THE EFFECTIVENESS OF ECO-LABELS IN INFLUENCING CONSUMER BEHAVIOR FOR FMCG PRODUCTS IN BANGKOK, THAILAND

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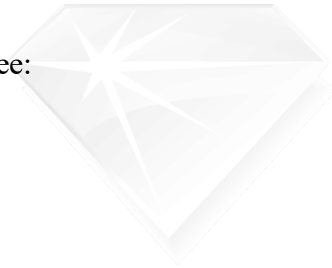This manuscript has been approved by

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Behavior for FMCG Products in Bangkok, Thailand

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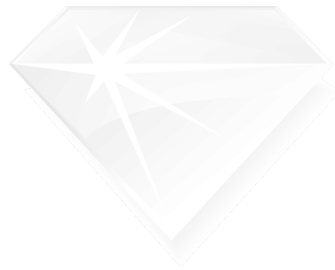Advisor: Assoc. Prof. Dr. Suthinan Pomsuwan**

ABSTRACT

The increasingly growing demand for environmentally friendly products and services, especially in the fast-moving consumer goods (FMCG) industry, has led to an increased usage of eco-labels worldwide as consumers and policy-makers are shifting more focus on eco-consciousness and sustainability. Understanding how eco-labels influence consumer purchasing behavior, especially for FMCG products, remains relatively unknown. This study investigates the impact of the marketing mix 4Ps (product, price, place and promotion), climate change attitudes, perceptions, and consumers' perceived value of eco-labeled products on their purchasing behavior in Bangkok, Thailand.

The findings of this study highlight the significant influence of various factors on consumer behavior when purchasing eco-friendly, eco-labeled products. These factors cover a range of variables that influence consumers' decision-making in this domain.

Keywords: Eco-labels, Consumer Behavior, Marketing Mix, Climate Change Attitudes, Perceived Value, FMCG Industry, Sustainability

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Riku Santeri Nummi

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

In chapter one as the introduction to the research paper, providing an overview of the study's objectives, research questions, and the significance of the research topic. This chapter sets the stage for the entire paper, outlining the scope and purpose of the research and establishing the context within which the study is conducted. The outcomes of the data analysis are outlined below:

1.1 : The Importance and Problem of the Study

1.2 : Research problems

1.3 : Objectives of the Study

1.4 : The Conceptual Framework

1.5 : Method of Study

1.6 : Tools and Statistics Used

1.7 : Scope of the Study

1.8 : Benefits of the Research

1.9 : Limitations of the Research

1.10: Definition of Terms

1.1 The Importance and Problem of the Study

Environmental sustainability has been a growing concern in recent years, especially the environmental impact of the fast-moving consumer goods (FMCG) industry. This has led to increased demand for environmentally friendly products, and this consequently has led to increased usage of eco-labels in FMCG products to help consumers make informed purchasing decisions. As consumer demand for more eco-friendly products has been on the rise, the industry is focusing more on sustainability in areas such as packaging, sourcing, environmental protection, plant-based alternatives, and energy efficiency (Wakeham, 2020).

The concerns regarding environmental sustainability and the need for eco-friendly practices have also been acknowledged by governments and regulators who

are implementing policies that promote eco-friendly practices in industries such as FMCG. For instance, the Ministry of Natural Resources and Environment in Thailand, has launched a program in the year 2011 which aims to promote environmentally friendly practices called the "Green Industry" (Green Industry Promotion and Development Office, 2022).

There are several studies investigating the effectiveness of marketing mix (4P) factors on how they influence consumer's buying attitudes towards environmentally friendly products and the degree of the factors' influences. A study from Saudi Arabia found that consumers are willing to pay higher prices for environmentally friendly products and that price overall is a significant factor on consumers' buying intentions. The same research also summarizes that all of the marketing mix 4Ps variables in terms of; product, price, place and promotional factors significantly influences consumers' buying decisions towards environmentally friendly products (Gani, 2021). Various conducted studies summarize the positive effects of marketing mix variables on consumer purchasing behavior similarly and how all of its' factors play an important role on customer attitudes and satisfaction towards eco-friendly products (Wangari, 2018; Mahmoud, 2018; Eneizan, 2015; Cheema et al., 2015). Schils (2022) claimed that one of the four marketing mix variables, pricing plays an important role in customers' decision making process and because it has such a powerful influence on consumption, companies must make careful decisions on how to price their goods or services. As consumers are coping with the current inflation, consumers are changing their purchasing behaviors making pricing an important factor of marketing mix . Another research shows that 66% of consumers purchasing fast-moving-consumer-goods check prices of the products they are buying (Schils, 2022).

A study done in 2015 found that usage of household goods which are also categorized as FMCG, were responsible for 60% of all global greenhouse gas emissions, strengthening the link between climate change and consumer behavior (Ivanova et al., 2015). The World Economic Forum has also addressed the current climate change topic by issuing guidelines for consumers on how they can make well-informed choices as consumers that directly affect the environment and therefore climate change (Kolaczkowski, 2021). Thøgersen (2021) revealed that there was a

complexity between consumer behavior and climate change perception as consumers are likely not to recognize the eco-friendly products that would help the environment without the labels. Dahlhoff (2022) further stated that consumers may not identify which actions are worthwhile towards eco-friendliness, based on a research report done in the United States of America, although consumers who are concerned about climate change are willing to make changes to their purchasing behavior if their actions further help the environmental impact. Based on an article by The Wall Street Journal, 42% of surveyed consumers have already changed their habits on consumption based on their environmental values and 65% of the respondents expect companies to do more environmentally speaking as they are facing these environmental issues such as climate change (Hutcheon et al., 2021). Globescan (2021), revealed in an annual Healthy & Sustainable Living study that people around the world are aware of climate change and that 63% of respondents feel that the seriousness of climate change is at "Very Serious" level in the year of 2021. Of the same respondents, 57% reported that they are willing to pay more for products that work to improve society/environment. The three biggest barriers for consumers to act on being more environmentally sustainable were; Not enough government support, Too expensive and Not enough business support (Malmqvist, 2022). Bhisawong (2021) studied Thai respondents about how climate change affected fashion retail consumers, the study indicates that the climate change movement is not currently very prevalent in Thailand and only a small group of people have taken action in the matter. However, she claimed that the government force was playing a significant role in the awareness of environmental concerns to be a serious issue.

How consumers perceive the quality, extrinsic and intrinsic attributes of eco-labeled products have been previously studied and one research found out that products with eco-labels greatly influence how consumers perceive the value of their purchased products (Braimah et al., 2022). Another study had similar results, eco-labels on supermarket products can increase customer's perceived quality and trust for eco-friendly products (Alamsyah et al., 2021). According to some research, having an eco-label on a product may negatively affect consumers' perception of said products attributes (Delmas & Grant, 2014; Rivera, 2002). For eco-labeled dairy products which

also fall under the FMCG sector, a study was conducted on how intrinsic and extrinsic values help close the gap between intention and purchasing behavior. The study showed a significant and positive relationship between the two mentioned variables (Gonzalez & Antonio, 2020). How consumers perceive gained social and private value can also affect consumer behavior in purchasing eco-labeled products. According to a study from South-Korea, eco-labels do have an impact on consumers' buying decisions based on how individuals perceive gained private and social value when purchasing such products (Hwang et al., 2016). Extrinsic attributes such as packaging also play a role in consumer behavior. Consumers are interested in purchasing products with eco-friendly innovative packaging alone (Cammarelle et al., 2021).

Only few studies have investigated the effectiveness of eco-labels on consumer purchasing behavior especially for FMCG products. Therefore, the purpose of this research is to fill this gap by examining the impacts of eco-labels on consumer purchasing behavior for FMCG products in Bangkok, Thailand.

1.2 Research problems
1. Do the four factors of marketing mix have an impact on consumer behavior?
2. Do different attitudes and perceptions towards climate change have an impact on consumer behavior?
3. Does perceived value of eco-labeled products have an impact on consumer behavior?

1.3 Objectives of the Study
1. To study the impact of marketing mix 4Ps variables on consumer behavior.
2. To study the impact of climate change attitudes and perceptions on consumer behavior.
3. To study the impact of consumers' perceived value of purchasing eco-labeled products on consumer behavior.

1.4 The Conceptual Framework
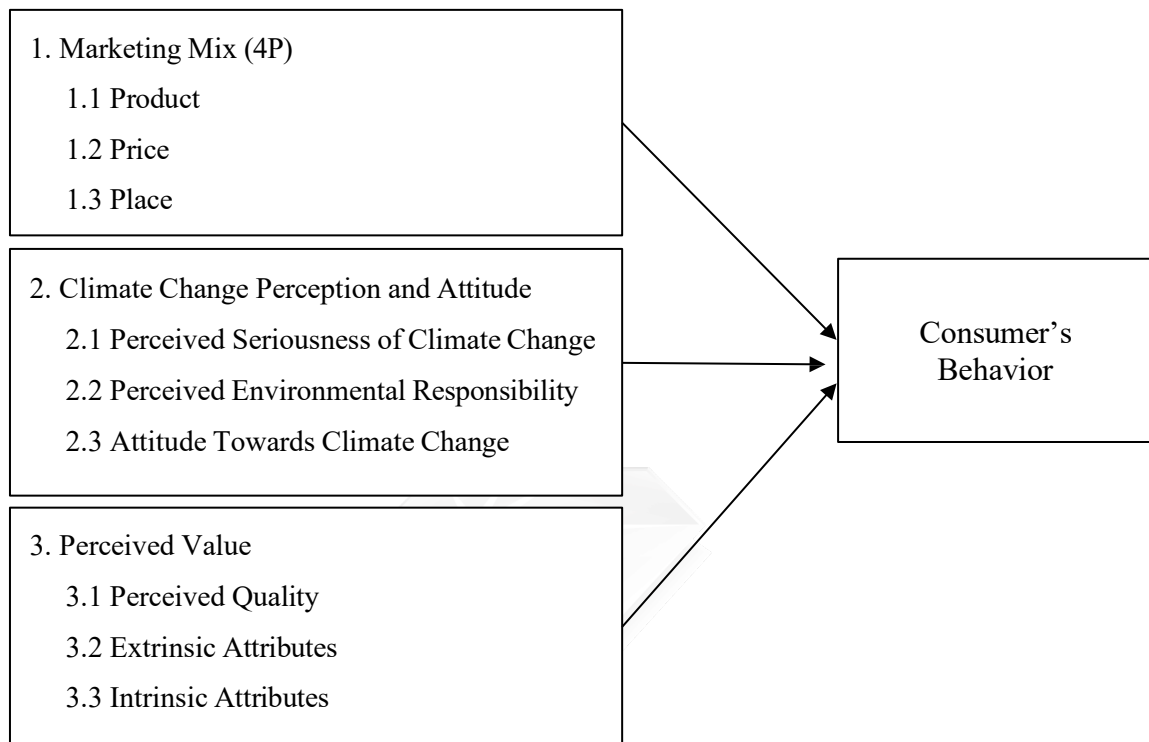
Figure 1.1: Conceptual Framework

1.5 Method of Study

The research method for this study is quantitative research. An online survey questionnaire will be used to collect a sample of FMCG product consumers in Bangkok, Thailand who are willing to respond to the questionnaire, with Convenience Sampling Method. The survey will be conducted using Google Forms and it will include questions on consumer behavior, eco-labels, and FMCG products.

