups	1.186	4	.297	.474	.755
	Within Groups	55.072	88	.626		
	Total	56.258	92			
I willing to pay more for green products in order to buy less environmentally harmful product	Between Groups	4.687	4	1.172	2.039	.096
	Within Groups	50.561	88	.575		
	Total	55.247	92			
I could accept green products if the price is higher but not over than ____ (%), please specify.	Between Groups	1.100	4	.275	.468	.759
	Within Groups	51.696	88	.587		
	Total	52.796	92			
I would buy green product when friends, family or colleague tell me to buy green products.	Between Groups	1.445	4	.361	.419	.794
	Within Groups	75.802	88	.861		
	Total	77.247	92			
I feel uncomfortable when friends buy green products while you don't.	Between Groups	2.154	4	.538	.585	.675
	Within Groups	81.029	88	.921		
	Total	83.183	92			
I've change my mind to be green consumer because of a lot of contents or advertisement about	Between Groups	2.654	4	.664	.775	.544
	Within Groups	75.346	88	.856		
	Total	78.000	92			
I don't care about peer pressure and I wouldn't purchase green product.	Between Groups	2.654	4	.663	.569	.686
	Within Groups	102.529	88	1.165		
	Total	105.183	92			
Manufacturers should be force to use recycled material in their manufacturing and	Between Groups	1.513	4	.378	.940	.445
	Within Groups	35.412	88	.402		
	Total	36.925	92			
I would buy green products if commercial advertising mention the ecological disadvantages of products.	Between Groups	4.038	4	1.010	1.592	.183
	Within Groups	55.790	88	.634		
	Total	59.828	92			
I would be willing to stop buying products that caused of pollution even though it might be inconvenient.	Between Groups	4.064	4	1.016	1.543	.197
	Within Groups	57.936	88	.658		
	Total	62.000	92			
The benefit of modern consumer products are more important to the society than the pollution which result from their production and use	Between Groups	3.157	4	.789	.850	.498
	Within Groups	81.746	88	.929		
	Total	84.903	92			

Appendix G One-way ANOVA (Education level)

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
I know very well about global warming means	Between Groups	1.321	3	.440	1.094	.356
	Within Groups	35.798	89	.402		
	Total	37.118	92			
I know very well about plastic problems that we are facing	Between Groups	4.237	3	1.412	4.048	.010
	Within Groups	31.053	89	.349		
	Total	35.290	92			
I know very well about climate change	Between Groups	2.888	3	.963	2.365	.076
	Within Groups	36.230	89	.407		
	Total	39.118	92			
I know substitutes of plastic	Between Groups	1.989	3	.663	1.295	.281
	Within Groups	45.581	89	.512		
	Total	47.570	92			
It is meaningless to buy a higher price for green packaging instead of plastics packaging given lower price in the market.	Between Groups	7.370	3	2.457	2.563	.060
	Within Groups	85.297	89	.958		
	Total	92.667	92			
I don't think that recycling packaging worth as their claim	Between Groups	4.259	3	1.420	1.641	.186
	Within Groups	76.988	89	.865		
	Total	81.247	92			
News and social medias about polluted seas, rivers and lakes are exaggerated	Between Groups	12.230	3	4.077	3.328	.023
	Within Groups	109.018	89	1.225		
	Total	121.247	92			
I know the meaning of recycled (Taufique et al.,2016)	Between Groups	.512	3	.171	.534	.660
	Within Groups	28.477	89	.320		
	Total	28.989	92			
I know the meaning of Biodegradability. (Taufique et al.,2016)	Between Groups	1.542	3	.514	.547	.651
	Within Groups	83.640	89	.940		
	Total	85.183	92			
I prefer to buy green products when I see the products with eco label	Between Groups	1.986	3	.662	1.086	.359
	Within Groups	54.272	89	.610		
	Total	56.258	92			
I willing to pay more for green products in order to buy less environmentally harmful product	Between Groups	1.574	3	.525	.870	.460
	Within Groups	53.674	89	.603		
	Total	55.247	92			
I could accept green products if the price is higher but not over than _____ (%), please specify.	Between Groups	2.524	3	.841	1.490	.223
	Within Groups	50.272	89	.565		
	Total	52.796	92			
I would buy green product when friends, family or colleague tell me to buy green products.	Between Groups	5.985	3	1.995	2.492	.065
	Within Groups	71.262	89	.801		
	Total	77.247	92			
I feel uncomfortable when friends buy green products while you don't.	Between Groups	4.264	3	1.421	1.603	.194
	Within Groups	78.919	89	.887		
	Total	83.183	92			
I've change my mind to be green consumer because of a lot of contents or advertisement about pollution issues.	Between Groups	1.073	3	.358	.414	.744
	Within Groups	76.927	89	.864		
	Total	78.000	92			
I don't care about peer pressure and I wouldn't purchase green product.	Between Groups	5.181	3	1.727	1.537	.210
	Within Groups	100.001	89	1.124		
	Total	105.183	92			
Manufacturers should be force to use recycled material in their manufacturing and processing operation.	Between Groups	1.225	3	.408	1.018	.388
	Within Groups	35.699	89	.401		
	Total	36.925	92			
I would buy green products if commercial advertising mention the ecological disadvantages of products.	Between Groups	2.445	3	.815	1.264	.292
	Within Groups	57.383	89	.645		
	Total	59.828	92			
I would be willing to stop buying products that caused of pollution even though it might be inconvenient.	Between Groups	5.827	3	1.942	3.077	.032
	Within Groups	56.173	89	.631		
	Total	62.000	92			
The benefit of modern consumer products are more important to the society than the pollution which result from their production and use (Reverse question	Between Groups	2.528	3	.843	.910	.439
	Within Groups	82.375	89	.926		
	Total	84.903	92			