1.6 Tools and Statistics Used

This research uses statistics tools to analyze the data, by using multiple regression analysis, descriptive statistics, frequency analysis and inferential statistics.

1.7 Scope of the Study

Independent Variables: 1. Marketing Mix (4Ps)

                                   1.1 Product

                                   1.2 Price

1.3 Place

1.4 Promotion

2. Climate Change Perception and Attitude

2.1 Perceived Seriousness of Climate Change

2.2 Perceived Environmental Responsibility

2.3 Attitude Towards Climate Change

3. Perceived Value

3.1 Perceived Quality

3.2 Extrinsic Attributes

3.3 Intrinsic Attributes

Dependent Variable: Consumer Behavior

Population and Sample:

The research method for this study is a quantitative research method using an online Google Forms survey. Participants of this study will be consumers of fast-moving consumer goods (FMCG) products in Bangkok, Thailand. Samples will be collected using a Convenience Sampling Method. Yamane's (1967) table was used to specify the sample size and the amount of samples to be collected will be from 400 respondents. The size of the population that will be used for the survey will be >100,000. The population of Thailand is currently estimated to be 66.09M (Thailand's Population Surpasses 66 Million, n.d.).

Size of Population	Sample Size (n) for Precision (e) of:			
	±3%	±5%	±7%	±10%
500	a	222	145	83
600	a	240	152	86
700	a	255	158	88
800	a	267	163	89
900	a	277	166	90
1,000	a	286	169	91
2,000	714	333	185	95
3,000	811	353	191	97
4,000	870	364	194	98
5,000	909	370	196	98
6,000	938	375	197	98
7,000	959	378	198	99
8,000	976	381	199	99
9,000	989	383	200	99
10,000	1,000	385	200	99
15,000	1,034	390	201	99
20,000	1,053	392	204	100
25,000	1,064	394	204	100
50,000	1,087	397	204	100
100,000	1,099	398	204	100
>100,000	1,111	400	204	100
a = Assumption of normal population is poor (Yamane, 1967). The entire population should be sampled.				

Figure 1.2: Yamane's Table for Sample Size
Source: Yamane, T. (1967). Statistics: An introductory analysis. New York: Harper and Row.

1.8 Benefits of the Research

The primary aim of this research is to contribute information and scientific data to the existing body of knowledge regarding consumer purchasing behaviors on eco-friendly FMCG products. Additionally this research will provide valuable insights into the factors that influence consumers decision making when purchasing eco-friendly FMCG products. This study will be valuable to businesses and policymakers when developing strategies to promote or market eco-friendly products. Furthermore, this research will also be a contribution to the academic literature on consumer behavior in the FMCG industry.

1.9 Limitations of the Research

As with any research study, there are limitations to be considered. This study focuses only on the purchasing behavior towards eco-friendly FMCG products. Other than FMCG products or industries are not included in the study.

The study relies on self-reported data which is conducted via online survey. There are various commonly known drawbacks to online surveys, respondents may answer dishonestly or inaccurately on purpose or without awareness.

Lastly, the study is limited to the general population of Bangkok, Thailand and is not applicable to other regions of the country or other countries.

1.10 Definition of Terms

Eco-labels: A type of environmental labeling that is used to indicate the environmental impact of a product or service.

FMCG: Fast-Moving Consumer Goods, a category of consumer goods that are sold quickly and at relatively low cost.

Sustainability: The ability to meet the needs of the present without compromising the ability of future generations to meet their own needs.

Eco-friendly: Products or practices that are not harmful to the environment and minimize negative impacts on natural resources.

Marketing-Mix (4P): A traditional marketing framework that includes Product, Price, Promotion and Place. These four elements put together are used to develop or implement an effective marketing plan. Product can be defined as a tangible and intangible feature of a product that meets the needs of the customer. This includes the design, packaging, quality, features, branding, warranties, and other elements that make up the product. Price, meaning the cost of the product, which can affect its perceived value and demand. Pricing strategies can vary depending on the target market, competition, and overall business goals. Place refers to a location where a product is made available for purchase, as well as the methods used to transport and store the product. It involves the distribution channels through which a product is made available to customers, and the convenience and accessibility of these channels to customers. Promotion, meaning activities aimed at increasing the visibility and appeal of a product

to potential customers. It includes advertising, sales promotions, personal selling, public relations, and direct marketing. Promotion is used to create awareness about a product

Perceived Seriousness of Climate Change: How consumers feel about the level of seriousness and urgency of the issue that is climate change. A measure of how concerned people are about the negative impacts of climate change on the environment, society, and economy.

Attitude Towards Climate Change: Consumers' beliefs, feelings, and behavioral intentions regarding the issue of climate change. It includes their level of concern about the problem, their beliefs about its causes and consequences, and their willingness to take action to address it.

Perceived Environmental Responsibility: Consumers values, beliefs and attitudes towards climate change, and their sense of duty and responsibility to take actions to promote eco-friendliness that consequently helps the fight against climate change.

Extrinsic Attributes: External characteristics of a certain product or service that may influence consumers purchasing decisions. This can be for example packaging, product branding, advertising or price.

Intrinsic Attributes: Inherent characteristics that directly relate to the core features and benefits of a certain product. Attributes can be for example durability, reliability and functionality of a product.

Perceived Quality: Customer's own assessment of a certain product's quality based on their own experiences and expectations.

CHAPTER 2
LITERATURE REVIEW

In chapter two as presenting a comprehensive literature review that explores and analyzes the existing entirety of knowledge related to the research topic. This chapter critically examines relevant scholarly articles, books, research papers, and other credible sources to provide a theoretical framework and context for the study. It synthesizes the literature, identifies key themes, and highlights any gaps or areas of disagreement in the current understanding of the topic.The outcomes of the data analysis are outlined below:

2.1 : The Background of Consumer behavior

2.2 : Theories and academic researches of Consumer Behavior

2.3 : Theories and academic researches of Marketing Mix (4Ps)

2.4 : Theories and academic researches of Climate Change Perception and Attitude

2.5 : Theories and academic researches of Perceived Value

2.6 : Conclusion

2.1 The Background of Consumer behavior

Consumer behavior describes the activities and decision-making processes people take when they purchase, use, and discard goods and services. Businesses must have a thorough awareness of the factors affecting consumer behavior in order to develop efficient product, services and marketing plans to meet consumer demands.

Internal factors that influence how customers perceive and assess goods and services include personality, attitudes, beliefs, values, motives, and emotions (Wangari, 2018; Mahmoud, 2018). These factors may have had a huge impact on consumers' perception and willingness to buy eco-friendly products (Gani, 2021). Social pressures and expectations that may affect consumers' behavior can be influenced by external factors such as culture, socioeconomic class, and family (Cheema et al., 2015).

The significance of eco-friendly features in customers' purchased products had greatly increased as they become more environmentally conscious (Thøgersen, 2021). Consumers may now make more ecologically conscious purchase decisions thanks to the development of eco-labels, which educate them about the environmental features of items (Hwang et al., 2016). Consumer awareness, trust, and perceived value are just a few examples of the variables that affect how effective eco-labels are at changing customer behavior (Alamsyah et al., 2021).

To sum up, the complex connection of internal and external factors affects consumer behavior. Businesses must modify their strategy and offer to meet the rising demand for eco-friendly items as environmental concerns gain more traction. For businesses to navigate the changing market dynamics and seize opportunities brought about by the increased demand for eco-friendly products, an understanding of consumer behavior is essential.

2.2 Theories and academic researches of Consumer Behavior

Businesses need to understand and take consumer behavior into account in order to create efficient and working marketing plans and to satisfy customers' needs. Consumer behavior theories and academic ideas can help explain the factors that affect consumers' decision-making processes when purchasing, using, and discarding goods and services (Gani, 2021).

The 4Ps of the marketing mix; product, price, location and promotion, are necessary concepts in understanding consumer behavior. These elements, according to research, have a substantial impact on consumers' decisions to purchase environmentally friendly goods (Cheema et al., 2015). Schils (2022) mentioned that a significant part of consumers take price into account when buying FMCG products. Schils (2022) also mentioned the significance of how pricing of products and services affects customers' decision-making processes. The involvement of a product's intrinsic and extrinsic attributes in customer behavior is another important factor when talking about the product itself. According to research, eco-labels can have a big impact on how customers perceive the worth of the products they buy and how much they trust environmentally friendly products (Alamsyah et al., 2021). These ideas stress the importance of understanding the factors that affect consumers' attitudes and purchasing

decisions while offering information about the complexity of consumer behavior. Businesses must take into account the interaction of intrinsic and extrinsic features as well as the different components of the marketing mix when developing eco-friendly FMCG products in order to successfully attract environmentally conscious customers. For instance, Thøgersen (2021) emphasizes the significance of eco-labels in influencing customer behavior by saying that consumers may find it difficult to recognize eco-friendly products without correct eco-labeling. Hwang et al. (2016) also discovered that customers' perceptions of the societal and private benefits they receive from purchasing eco-labeled goods may affect their purchase choices.

In conclusion, companies in the FMCG industry can create marketing plans that effectively address consumers' needs for buying eco-friendly products and their concerns about doing so, while also addressing potential barriers like cost and product quality. By doing this, they can improve the possibility that customers will choose FMCG products with an eco-label and help to encourage ecologically friendly consumption habits.

2.3 Theories and academic researches of Marketing Mix (4Ps)

Businesses looking to encourage consumers to purchase environmentally friendly products must understand how the marketing mix (4Ps) variables affect customer behavior in fast-moving consumer goods (FMCG) items that are environmentally friendly. The four elements of the marketing mix; product, price, place, and promotion, together form an all-inclusive marketing strategy for a business.

Product: Consumer decision-making is heavily influenced by the features and benefits of eco-friendly FMCG products. Consumers were influenced by extrinsic features such as eco-labels (Hwang et al., 2016), packaging materials (Cammarelle et al., 2021), and environmental certifications to select the eco-friendly products. To successfully market to environmentally friendly consumers, businesses should highlight the environmental advantages of their products while preserving product quality and its base attributes (Gani, 2021).

Price: Especially in the FMCG industry, price plays a significant factor in determining customers' purchasing behavior (Wangari, 2018). Businesses need to find a balance between offering affordable prices for their eco-friendly products and

preserving the perceived value of their goods. However, businesses must take into account consumers' willingness to pay for sustainable products and their sensitivity to price changes (Schils, 2021.). Research suggests that eco-labeled products could dictate a price premium (Delmas & Grant, 2014). Businesses may appeal to diverse consumer segments and promote more wide adoption of eco-friendly consumption practices by providing a wider variety of eco-friendly items at different pricing ranges to suit most consumers' needs.

Place: Consumer behavior may have been affected by the accessibility and availability of eco-friendly FMCG items. Companies need to make sure that both physical and online retail settings can be readily accessed and consumers can see their environmentally friendly items (Wangari, 2018). Also, businesses may work with distributors and retailers to promote environmental activities and increase product availability across different locations (Cheema et al., 2015).

Promotion: Marketing is crucial in influencing customer views and preferences for FMCG items that are environmentally friendly. Businesses could promote their products' environmental advantages and their dedication to sustainability through different marketing techniques including advertising, public relations, and social media (Mahmoud, 2018). According to research, consumers' trust and purchase intentions can improve when eco-labels and certifications are effectively marketed (Hwang et al., 2016).

Businesses wanting to promote eco-friendly FMCG products must understand how the marketing mix (4Ps) and customer behavior interact. Businesses may promote more sustainable consumption habits and help create a greener future by improving their product offers, pricing plans, distribution methods, and marketing initiatives.

2.4 Theories and academic researches of Climate Change Perception and Attitude

Businesses in the FMCG sector must follow how consumers' views and feel about the climate change issue in order to properly market environmentally friendly products. According to research, consumers' expectations of businesses change as they become more conscious of climate change and demand more environmentally friendly products and services (Hutcheon et al., 2021). Thøgersen's (2021) study found that the

importance of businesses informing and assisting their clients in making environmentally conscious decisions and the necessity for significant assistance in helping consumers make such decisions. Also, according to the World Economic Forum, consumers may play a very important role in fighting the climate change issue by making wise and environmentally friendly purchases.

The Theory of Planned Behavior (TPB) provides a useful framework for analyzing consumer attitudes in regards to climate change and their decisions to purchase eco-friendly products. According to TPB theory, people's attitudes, subjective norms, and perceived behavioral control had an impact on their intentions to engage in a certain action, which had an impact on their actual behavior (Ajzen, 1991). The TPB can help in explaining the relationship between consumers' perceptions of the effects of their consumption choices on the environment and their propensity to buy eco-labeled goods in the context of climate change and eco-friendly FMCG products (Gani, 2021). According to a study by Dahlhoff (2022), more people were adopting environmentally sustainable activities as a result of climate change. Similar to how customers are becoming more concerned about climate change, Malmqvist (2022) reported that consumers expect firms and governments to take action.

Figure 1.3: The theory of planned behavior. Organizational Behavior and Human
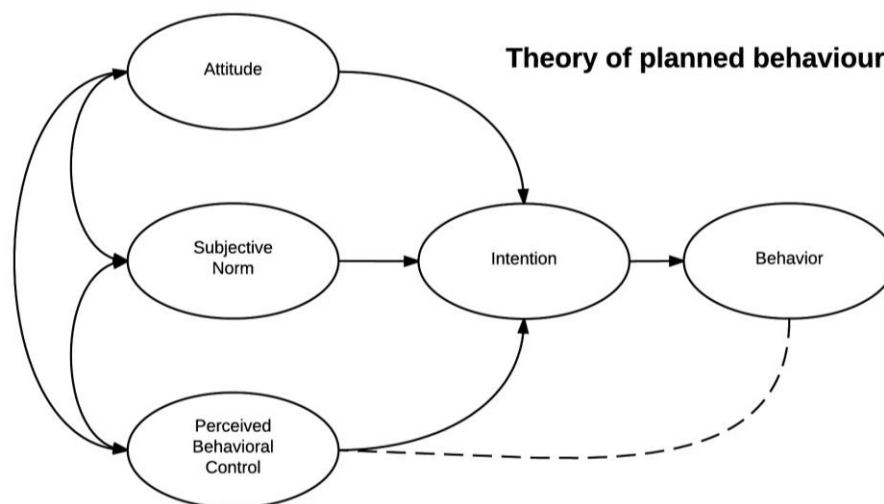
Decision   Processes
Source: Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179-211.

Theories and research articles on perception and attitude toward climate change stress the significance of understanding customers' environmental concerns. To effectively advertise eco-friendly products, businesses in the FMCG sector must identify and solve these problems. Businesses may cultivate a more environmentally conscious client base and help to mitigate the effects of climate change by integrating climate change awareness into their marketing strategy and giving consumers the information, they need to make educated decisions. By executing this strategy, they can address the rising demand for environmentally friendly goods and methods of production while also succeeding over the long run in the FMCG industry.

2.5 Theories and academic researches of Perceived Value

When a consumer is in a process of decision-making, perceived value refers to the evaluation of the utility of a product or service based on the consumer's view of what they get in comparison to what they provide. When talking of eco-friendly FMCG products, both intrinsic and extrinsic factors contribute to customers' sense of value of the said product. For instance, customers' perceived value of a product's environmental advantages and sustainability features are known as "green perceived value" (Braimah et al., 2022). Research had found that consumers' positive perception of green value positively influenced their attitudes towards eco-friendly products and their purchase intentions (Alamsyah et al., 2021). Green perceived value can be enhanced by the usage of eco-labels and certifications on products, which provides consumers with assurance regarding the product's eco-friendliness and sustainability (Hwang et al., 2016; Gonzalez & Antonio, 2020).

Additionally, consumers may perceive social value gained from purchasing eco-labeled products, as it demonstrates their commitment to environmental friendliness and positive contribution to society (Hwang et al., 2016). Private value, such as personal satisfaction or improved health, can also influence consumers' perceived value of eco-friendly products (Gonzalez & Antonio, 2020).

Perceived value may be influenced by trade-offs between product qualities. For example, some consumers viewed eco-labeled products as having worse quality or being more expensive in comparison to non-eco-friendly products (Usrey et al., 2020). This negative perception of eco-friendly products could possibly discourage consumers

from purchasing eco-friendly products and deter businesses from investing in the development of green product alternatives. To control these potential issues, FMCG businessess need to find a balance between marketing the environmental benefits of their products and making sure that they meet consumers' expectations in terms of quality, price, and overall value. According to Usrey et al., 2020, the best way to overcome these issues is to adjust marketing strategies based on the product category. For example, in product categories where consumers are not familiar with eco-friendly alternatives, brands could first focus on highlighting the effectiveness and performance of their products, with the eco-friendliness aspect being a secondary marketing feature, instead of being the main one.

Finally, recognizing and utilizing how consumers perceive products' value is vital for businesses in the FMCG industry to effectively market eco-friendly products. Businesses may develop a compelling value proposition that appeals to environmentally concerned consumers and influences them to buy FMCG items with an eco-label by concentrating on green perceived value, social value, and private value.

2.6 Conclusion

The literature examined in this study emphasizes the complex connection of customer behavior and eco-friendly FMCG products. Theories and academic concepts, including the marketing mix (4Ps), intrinsic and extrinsic attributes, climate change perception and perceived value, provide valuable insights into the factors that influence consumers' decision-making processes when purchasing eco-friendly products.

According to researchers, customers are becoming more aware of environmental concerns while making purchases, and eco-labels and certifications are essential for expressing the advantages that said products have for the environment. Businesses must carefully balance these attributes, such as product quality, pricing, perceived value, to make sure that they effectively appeal to eco-friendly consumers. Businesses in the FMCG industry should establish marketing strategies that target customers' motives and concerns linked to eco-friendliness, in order to encourage ecologically sustainable consumer habits. Businesses may adjust their marketing plans to connect with their target audience and to encourage more eco-friendly attitudes among consumers.

The success and expansion of eco-friendly FMCG products finally depends on businesses' ability to satisfy customer demands for quality, affordability, and perceived value while also successfully communicating their environmental advantages. Companies can help promote more environmentally friendly consumption habits and lessen the effects of climate change and environmental degradation by doing this.
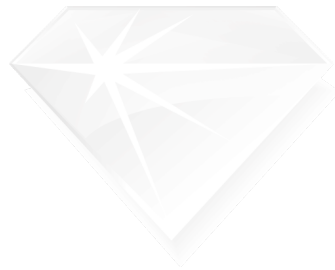
CHAPTER 3
METHODOLOGY

In chapter three, it describes the research methodology employed in the study. This chapter provides a detailed explanation of the research design, data collection procedures, data analysis techniques, and ethical considerations. The outcomes of the data analysis are outlined below:

3.1 : The Type of Research and Tool

3.2 : The Research Design

3.3 : The Quality of the Research Tool

3.4 : The Data Collection

3.5 : The Population and Sample

3.6 : The Sampling Technique

3.7 : The Research Procedure and Timeline

3.8 : The Hypotheses Test and Data Analysis Hypotheses

3.1 The Type of Research and Tool

This study uses quantitative research methods and an online survey questionnaire is utilized as the research instrument. Volunteers above the age of 20, from Bangkok with internet access will participate in the survey. The questionnaire will be distributed online to the targeted population.

Part 1: Demographic Data (6 questions)

Demographic data relates to information about the qualities of the participants taking part in the study. This data may include demographic questions such as questions about age, gender, education, job status and income level.

Part 2: General Question (8 questions)

This section includes 8 general questions related to consumer behavior concerning the idea of purchasing and using habits.

Part 3: Marketing Mix (4Ps) (9 questions)

This section includes 9 questions composing sub-variables questions; 3 questions of Product, 2 questions of Price, 2 questions of Place, and 2 questions of Promotion.

Table 3.1: Marketing Mix (4Ps) Questionnaire

No.	Variable	Question	Reference
1	Product	Green products are reliable	(Bahl & Chandra, 2018)
2		Green products are healthier than the conventional products	
3		Green products offered by the FMCG sector are far better than their non-green products	
4	Price	Perceived price is positively associated with the purchase intention for a green product	
5		It is worth paying higher prices for green products	(Sudari et al., 2019)
6	Place	Purchasing location has a positive effect on customer satisfaction.	(Bahl & Chandra, 2018)
7		I do make extra efforts to search for a green product	
8	Promotion	Green certification on the packaging of the goods influences me	
9		Special displays for green products influence me	

Part 4: Climate Change Perception and Attitude (9 questions)

This section includes 9 questions composing 3 questions of each sub-variables, Perceived Seriousness of Climate Change, Perceived Environmental Responsibility, and Attitude Towards Climate Change.

Table 3.2: Climate Change Perception and Attitude Questionnaire

No.	Variable	Question	Reference
1	Perceived Seriousness of Climate Change	We need to raise environmental awareness	(Zheng et al., 2020)
2		It is critical to endorse a green lifestyle.	
3		I often think about how environmental quality could be improved.	
4	Perceived Environmental Responsibility	It takes more energy to produce meat, therefore I eat less meat.	(Semenza et al., 2008)
5		I prefer to purchase items that are environmentally friendly.	(Zheng et al., 2020)
6		I bring my own bags to the grocery or other store	
7	Attitude Towards Climate Change	I learn frequently from my friends and family about eco-friendly products.	(Lacasse, K., 2015)
8		I often share information about green products with my friends.	
9		Before any purchase, I check product labels and see if it contains things that are harmful to the environment	(Zheng et al., 2020)

Part 5: Perceived Value (9 questions)

This section includes 9 questions composing questions of each sub-variables, Perceived Quality, Extrinsic Attributes, and Intrinsic Attributes.

Table 3.3: Perceived Value Questionnaire

No.	Variable	Question	Reference
1	Perceived Quality	I believe that the businesses promoting green products are truthful about environmental promises.	(Doszhanov & Ahmad, 2015)
2		I feel that green products' brand's	

No.	Variable	Question	Reference
		environmental arguments and cases are generally trustworthy.	
3		The product's environmental functions provide very good value for me.	
4	Extrinsic Attributes	It makes sense to use green products instead of other products because of its environmental commitments.	
5		I think the business of green products is the best benchmark in environmental commitments.	
6		I believe that environmental problems like global warming are caused by goods and fast products.	(Nisbet, 2015)
7	Intrinsic Attributes	Use of renewable / recycled products is the best way to combat global warming.	
8		I believe that we contribute to pollution by the products we use.	
9		I prefer simple and unprocessed foods because I think it helps the environment.	

Part 6: Consumer Behavior (7 Questions)

This section includes 7 questions about consumer behavior in likert scale measuring and concerning towards FMCG products in Thailand.

Table 3.4: Consumer Behavior Questionnaire

No.	Variable	Question	Reference
1		I use a recycling center or in some way recycle some of my household trash.	
2	Consumer Behavior	I have switched products for ecological reasons.	(Sudbury-Riley & Kohlbacher, 2016)
3		If I understand the potential damage to the environment that some products can cause, I do not purchase those products.	

4		Whenever possible, I buy products packaged in reusable containers.	
5		I do not buy products from companies who discriminate against minorities.	
6		I will not buy a product if I know that the company that sells it is socially irresponsible.	
7		I do not buy household products that harm the environment.	

3.2 The Research Design

The online questionnaire will be measured as the following:

3.2.1 Part 1-2: the fact: nominal and ordinal scales

3.2.2 Part 3-5: the independent variables: interval scale (the least (1) to the most (5))

3.2.3 Part 6: the dependent variable: interval scale (the least (1) to the most (5))

In parts 2-6 of the questionnaire, which utilize a 5-point Likert scale, the mean ranges for interpreting the average scores are calculated as follows:

Range = (Maximum - Minimum) / Scale Level

Range = (5 - 1) / 5 = 0.8 (de Winter, J.C.F. and D. Dodou, 2010)

Table 3.5: The Range of Mean Interpretation

Range	Interpretation
1.00 - 1.80	Least Agree
1.81 - 2.60	Slightly Agree
2.61 - 3.40	Moderately Agree
3.41 - 4.20	Mostly Agree
4.21 - 5.00	Completely Agree

The study utilizes two types of statistical methods:

1. Descriptive statistics, which is composed of frequency, percentage, mean, and standard deviation.

2. Inferential statistics, which is composed of the Multiple Regression Analysis Test.

3.3 The Quality of the Research Tool

The online questionnaire has been validated and approved by the advisor, Assoc. Prof. Dr. Suthinan. A reliability test was carried out with a sample group of 42 volunteers. The questionnaire data were analyzed using Cronbach's Alpha in statistical software, with a total reliability based on 400 samples.

Table 3.6: The Total Reliability Test Results

Variable	Cronbach's Alpha	N (number) of Items
Marketing Mix (4Ps)	.859	9
Climate Change Perception and Attitude	.921	9
Perceived Value	.958	9
Customer Behavior	.904	7
Total	**.883**	**34**

3.4 The Data Collection

In this research study, data collection will involve one method: a survey questionnaire using Google Forms.

Google Forms: Google Forms is an online survey tool that enables researchers to design, disseminate, and analyze surveys. In this study, a survey will be crafted and shared with a sample of 400 participants through Google Forms. The survey will contain questions related to the independent variables (marketing mix (4Ps), climate

change perception and attitude, and perceived value) and the dependent variable (consumer behavior). Participants can complete the survey online at any time that suits them the best during the designated data collection period.

3.5 The Population and Sample

The population for this research study consists of individuals aged 20 or older residing in Bangkok, who have access to the internet and are open to participating in the study.

3.6 The Sampling Technique

The sample will include 400 participants, chosen from the population using a specific sampling method (explained below).

There are several factors to consider when selecting the population and sample for a research study:

1.   Representative: The sample is representative of the population, which means it should accurately portray the population's characteristics. This assists in ensuring that the study's results can be generalized to the broader population.

2.   Size: The sample size is a crucial aspect to consider since a larger sample can give more precise results than a smaller one. However, it is also essential to take into account the resources and time available for the study, as a larger sample might necessitate more resources and time for data collection.

3.   Sampling technique: The sampling technique refers to the approach used to choose the sample from the population. In this research, a convenience sampling method will be utilized for data collection. By thoroughly considering the population and sample for a research study, researchers can ensure the study's results are accurate and can be generalized to the broader population.

3.7 The Research Procedure and Timeline

In this research study, the research procedure and timeline will be as follows:

   1. Research design: The research design will be determined based on the research question and the goals of the study.

   2. Data collection: Data will be collected from the sample of 400 participants using an online survey questionnaire. The data will be collected over a period of 3 weeks.

   3. Data analysis: After collecting the required data, statistical techniques will be used to analyze the data in order to identify any patterns or trends that can assist in addressing the research question.

   4. Results: The findings of the study will be summarized and presented in a report or publication, along with their implications for the research question.

3.8 The Hypotheses Test and Data Analysis Hypotheses:

H1: Marketing Mix (4Ps) factors has an influence on Consumer Behavior

H2: Climate Change Perception and Attitude factor has an influence on Consumer Behavior

H3: Perceived Value factor has an influence on Consumer Behavior

The following statistical tools are used for data analysis:

   1. Descriptive Statistics: These statistics were used to analyze the demographic information of the participants, such as their age, gender, and education level. Descriptive statistics help in summarizing and analyzing the characteristics of the data and presenting them in the form of mean, standard deviation, frequency, and percentages. Additionally, a class interval scale was utilized to analyze the mean score, ranging from five to one. (Best, John W, 1983: 181-184)

$$\text{Class Interval} = \frac{Maximum - Minimum}{Class\ number}$$

$$0.8 = \frac{5 - 1}{5}$$

The analysis of the rating scale can be interpreted as follows:

1 = 1.00 – 1.80, means Least Agree

2 = 1.81 – 2.60, means Slightly Agree

3 = 2.61 – 3.40, means Moderately Agree

4 = 3.41 – 4.20, means Mostly Agree

5 = 4.21 – 5.00, means Completely Agree

    2.   Inferential Statistics: These statistical methods are used to draw conclusions and make inferences about the data, including examining relationships between variables. Multiple Regression Analysis was utilized in this study to test the hypotheses and examine the relationships between the independent variables.
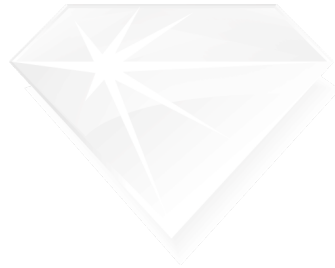
CHAPTER 4
ANALYSIS AND FINDINGS

In this chapter, the data analysis and research results are discussed, utilizing statistical software. The data from a total of 400 participants were analyzed according to the conceptual framework, and the outcomes of the data analysis are outlined below:

4.1 : Analysis of Demographic and General Data

4.2 : Analysis of Consumer Behavior

4.3 : Analysis of Marketing Mix (4Ps)

4.4 : Analysis of Climate Change Perception and Attitude

4.5 : Analysis of Perceived Value

4.6 : Analysis of the relationship among Consumer Behavior, Marketing Mix (4Ps), Climate Change Perception and Attitude, and Perceived Value

4.7 : Results of the Hypothesis Testing

4.1 Analysis of Demographic and General Data

The table below displays the personal information of the 400 participants, including their gender, age, education, occupation, monthly income, marital status, eco-labeled product trustworthiness, primary product consideration, product purchasing frequency, sustainability's importance, type of eco-labels and their effectiveness, sustainability-promoting eco-labeled FMCG products, sources of information, eco-label premium willingness ratio. The data was analyzed and presented using frequency and percentage measures.

Table 4.1: Demographic Data of 400 respondents

Demographic Data	Frequency	Percentage (%)
1. Gender		
Male	162	40.5%
Female	229	57.3%
Prefer not to say	9	2.2%
Total	**400**	**100%**
2. Age		
20-30 years	109	27.3%
31-40 years	205	51.2%
41-50 years	78	19.5%
Above 51 years	8	2.0%
Total	**400**	**100%**
3. Education		
High school / Diploma	17	4.2%
Bachelor's degree	291	72.8%
Higher than Bachelor's degree	92	23.0%
Total	**400**	**100%**
4. Occupation		
Student	1	0.3%
Employed	357	89.2%
Business Owner	42	10.5%
Total	**400**	**100%**

Table 4.1 (Continued): Demographic Data of 400 respondents

Demographic Data	Frequency	Percentage (%)
5. Monthly Income		
15,001 - 30,000 THB	58	14.4%
30,001 - 45,000 THB	129	32.2%
45,001 - 60,000 THB	185	46.3%
60,001 - 75,000 THB	25	6.3%
Above 75,001 THB	3	0.8%
Total	**400**	**100%**
6. Marital status		
Single	347	86.8%
Married	53	13.3%
Total	**400**	**100%**

Table 4.1 presents a summary of the demographic data of 400 participants, including their gender, age, education, occupation, monthly income, and marital status. The data is analyzed using frequency and percentage measures.

From the data, it is observed that the majority of the respondents were female (57.3%) and the most common age group was 31-40 years (51.2%). About three-quarters of the respondents (72.8%) had a bachelor's degree, and most of them were employed (89.3%). In terms of monthly income, the majority of the respondents (46.3%) earned between 45,001-60,000 THB per month. Finally, the majority of the respondents were single (86.8%). These demographic data provide a snapshot of the characteristics of the sample population and can be useful in interpreting the results of the study.

Table 4.2: General Questions of 400 respondents

General Question	Frequency	Percentage
1. Do you believe that eco-labels on FMCG products are trustworthy?		
Always	226	56.5%
Mostly	152	38.0%
Neutral	20	5.0%
Mostly not	2	0.5%
Total	**400**	**100%**
2. Which of the following factors is most important to you when making purchasing decisions for FMCG products?		
Price	163	40.7%
Quality	145	36.3%
Brand name	62	15.5%
Availability	22	5.5%
Environmental impact	8	2.0%
Total	**400**	**100%**
3. How often do you purchase eco-labeled FMCG products?		
Always	176	44.0%
Mostly	153	38.2%
Neutral	45	11.2%
Mostly not	19	4.8%

(Continued)

Table 4.2: (Continued) General Questions of 400 respondents

General Question	Frequency	Percentage
3. How often do you purchase eco-labeled FMCG products?		
Not at all	7	1.8%
Total	**400**	**100%**
4. How important is environmental sustainability to you when making purchasing decisions for FMCG products?		
Very important. I always choose eco-labeled products.	160	40.0%
Somewhat important. But not top priority.	159	39.8%
Indifferent towards sustainability.	66	16.5%
Prioritize other factors over sustainability.	10	2.5%
Not familiar with eco-labeling.	5	1.2%
Total	**400**	**100%**
5. Which type of eco-label do you find most effective in influencing your purchasing decision?		
Energy-saving label	56	14.0%
Recyclable material label	156	39.0%
Organic or natural label	156	39.0%
Non-toxic label	28	7.0%

Table 4.2: (Continued) General Questions of 400 respondents

General Question	Frequency	Percentage
5. Which type of eco-label do you find most effective in influencing your purchasing decision?		
No preference	4	1.0%
Total	**400**	**100%**
6. In your opinion, which of the following is the most important reason for using eco-labeled FMCG products?		
To reduce environmental impact	104	26.0%
To support environmentally conscious companies	23	5.8%
To improve personal health	263	65.8%
No opinion	10	2.4%
Total	**400**	**100%**
7. When purchasing FMCG products, which of the following sources of information do you rely on most?		
Product packaging	164	41.0%
Online product descriptions	146	36.5%
Recommendations from friends or family	73	18.3%
Advertising	17	4.2%
Total	**400**	**100%**

(Continued)

Table 4.2: (Continued) General Questions of 400 respondents

General Question	Frequency	Percentage
8. How willing are you to pay a premium for eco-labeled FMCG products compared to non-eco-labeled products?		
Very willing	129	32.3%
Somewhat willing	127	31.8%
Neutral	105	26.2%
Somewhat unwilling	34	8.4%
Not at all willing	5	1.3%
Total	**400**	**100%**

Table 4.2 presents the results that show that the majority of respondents (56.5%) believe that eco-labels on FMCG products are trustworthy, while 40% of respondents always choose eco-labeled products as they consider environmental sustainability very important in their purchasing decisions. Price was the most important factor when making purchasing decisions for FMCG products for 40.8% of respondents, followed by quality (36.3%) and brand name (15.5%). Recyclable material and organic or natural labels, were found to be the most effective types of eco-labels in influencing purchasing decisions (39% each), while energy-saving labels were found to be the least effective (14%). The majority of respondents (65.8%) stated that they use eco-labeled products to improve their personal health, while 26% use them to reduce environmental impact. The packaging of products was the most relied-on source of information (41%) for respondents, followed by online product descriptions (36.5%). 63.3% of respondents were willing to pay a premium for eco-labeled FMCG products compared to non-eco-labeled products.

4.2 Analysis of Consumer Behavior

The following table presents the analysis of Consumer Behavior, including the mean, standard deviation, and mean interpretation.

Table 4.3: Mean and Standard Deviation of Consumer Behavior

Consumer Behavior	Mean	Std. Deviation	Interpretation
I use a recycling center or in some way recycle some of my household trash.	3.50	1.153	Mostly Agree
I have switched products for ecological reasons.	3.43	1.280	Mostly Agree
If I understand the potential damage to the environment that some products can cause, I do not purchase those products.	3.80	1.107	Mostly Agree
Whenever possible, I buy products packaged in reusable containers.	3.63	1.217	Mostly Agree
I do not buy products from companies who discriminate against minorities .	3.83	1.142	Mostly Agree
I will not buy a product if I know that the company that sells it is socially irresponsible.	3.88	1.096	Mostly Agree
I do not buy household products that harm the environment.	3.79	1.193	Mostly Agree
Avg.	**3.69**	**1.170**	**Mostly Agree**

From table 4.3, the consumer behavior of participants was analyzed and the results are presented. The respondents mostly agreed with the statements, with an average score of 3.69 out of 5. For the statement "I use a recycling center or in some way recycle some of my household trash", the mean score is 3.50 with a standard

deviation of 1.153, indicating that most respondents agree with the statement. Meanwhile, "I have switched products for ecological reasons" has a mean score of 3.43 and a standard deviation of 1.280, indicating that most respondents agree with the statement, but there is more variability in the responses compared to the first statement. For the statement "If I understand the potential damage to the environment that some products can cause, I do not purchase those products", the mean score is 3.80 with a standard deviation of 1.107, indicating that most respondents mostly agree with the statement. "Whenever possible, I buy products packaged in reusable containers" has a mean score of 3.63 and a standard deviation of 1.217, indicating that most respondents mostly agree with the statement. For the statement "I do not buy products from companies who discriminate against minorities", the mean score is 3.83 with a standard deviation of 1.142, indicating that most respondents mostly agree with the statement. The statement "I will not buy a product if I know that the company that sells it is socially irresponsible" has a mean score of 3.88 with a standard deviation of 1.096, indicating that most respondents mostly agree with the statement. Finally, for the statement "I do not buy household products that harm the environment", the mean score is 3.79 with a standard deviation of 1.193, indicating that most respondents mostly agree with the statement. Overall, the data suggests that the respondents have positive attitudes towards environmentally friendly and socially responsible consumption.

4.3 Analysis of Marketing Mix (4Ps)

The following table presents the analysis of Marketing Mix (4Ps)'s sub variables, including the mean, standard deviation, and mean interpretation.

Table 4.4: Mean and Standard Deviation of Marketing Mix (4Ps)

Marketing Mix (4Ps)	Mean	Std. Deviation	Interpretation
Green products are reliable	4.17	.959	Mostly Agree

(Continued)

Table 4.4: (Continued) Mean and Standard Deviation of Marketing Mix (4Ps)

Marketing Mix (4Ps)	Mean	Std. Deviation	Interpretation
Green products are healthier than the conventional products	3.88	1.082	Mostly Agree
Green products offered by the FMCG sector are far better than their non-green products	3.95	1.057	Mostly Agree
Perceived price is positively associated with the purchase intention for a green product	4.04	.992	Mostly Agree
It is worth paying higher prices for green products	4.14	.974	Mostly Agree
Purchasing location has a positive effect on customer satisfaction.	3.74	1.118	Mostly Agree
I do make extra efforts to search for a green product	3.72	1.051	Mostly Agree
Green certification on the packaging of the goods influences me	4.02	.982	Mostly Agree
Special displays for green products influences me	3.78	1.008	Mostly Agree
Avg.	**3.94**	**1.025**	**Mostly Agree**

Table 4.4 presents the results of the analysis of the marketing mix (4Ps) in relation to the consumers' attitudes towards green products. The data shows that the respondents mostly agreed with the statements, with an average score of 3.94 out of 5. The statement "Green products are reliable" has the highest mean score of 4.17 and a standard deviation of .959, indicating that most respondents agree with the statement. Similarly, "It is worth paying higher prices for green products" has a mean score of 4.14 and a standard deviation of .974, indicating that most respondents agree with this statement. The statement "Green products offered by the FMCG sector are far better

than their non-green products" has a mean score of 3.95 and a standard deviation of 1.057, indicating that most respondents agree with this statement. The data also shows that the perceived price of green products is positively associated with the purchase intention, with a mean score of 4.04 and a standard deviation of .992. The respondents mostly agreed that green certification on the packaging of goods and special displays for green products influence their purchase decision, with mean scores of 4.02 and 3.78 respectively. Finally, the mean score for the statement "Purchasing location has a positive effect on customer satisfaction" is 3.74 with a standard deviation of 1.118, indicating that most respondents mostly agree with the statement. Overall, the data suggests that the respondents have positive attitudes towards green products and are willing to pay more for them if they perceive them to be reliable and healthier.

4.4 Analysis of Climate Change Perception and Attitude

The following table presents the analysis of Climate Change Perception and Attitude's sub variables, including the mean, standard deviation, and mean interpretation.

Table 4.5: Mean and Standard Deviation of Climate Change Perception and Attitude

Climate Change Perception and Attitude	Mean	Std. Deviation	Interpretation
We need to raise environmental awareness	3.25	1.291	Moderately Agree
It is critical to endorse a green lifestyle.	3.31	1.330	Moderately Agree
I often think about how environmental quality could be improved.	3.42	1.234	Mostly Agree
It takes more energy to produce meat, therefore I eat less meat.	3.42	1.270	Mostly Agree
I prefer to purchase items that are environmentally friendly.	3.38	1.185	Moderately Agree

(Continued)

Table 4.5: (Continued) Mean and Standard Deviation of Climate Change Perception
and Attitude

Climate Change Perception and Attitude	Mean	Std. Deviation	Interpretation
I bring my own bags to the grocery or other store	3.23	1.216	Moderately Agree
I learn frequently from my friends and family about eco-friendly products.	3.63	1.089	Mostly Agree
I often share information about green products with my friends.	3.18	1.424	Moderately Agree
Before any purchase, I check product labels and see if it contains things that are harmful to the environment	3.53	1.230	Mostly Agree
Avg.	**3.37**	**1.252**	**Moderately Agree**

Table 4.5 presents the mean and standard deviation of climate change perception and attitude. The results suggest that the respondents generally have positive attitudes towards climate change perception and attitude, with an average score of 3.37, indicating a moderate agreement. The participants' attitudes towards environmental awareness and endorsing a green lifestyle are moderately agreeable, with mean scores of 3.25 and 3.31, respectively. This suggests that the respondents have a basic level of environmental consciousness and recognize the importance of living a green lifestyle. The respondents also mostly agree with the statements that they frequently think about how to improve environmental quality, eat less meat due to the energy needed for production, and prefer to purchase environmentally friendly items, with mean scores ranging from 3.38 to 3.42. This implies that the respondents are aware of the environmental impact of their choices and are taking steps to reduce their carbon footprint. Meanwhile, bringing their own bags to stores and checking product labels before purchasing are moderately agreeable, with mean scores of 3.23 and 3.53, respectively. The respondents mostly agree that they learn frequently from their friends

and family about eco-friendly products, with a mean score of 3.63. This indicates that the respondents are open to learning more about eco-friendly products and practices. However, the respondents only moderately agree that they often share information about green products with their friends, with a mean score of 3.18.

4.5 Analysis of Perceived Value

The following table presents the analysis of Perceived Value's sub variables, including the mean, standard deviation, and mean interpretation.

Table 4.6: Mean and Standard Deviation of Perceived Value

Perceived Value	Mean	Std. Deviation	Interpretation
I believe that the businesses promoting green products are truthful about environmental promises.	3.26	1.246	Moderately Agree
I feel that green products' brand's environmental arguments and cases are generally trustworthy.	3.19	1.300	Moderately Agree
The product's environmental functions provide very good value for me.	3.32	1.290	Moderately Agree
It makes sense to use green products instead of other products because of its environmental commitments.	3.18	1.310	Moderately Agree
I think the business of green products is the best benchmark in environmental commitments.	3.28	1.361	Moderately Agree
I believe that environmental problems like global warming are caused by goods and fast products.	3.21	1.295	Moderately Agree

(Continued)

Table 4.6: (Continued) Mean and Standard Deviation of Perceived Value

Perceived Value	Mean	Std. Deviation	Interpretation
Use of renewable / recycled products is the best way to combat global warming.	3.46	1.178	Mostly Agree
I believe that we contribute to pollution by the products we use.	2.79	1.432	Moderately Agree
I prefer simple and unprocessed foods because I think it helps the environment.	2.97	1.360	Moderately Agree
Avg.	**3.18**	**1.308**	**Moderately Agree**

Table 4.6 presents the mean and standard deviation of participants' perceived value of green products. The results indicate that participants generally have a moderate agreement with the statements related to the perceived value of green products, with an overall mean score of 3.18. The majority of participants believe that businesses promoting green products are truthful about environmental promises, with a mean score of 3.26. Participants also feel that the environmental arguments and cases made by green product brands are generally trustworthy (mean score of 3.19) and that the environmental functions of green products provide very good value (mean score of 3.32). However, participants only moderately agree that it makes sense to use green products instead of other products due to environmental commitments (mean score of 3.18) and that the business of green products is the best benchmark in environmental commitments (mean score of 3.28). Meanwhile, the respondents moderately agree to "I believe that environmental problems like global warming are caused by goods and fast products" with a mean score of 3.21. Additionally, the majority of participants agree that the use of renewable/recycled products is the best way to combat global warming (mean score of 3.46) and that they contribute to pollution by the products they use (mean score of 2.79). Participants also moderately agree that they prefer simple and unprocessed foods to help the environment (mean score of 2.97).

4.6 Analysis of the relationship among Consumer Behavior, Marketing Mix (4Ps), Climate Change Perception and Attitude, and Perceived Value

This section examines the relationship between the independent variables: Marketing Mix (4Ps), Climate Change Perception and Attitude, and Perceived Value to Consumer Behavior. To analyze these relationships was utilized as below:

Table 4.7: Coefficients

Model		Unstandardised Coefficients		Standardized Coefficients	t.	Sig.
		B	Std. Error	β		
1	(Constant)	1.619	.229		7.062	.000
	Product	.336	.063	.326	5.354	.000*
	Price	.136	.063	.133	2.156	.032*
	Place	-.045	.058	-.045	-.782	.435
	Promotion	.087	.057	.088	1.517	.130
2	(Constant)	2.382	.155		15.327	.000
	PerceivedSeriousness	.040	.056	.049	.718	.473
	Perceived Environmental	.364	.064	.409	5.5652	.000*
	Attitude	-.012	.046	-.014	-.257	.797
3	(Constant)	2.754	.121		22.848	.000
	PerceivedQuality	.044	.061	.060	.719	.472
	ExtrinsicAttributes	-.114	.067	-.159	-1.703	.089
	IntrinsicAttributes	.376	.069	.503	5.493	.000*

a. Dependent Variable: ConsumerBehavior
b. Predictors: (Constant), Promotion, Price, Place, Product
c. Predictors: (Constant), Attitude, PerceivedSeriousness, PerceivedEnvironment
d. Predictors: (Constant), IntrinsicAttributes, PerceivedQuality, ExtrinsicAttributes

Table 4.7 presents the coefficients for the three regression models. Interpretation of the coefficients for each model:

Model 1, the constant term has a coefficient of 1.619 and a standard error of 0.229. This represents the estimated mean value of the dependent variable when all predictors (Promotion, Price, Place, and Product) are zero. The coefficient for the Product predictor is 0.336, indicating that a one-unit increase in Product is associated with a 0.336 unit increase in the dependent variable, holding other predictors constant. The coefficient for the Price predictor is 0.136, suggesting that a one-unit increase in Price is associated with a 0.136 unit increase in the dependent variable, controlling for other predictors. The coefficient for the Place predictor is -0.045, implying that a one-unit increase in Place is associated with a -0.045 unit decrease in the dependent variable, while other predictors are held constant. The coefficient for the Promotion predictor is 0.087, indicating that a one-unit increase in Promotion is associated with a 0.087 unit increase in the dependent variable, controlling for other predictors.

Model 2, the constant term has a coefficient of 2.382 and a standard error of 0.155, representing the estimated mean value of the dependent variable when all predictors (Attitude, PerceivedSeriousness, PerceivedEnvironment) are zero. The coefficient for the PerceivedSeriousness predictor is 0.040, suggesting that a one-unit increase in PerceivedSeriousness is associated with a 0.040 unit increase in the dependent variable, while other predictors are held constant. The coefficient for the PerceivedEnvironmental predictor is 0.364, indicating that a one-unit increase in PerceivedEnvironmental is associated with a 0.364 unit increase in the dependent variable, controlling for other predictors. The coefficient for the Attitude predictor is -0.012, implying that a one-unit increase in Attitude is associated with a -0.012 unit decrease in the dependent variable, holding other predictors constant.

Model 3, the constant term has a coefficient of 2.754 and a standard error of 0.121, representing the estimated mean value of the dependent variable when all predictors (IntrinsicAttributes, PerceivedQuality, ExtrinsicAttributes) are zero. The coefficient for the PerceivedQuality predictor is 0.044, indicating that a one-unit increase in

PerceivedQuality is associated with a 0.044 unit increase in the dependent variable, controlling for other predictors. The coefficient for the ExtrinsicAttributes predictor is -0.114, suggesting that a one-unit increase in ExtrinsicAttributes is associated with a -0.114 unit decrease in the dependent variable, while other predictors are held constant. The coefficient for the IntrinsicAttributes predictor is 0.376, implying that a one-unit increase in IntrinsicAttributes is associated with a 0.376 unit increase in the dependent variable, holding other predictors constant.

4.7 Results of the Hypothesis testing

To be concluded that all three hypotheses for this study were accepted, the testing is analyzed in the below table:

Table 4.8: Results of the Hypothesis Testing

Hypothesis	Result
1. Marketing Mix (4Ps) factors has an influence on Consumer Behavior	**Accepted***
- Product	**Accepted**
- Price	**Accepted**
- Place	Not Accepted
- Promotion	Not Accepted
2. Climate Change Perception and Attitude factor has an influence on Consumer Behavior	**Accepted***
- Perceived Seriousness of Climate Change	Not Accepted
- Perceived Environmental Responsibility	**Accepted**
- Attitude Towards Climate Change	Not Accepted
3. Perceived Value factor has an influence on Consumer Behavior	**Accepted***
- Perceived Quality	Not Accepted
- Extrinsic Attributes	Not Accepted

- Intrinsic Attributes	**Accepted**

The results of hypothesis testing, as shown in Table 4.8, provide insights into the influence of different factors on consumer behavior. The first hypothesis aimed to determine whether the Marketing Mix (4Ps) factors have an influence on consumer behavior. The findings reveal that Product and Price have a significant impact on consumer behavior, supporting the hypothesis. This suggests that the specific attributes of the product and its pricing strategy play a crucial role in shaping consumer behavior. On the other hand, the influence of Place and Promotion on consumer behavior was not found to be significant, indicating that these factors may have limited impact or need further investigation. The second hypothesis focused on the influence of Climate Change Perception and Attitude on consumer behavior. The results indicate that consumer behavior is significantly influenced by the perceived seriousness of climate change and the attitude towards climate change. This suggests that consumers who perceive climate change as a serious issue and hold positive attitudes towards it are more likely to exhibit certain behavioral patterns. However, the influence of perceived environmental responsibility on consumer behavior was not found to be significant, suggesting that other factors may have a stronger impact on consumer behavior in this context. Lastly, the third hypothesis examined the influence of Perceived Value factors on consumer behavior. The results reveal that Perceived Quality and Intrinsic Attributes significantly influence consumer behavior, supporting the hypothesis. This implies that consumers' perception of the quality of a product and the intrinsic attributes associated with it (such as its features, functionality, or design) can greatly impact their behavior. However, the influence of Extrinsic Attributes on consumer behavior was not found to be significant, suggesting that other factors may play a more prominent role in shaping consumer behavior in relation to extrinsic attributes.

CHAPTER 5
SUMMARY, CONCLUSION AND DISCUSSION

This part will cover 4 elements: summary and conclusion, discussion, recommendations for implications, and recommendations for future research. They are as follows:

5.1 Summary and Conclusion

5.2 Discussion

5.3 Recommendations for Implications

5.4 Recommendations for Future Research

5.1 Summary and Conclusion

Consumer behavior towards eco-friendly FMCG products is influenced by a complex interplay of internal and external factors. Internal factors, including personality, attitudes, beliefs, and values, shape consumers' preferences and willingness to purchase eco-friendly products. External factors, such as culture, socioeconomic class, and social influence, also play a significant role in shaping consumer behavior. The marketing mix (4Ps) variables, product and price significantly influence consumer behavior towards eco-friendly products; nonetheless, place and promotion are not accepted significantly in the recent research even though the general questions collected data conveyed that Bangkok residents moderately agreed with the factors. Overall, the features, affordability, and accessibility strategies of eco-friendly products affect consumers' decision-making processes.

Consumers' perception and attitude towards climate change are crucial determinants of their behavior and preference for eco-friendly products. The seriousness of climate change, attitude towards climate change, and perceived behavioral control influence consumers' intention to adopt eco-friendly products. Additionally, consumers' environmental concern, values, and personal beliefs about sustainability and environmental responsibility shape their attitude and behavior towards eco-friendly FMCG products.

Perceived value, including both functional and emotional benefits, plays a vital role in consumer behavior towards eco-friendly products. Consumers perceive eco-

friendly products as having higher value due to their positive environmental impact, health benefits, and social responsibility.

To effectively target environmentally conscious consumers, businesses must understand these factors and develop marketing strategies that highlight the intrinsic and extrinsic attributes of eco-friendly FMCG products. Emphasizing the environmental advantages, affordability, availability, and perceived value of eco-friendly products can positively influence consumer behavior and drive demand for sustainable options.

5.2 Discussion

The aim of this chapter is to compare the research results and discuss the relevance to the obtained findings. The research results will be analyzed in relation to the theories and academic research on consumer behavior, the marketing mix (4Ps), climate change perception and attitude, and perceived value.

Consumer behavior

The research findings align with the relevance of research presented by Gani (2021) that internal factors such as personality, attitudes, beliefs, values, motives, and emotions can influence consumers' perception and willingness to buy eco-friendly products. The results suggest that these internal factors, although not directly measured in the study, may have played a role in shaping consumer behavior as Gani's result as well as Cheema et al. (2015)'s. Furthermore, the research supports the notion that the significance of eco-friendly features in customers' purchased products has increased as consumers become more environmentally conscious, as emphasized by Thøgersen (2021). The findings suggest that consumers' environmental awareness may have influenced their decision-making when purchasing eco-friendly products. Additionally, the study acknowledges the importance of eco-labels in influencing customer behavior, as highlighted by Alamsyah et al. (2021). The research results indirectly align with this idea by indicating that factors such as promotion, price, place, and product may impact consumer behavior when considering eco-friendly items. The research results support the findings presented by Cheema et al. (2015) and Schils (2022) regarding the influence of price on consumer behavior. The coefficient for the Price predictor

suggests that changes in price can have an impact on consumers' purchasing decisions. This aligns with Schils' (2022) assertion that price plays a significant role in determining customers' behavior in the FMCG industry. Moreover, the study provides indirect support for the importance of eco-labels and certifications in influencing consumers' perceptions and purchase decisions, as mentioned by Alamsyah et al. (2021). The research findings suggest that product attributes, such as eco-labels, may contribute to consumers' perceived value of eco-friendly products, thus affecting their behavior.

Marketing Mix (4Ps)

In the context of encouraging consumers to purchase environmentally friendly products, understanding the influence of the marketing mix (4Ps) variables on customer behavior in fast-moving consumer goods (FMCG) is crucial. The marketing mix consists of four elements: product, price, place, and promotion, which collectively form a comprehensive marketing strategy for businesses.

Accepted Sub-Variables:

Product plays a significant role in influencing consumer decision-making when it comes to eco-friendly FMCG products (Product). Consumers are influenced by extrinsic features such as eco-labels, packaging materials, and environmental certifications when selecting eco-friendly products (Hwang et al., 2016; Cammarelle et al., 2021). Moreover, to effectively target environmentally conscious consumers, businesses should emphasize the environmental advantages of their products while ensuring product quality and core attributes are maintained (Gani, 2021).

Price, particularly in the FMCG industry, significantly impacts customers' purchasing behavior (Price). Besides, businesses need to strike a balance between offering affordable prices for their eco-friendly products and maintaining the perceived value of their goods (Wangari, 2018). However, businesses should consider consumers' willingness to pay for sustainable products and their sensitivity to price changes (Schils, 2021).

Not Accepted Sub-Variables:

The results indicate that product and price have a significant impact on consumer behavior, supporting the idea that these variables play a crucial role in shaping consumer decisions, as mentioned by Wangari (2018) and Cheema et al. (2015). However, the influence of place and promotion on consumer behavior is not significant in this recent research, as Mahmoud (2018) claimed that green place focuses on managing logistics to reduce transportation emissions and the carbon footprint, aiming to ensure environmentally friendly distribution. It involves choosing suitable locations for product placement, both physical and virtual, that are free from contamination. The choice of where and when to make green products available significantly influences customer behavior, as most customers will not go out of their way to purchase them unless the ecological nature of the products is guaranteed. Therefore, the place is playing a crucial role as it has to be convenient for consumers to achieve and also has to concern the local environment and logistics for any transportation. For the promotion factor, Mahmoud (2018) also claimed that green promotion involves conveying genuine information about products in a manner that safeguards consumers' materialistic and moral interests. It entails configuring promotional tools, such as advertising, marketing materials, public relations, and sales promotions, with a focus on people, planet, and profits. The objective is to influence consumer behavior by highlighting the positive outcomes of environmentally responsible purchases. Furthermore, it is crucial to monitor and ensure the accuracy of companies' claims in this regard. However, in Bangkok, there are only a few organizations that raise green topics to promote in marketing communication, public relations, advertising, or sales promotion, the promotion factor in this recent research is not accepted significantly (Panya O, 2003).

Climate Change Perception and Attitude

The recent research results provide support for the idea that consumer behavior is influenced by perceptions and attitudes towards climate change. The findings align with the Theory of Planned Behavior (TPB), as mentioned by Gani (2021), and indicate that consumers' perceptions of the seriousness of climate change and their attitudes towards it can impact their purchasing decisions, even though the results of perceived

seriousness of climate change and attitude towards climate change factors are not significant, which perceived environmental responsibility narrowly accepted significantly. Thøgersen (2021) claimed that situational constraints and habits are significant barriers to reducing carbon footprints in areas like electricity usage and heating. Waste reduction, substitution of carbon-intensive products, and adoption of climate-friendly alternatives require interventions that make it easier for consumers.

Accepted Sub-Variables:

Perceived Environmental Responsibility is a significant factor that businesses in the FMCG sector must consider when marketing environmentally friendly products (Hutcheon et al., 2021). As consumers become more conscious of climate change, their expectations of businesses change, leading to a higher demand for eco-friendly products and services. This highlights the importance of businesses informing and assisting their clients in making environmentally conscious decisions (Thøgersen, 2021).

The Theory of Planned Behavior (TPB) provides a useful framework for analyzing consumer attitudes and their decisions to purchase eco-friendly products in the context of climate change (Ajzen, 1991). According to TPB, people's attitudes, subjective norms, and perceived behavioral control influence their intentions and subsequent behavior. In the context of climate change and eco-friendly FMCG products, TPB can explain the relationship between consumers' perceptions of the environmental impact of their consumption choices and their propensity to buy eco-labeled goods (Gani, 2021).

A study by Dahlhoff (2022) found that more people are adopting environmentally sustainable activities due to climate change. This aligns with the increasing concern of customers regarding climate change, as reported by Malmqvist (2022), who also highlighted consumers' expectations for firms and governments to take action.

Not Accepted Sub-Variables:

As a consequence of the recent research results conducted in Bangkok for Bangkok residents, assessing carbon footprints is challenging for consumers, calling for better education and simplified tools like carbon labeling are arduous in Thailand recently in the era; in the result that the perceived seriousness of climate change, and attitude towards climate change are not significant in this research.

Perceived Value

The research findings are consistent with the notion that perceived value, including intrinsic attributes and perceived quality, influences consumer behavior. This supports the ideas presented by Wangari (2018) regarding the significance of perceived value in shaping consumer decision-making. Further, the findings of Alamsyah et al. (2021) indicate that the presence of an eco-label attribute on green products can increase customer's perceived quality and green trust. However, perceived innovation does not seem to be influenced by the eco-label attribute and does not impact customer's green trust.

Accepted Sub-Variables:

Perceived value plays a significant role in consumers' decision-making process, especially when considering eco-friendly FMCG products. The evaluation of the utility of a product or service is based on the consumer's perception of what they receive in comparison to what they provide. The usage of eco-labels and certifications on products can enhance green perceived value by providing consumers with assurance of the product's eco-friendliness and sustainability (Hwang et al., 2016; Gonzalez & Antonio, 2020). Additionally, consumers may perceive social value in purchasing eco-labeled products as it reflects their commitment to environmental friendliness and positive contribution to society (Hwang et al., 2016). The personal satisfaction and improved health associated with eco-friendly products can also influence consumers' perceived value (Gonzalez & Antonio, 2020).

Not Accepted Sub-Variables:

For extrinsic attributes factor that is not also accepted significantly, regarding that Hwang et al. (2016) claimed that despite consumers expressing a willingness to pay more for eco-labeled products, eco-labels alone do not effectively encourage purchases. The study finds that consumers' perceived private value, such as cost-saving benefits, has a stronger influence on their purchasing decisions compared to perceived social value. To increase the market for eco-labeled products, strategies should be developed to address both private and social value. What is more, the study emphasizes that perceived quality can directly mediate the increase in customer's green trust,

supported by the eco-label attribute, yet not accepted significantly for Bangkok residents.

5.3 Recommendations for Implications

1. Enhancing consumer education and awareness by providing consumers with information about the environmental impact of their choices and the value of eco-friendly features can help shape their attitudes and drive sustainable consumption.

2. Emphasizing the value proposition by focusing on highlighting the intrinsic attributes and quality of their eco-friendly products.

3. Utilizing effective pricing strategies by considering implementing pricing strategies that make eco-friendly products more accessible and competitive compared to conventional alternatives.

4. Leveraging eco-labels and certifications by actively seeking eco-label certifications and communicating these labels effectively on their products.

5. Enhancing product design and innovation by investing in product design and innovation to create eco-friendly products that meet consumers' needs and preferences.

6. Developing sustainable packaging, improving energy efficiency, and incorporating eco-friendly materials can enhance the perceived value and desirability of products.

7. Collaborating with stakeholders by collaborating with government bodies, NGOs, and industry associations to collectively promote sustainable consumption.

8. Sharing best practices, conducting joint awareness campaigns, and advocating for supportive policies can amplify the impact of individual efforts.

5.4 Recommendations for Future Research

1. Cross-cultural analysis by Investigating the cross-cultural variations in consumer behavior towards eco-friendly products. Different cultural values, norms, and beliefs may influence consumer attitudes and purchasing decisions differently across various countries and regions.

2. Influencing of social networks by exploring the influence of social networks and interpersonal communication on consumer behavior towards eco-friendly products. Investigate how social interactions, peer influence, and online platforms impact

consumers' attitudes, knowledge, and purchasing decisions related to eco-friendly products.

3. Effectiveness of different marketing strategies by examining the effectiveness of different marketing strategies in promoting eco-friendly products. Compare the impact of various marketing techniques such as social media campaigns, celebrity endorsements, cause-related marketing, and green advertising on consumer behavior and purchase intentions.

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APPENDIX

Questionnaire

The Effectiveness of Eco-Labels in Influencing Consumer Behavior for FMCG Products in Bangkok, Thailand

Description:

Dear Participants,

I am conducting a survey to explore The Effectiveness of Eco-Labels in Influencing Consumer Behavior for FMCG Products in Bangkok, Thailand. The aim of this study is to identify the key factors that influence consumer behavior for FMCG products. Participation in this survey is voluntary and confidential. Any data collected from respondents will be kept confidential and used only for research purposes.

The survey comprises both multiple-choice and Likert scale questions and is expected to take approximately 15 minutes to complete.

Please be advised that by agreeing to participate in this study, you are granting consent for the utilization of your responses for research purposes. If you have any inquiries or concerns regarding the survey, please do not hesitate to contact me (riku.numm@bumail.net).

Note: 1. Fast-moving consumer goods (FMCG) refer to inexpensive products with high turnover rates, such as milk, chewing gum, fruits, vegetables, soda, beer, and common medications like aspirin.

2. Eco-labels are symbols or logos displayed on product packaging or e-catalogs that help consumers and institutional buyers in quickly and effortlessly identifying environmentally preferable products that satisfy specific environmental performance standards.

Thank you for your valuable time and participation.

Demographic Questions:

Instructions: Please choose the (✔) answer that matches your information.

1. Gender

❏ Male ❏ Female ❏ Prefer not to say

2. Age

❏ Under 20 years ❏ 20 - 30 years ❏ 31 - 40 years

❏ 41 - 50 years ❏ Above 51 years

3. Education

❏ Lower than high school ❏ High school / Diploma ❏ Bachelor's degree

❏ Higher than Bachelor's degree

4. Occupation

❏ Student ❏ Employed ❏ Business owner

❏ Unemployed

5. Monthly Income

❏ 0 - 15,000 THB ❏ 15,001 - 30,000 THB ❏ 30,001 - 45,000 THB

❏ 45,001 - 60,000 THB ❏ 60,001 - 75,000 THB ❏ Above 75,001 THB

6. Marital Status

❏ Single ❏ Married ❏ Divorced ❏ Widowed

General Questions:

1. Do you believe that eco-labels on FMCG products are trustworthy?

❏ Always ❏ Mostly ❏ Neutral

❏ Mostly not ❏ Not at all

2. Which of the following factors is most important to you when making purchasing decisions for FMCG products?

❏ Price ❏ Quality ❏ Brand name

❏ Availability ❏ Environmental impact

3. How often do you purchase eco-labeled FMCG products?

❏ Always ❏ Mostly ❏ Neutral

❏ Mostly not ❏ Not at all

4. How important is environmental sustainability to you when making purchasing decisions for FMCG products?

❏ Very important. I always choose eco-labeled products.

❏ Somewhat important. But not top priority.

❏ Indifferent towards sustainability.

❏ Prioritize other factors over sustainability.

❏ Not familiar with eco-labeling.

5. Which type of eco-label do you find most effective in influencing your purchasing decision?

❏ Energy-saving label ❏ Recyclable material label ❏ Organic or natural label

❏ Non-toxic label ❏ No preference

6. In your opinion, which of the following is the most important reason for using eco-labeled FMCG products?

❏ To reduce environmental impact ❏ To support environmentally conscious companies

❏ To improve personal health ❏ No opinion

7. When purchasing FMCG products, which of the following sources of information do you rely on most?

❏ Product packaging ❏ Online product descriptions

❏ Recommendations from friends or family ❏ Advertising

8. How willing are you to pay a premium for eco-labeled FMCG products compared to non-eco-labeled products?

❏ Very willing ❏ Somewhat willing ❏ Neutral

❏ Somewhat unwilling ❏ Not at all willing

Section 2:

Instructions: Please indicate your opinion on the following statements by checking only one box per statement.

(1 = Least Agree, 2 = Slightly Agree, 3 = Moderately Agree, 4 = Mostly Agree, 5 = Completely Agree)

Marketing Mix (4Ps)

1.	Green products are reliable.	1	2	3	4	5
2.	Green products are healthier than conventional products.	1	2	3	4	5
3.	It is worth paying higher prices for green products.	1	2	3	4	5
4.	Perceived price is positively associated with the purchase intention for a green product.	1	2	3	4	5
5.	Purchasing location has a positive effect on customer satisfaction.	1	2	3	4	5
6.	I do make extra efforts to search for a green product.	1	2	3	4	5
7.	Green certification on the packaging of the goods influences me.	1	2	3	4	5

8.	Special displays for green products influence me.	1	2	3	4	5
9.	Green products offered by the FMCG sector are far better than their non-green products.	1	2	3	4	5

Section 3:

Instructions: Please indicate your opinion on the following statements by checking only one box per statement.

(1 = Least Agree, 2 = Slightly Agree, 3 = Moderately Agree, 4 = Mostly Agree, 5 = Completely Agree)

Climate Change Perception and Attitude

1.	I learn frequently from my friends and family about eco-friendly products.	1	2	3	4	5
2.	We need to raise environmental awareness.	1	2	3	4	5
3.	I often think about how environmental quality could be improved.	1	2	3	4	5
4.	Before any purchase, I check product labels and see if it contains things that are harmful to the environment.	1	2	3	4	5
5.	I prefer to purchase items that are environmentally friendly.	1	2	3	4	5
6.	It is critical to endorse a green lifestyle.	1	2	3	4	5
7.	I often share information about green products with my friends.	1	2	3	4	5

8.	I bring my own bags to the grocery or other store.	1	2	3	4	5
9.	It takes more energy to produce meat, therefore I eat less meat.	1	2	3	4	5

Section 4:

Instructions: Please indicate your opinion on the following statements by checking only one box per statement.

(1 = Least Agree, 2 = Slightly Agree, 3 = Moderately Agree, 4 = Mostly Agree, 5 = Completely Agree)

Perceived Value

1.	I believe that environmental problems like global warming are caused by goods and fast products.	1	2	3	4	5
2.	I believe that we contribute to pollution by the products we use.	1	2	3	4	5
3.	Use of renewable / recycled products is the best way to combat global warming.	1	2	3	4	5
4.	I prefer simple and unprocessed foods because I think it helps the environment.	1	2	3	4	5
5.	I think the business of green products is the best benchmark in environmental commitments.	1	2	3	4	5
6.	I believe that the businesses promoting green products are truthful about environmental promises.	1	2	3	4	5
7.	I feel that green products brand's environmental arguments and cases are generally trustworthy.	1	2	3	4	5

8.	The product's environmental functions provide very good value for me.	1	2	3	4	5
9.	It makes sense to use green products instead of other products because of its environmental commitments.	1	2	3	4	5

Section 5:

Instructions: Please indicate your opinion on the following statements by checking only one box per statement.

(1 = Least Agree, 2 = Slightly Agree, 3 = Moderately Agree, 4 = Mostly Agree, 5 = Completely Agree)

Consumer Behavior

1.	I use a recycling center or in some way recycle some of my household trash.	1	2	3	4	5
2.	I have switched products for ecological reasons.	1	2	3	4	5
3.	If I understand the potential damage to the environment that some products can cause, I do not purchase those products.	1	2	3	4	5
4.	Whenever possible, I buy products packaged in reusable containers.	1	2	3	4	5
5.	I do not buy products from companies who discriminate against minorities.	1	2	3	4	5
6.	I will not buy a product if I know that the company that sells it is socially irresponsible.	1	2	3	4	5
7.	I do not buy household products that harm the environment.	1	2	3	4	5

Statistic Results

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	42	100.0
	Excluded^a	0	.0
	Total	42	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.883	.872	34

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	162	40.5	40.5	40.5
	2	229	57.3	57.3	97.8
	3	9	2.3	2.3	100.0
	Total	400	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	109	27.3	27.3	27.3
	3	205	51.2	51.2	78.5
	4	78	19.5	19.5	98.0
	5	8	2.0	2.0	100.0
	Total	400	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	17	4.3	4.3	4.3
	3	291	72.8	72.8	77.0
	4	92	23.0	23.0	100.0
	Total	400	100.0	100.0	

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	357	89.3	89.3	89.5
	3	42	10.5	10.5	100.0
	Total	400	100.0	100.0	

Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	58	14.5	14.5	14.5
	3	129	32.3	32.3	46.8
	4	185	46.3	46.3	93.0
	5	25	6.3	6.3	99.3
	6	3	.8	.8	100.0
	Total	400	100.0	100.0	

Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	347	86.8	86.8	86.8
	2	53	13.3	13.3	100.0
	Total	400	100.0	100.0	

G1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	.5	.5	.5
	3	20	5.0	5.0	5.5
	4	152	38.0	38.0	43.5
	5	226	56.5	56.5	100.0
	Total	400	100.0	100.0	

G2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	163	40.8	40.8	40.8
	2	145	36.3	36.3	77.0
	3	62	15.5	15.5	92.5
	4	22	5.5	5.5	98.0
	5	8	2.0	2.0	100.0
	Total	400	100.0	100.0	

G3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	1.8	1.8	1.8
	2	19	4.8	4.8	6.5
	3	45	11.3	11.3	17.8
	4	153	38.3	38.3	56.0
	5	176	44.0	44.0	100.0
	Total	400	100.0	100.0	

G4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	1.3	1.3	1.3
	2	10	2.5	2.5	3.8
	3	66	16.5	16.5	20.3
	4	159	39.8	39.8	60.0
	5	160	40.0	40.0	100.0
	Total	400	100.0	100.0	

G5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	56	14.0	14.0	14.0
	2	156	39.0	39.0	53.0
	3	156	39.0	39.0	92.0
	4	28	7.0	7.0	99.0
	5	4	1.0	1.0	100.0
	Total	400	100.0	100.0	

G6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	104	26.0	26.0	26.0
	2	23	5.8	5.8	31.8
	3	263	65.8	65.8	97.5
	4	10	2.5	2.5	100.0
	Total	400	100.0	100.0	

G7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	164	41.0	41.1	41.1
	2	146	36.5	36.6	77.7
	3	73	18.3	18.3	96.0
	4	16	4.0	4.0	100.0
	Total	399	99.8	100.0	
Missing	System	1	.3		
Total		400	100.0		

G8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	1.3	1.3	1.3
	2	34	8.5	8.5	9.8
	3	105	26.3	26.3	36.0
	4	127	31.8	31.8	67.8
	5	129	32.3	32.3	100.0
	Total	400	100.0	100.0	

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Promotion, Price, Place, Product[b]	.	Enter

a. Dependent Variable: ConsumerBehavior

b. Tolerance = .000 limit reached.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.451[a]	.204	.196	.76735

a. Predictors: (Constant), Promotion, Price, Place, Product

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	59.526	4	14.882	25.273	.000[b]
	Residual	232.588	395	.589		
	Total	292.114	399			

a. Dependent Variable: ConsumerBehavior

b. Predictors: (Constant), Promotion, Price, Place, Product

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.619	.229		7.062	.000
	Product	.336	.063	.326	5.354	.000
	Price	.136	.063	.133	2.156	.032
	Place	-.045	.058	-.045	-.782	.435
	Promotion	.087	.057	.088	1.517	.130

a. Dependent Variable: ConsumerBehavior

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	MarketingMix	.[b]	.	.	.	.000

a. Dependent Variable: ConsumerBehavior

b. Predictors in the Model: (Constant), Promotion, Price, Place, Product

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Attitude, PerceivedSeriousness, PerceivedEnvironmental[b]	.	Enter

a. Dependent Variable: ConsumerBehavior

b. Tolerance = .000 limit reached.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.439[a]	.193	.187	.77152

a. Predictors: (Constant), Attitude, PerceivedSeriousness, PerceivedEnvironmental

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	56.396	3	18.799	31.582	.000[b]
	Residual	235.718	396	.595		
	Total	292.114	399			

a. Dependent Variable: ConsumerBehavior

b. Predictors: (Constant), Attitude, PerceivedSeriousness, PerceivedEnvironmental

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.382	.155		15.327	.000
	PerceivedSeriousness	.040	.056	.049	.718	.473
	PerceivedEnvironmental	.364	.064	.409	5.652	.000
	Attitude	-.012	.046	-.014	-.257	.797

a. Dependent Variable: ConsumerBehavior

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	AttitudePerception	.[b]	.	.	.	.000

a. Dependent Variable: ConsumerBehavior

b. Predictors in the Model: (Constant), Attitude, PerceivedSeriousness, PerceivedEnvironmental

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	IntrinsicAttributes, PerceivedQuality, ExtrinsicAttributes[b]	.	Enter

a. Dependent Variable: ConsumerBehavior

b. Tolerance = .000 limit reached.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.424[a]	.180	.173	.77791

a. Predictors: (Constant), IntrinsicAttributes, PerceivedQuality, ExtrinsicAttributes

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.475	3	17.492	28.905	.000[b]
	Residual	239.639	396	.605		
	Total	292.114	399			

a. Dependent Variable: ConsumerBehavior

b. Predictors: (Constant), IntrinsicAttributes, PerceivedQuality, ExtrinsicAttributes

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.754	.121		22.848	.000
	PerceivedQuality	.044	.061	.060	.719	.472
	ExtrinsicAttributes	-.114	.067	-.159	-1.703	.089
	IntrinsicAttributes	.376	.069	.503	5.493	.000

a. Dependent Variable: ConsumerBehavior

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	PerceivedValue	.[b]	.	.	.	.000

a. Dependent Variable: ConsumerBehavior

b. Predictors in the Model: (Constant), IntrinsicAttributes, PerceivedQuality, ExtrinsicAttributes

Biodata

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