

GREEN MARKETING OF PANASONIC ELECTRONIC PRODUCTS: PERSPECTIVE OF 4P'S

Mingzhe Liu ^{1*}

¹ Graduate School, Siam University of Thailand

* **Corresponding Author, E-mail:** 646067916@qq.com

Abstract: In today's society, the awareness of environmental protection is increasingly increasing, green consumption has become a topic of more and more attention to global consumers. As a well-known manufacturer of electrical products, Panasonic has also realized the importance of green marketing by launching green products and green marketing strategies to meet consumers' needs for environmental protection. As a developing country, Thailand attaches increasing importance to green consumption, and consumers' demand for environmentally friendly products is also growing. Therefore, this study aims to explore the decision behavior of Thai consumers on the green marketing of Panasonic products, and to provide a reference for the promotion of Panasonic products in the Thai market. The research objectives were four parts: O1: To discuss the impact of green products on the decision of Thai consumers to buy Panasonic electrical appliances. O2: To analyze the impact of green prices on the decision of Thai consumers to buy Panasonic electrical appliances. O3: To evaluate the impact of green promotion on Thai consumers' decision to buy Panasonic appliances. O4: To investigate the impact of the green location on the decision of Thai consumers to buy Panasonic electrical appliances. This paper is a quantitative research method to analyze causality. The respondents were 210 Panasonic air conditioning users, using random sampling technology, and the statistics used in the data analysis included frequency number, correlation analysis, and Inferential analysis. The results show that the simultaneous changes in the green marketing mix will be able to affect 96.8% of Panasonic's electronics purchase decisions. According to the empirical analysis results, changes in the green marketing mix (including green products, green prices, green promotions, and green place) will have an impact on the purchase decision of Panasonic electronic products. In terms of influencing purchase decisions, the price, place, promotion and the product itself are clearly sequential.

Keywords: Green Marketing, Purchase Decision, Thai Market, Panasonic Brand

Introduction

In recent years, with the popularization of green consumption concepts and government

policy support for the environmental protection industry, the green marketing of electrical products has gradually attracted attention (Hosoya, 2020; Bahl & Chandra, 2018). In the context of fierce market competition, more and more electrical companies have realized the connection between environmental protection and sustainable development and have launched products that meet the concept of green marketing to enhance their corporate image and market competitiveness (Bagali et al., 2024). As one of the essential consumer goods for every family, the waste and pollution generated during the production, use and treatment of electrical products have become more and more the focus of environmental protection. This shows that the green marketing of electrical products is particularly important in this context.

As a well-known manufacturer of electrical appliances, Panasonic has also realized the importance of green marketing and has met consumers' demand for environmental protection by launching green products and green marketing strategies. As a developing country, Thailand has been paying more and more attention to green consumption, and consumers' demand for environmentally friendly products is also growing (Tandukar & Yadav, 2020). As an electrical appliance manufacturer with a certain reputation in the Thai market, Panasonic aims to meet Thai consumers' demand for environmentally friendly products and enhance its brand image and market share by launching green products and green marketing strategies. However, in terms of green marketing, consumers' attitudes and behaviors are often affected by many factors, such as environmental awareness, price, product performance, brand image, etc. The green marketing of electrical appliances still faces some challenges (Latief, 2023).

The reason is that consumers have limited knowledge of green products and have doubts about the benefits and credibility of green marketing, which makes market promotion difficult. When implementing green marketing, electrical appliance companies need to increase R&D costs, transform production lines, and find environmentally friendly materials, etc (Adisak, 2020). The cost is high, which puts certain pressure on business operations. Furthermore, the life cycle of electrical appliances is long, and there are still problems in the disposal of discarded products (Abdelkafi & Pero, 2018). It is necessary to strengthen the research on recycling and waste treatment technologies.

Therefore, this study aims to explore the attitudes and behaviors of Thai consumers towards green marketing of Panasonic electrical products and provide reference for the promotion of Panasonic electrical products in the Thai market. This study will explore the attitudes and behaviors of Thai consumers towards green marketing of Panasonic electrical products through questionnaire surveys and in-depth interviews, analyze consumer needs and preferences, and provide reliable data support for Panasonic electrical products to carry out green marketing in the Thai market. Through the study of Thai consumers' attitudes towards green marketing of Panasonic electrical products, it can not only provide a reference for Panasonic's brand promotion and marketing strategy in the Thai

market, but also help understand Thai consumers' cognition and demand for environmentally friendly products and promote the further popularization and promotion of environmental awareness. At the same time, it can also provide experience and reference for other electrical product manufacturers to carry out green marketing.

Research Objectives

Specifically divided into four aspects:

- 1) To discuss the impact of green products on the decision of Thai consumers to buy Panasonic electrical appliances.
- 2) To analyze the impact of green prices on the decision of Thai consumers to buy Panasonic electrical appliances.
- 3) To evaluate the impact of green promotion on Thai consumers' decision to buy Panasonic appliances.
- 4) To investigate the impact of the green location on the decision of Thai consumers to buy Panasonic electrical appliances.

Literature Review

Overview of Green Marketing

Green marketing is a marketing strategy that enterprises pay attention to environmental protection, energy saving, low carbon, sustainable development and other aspects in the process of product design, production, sales and marketing to reduce the impact on the environment and enhance brand image and market competitiveness (Srivastava, 2013; Bagali et al., 2024). Its characteristics include paying attention to environmental protection, sustainability and social responsibility, promoting product innovation and green production, emphasizing consumer health and environmental issues, and enhancing corporate brand image and market competitiveness (Singh & Abidi, 2021). Through green packaging, environmental protection publicity, green activities, green product certification and other means, enterprises attract consumers with increasing environmental awareness, establish a good image and enhance market position (Priti, 2021; Brinkmann & Bhatiasevi, 2023). Therefore, environmental marketing, as the key to sustainable development, requires all marketing activities that are sensitive to environmental protection.

The green marketing mix adjusts the four elements (4P) of the marketing mix, namely: 1) Green products. Green products save energy through non-wasting or recyclable products, maintain and enhance natural environmental resources, and reduce or eliminate the use of toxic substances, pollution and waste. 2) Green price. Green price is an important element of the marketing mix. Most consumers are willing to pay a higher price if they think the additional product is valuable. This value

can be increased by improving performance, function, design, visual appeal or taste (Cabigiosu, 2022). The price of green products mostly requires consumers to pay an additional cost in the form of a more environmentally friendly quality product. 3) Green location. Deciding when and where the product is offered has a great impact on attracting customers. Only a minority of consumers are interested in purchasing green products. The place must also fit the company's desired image (Pitri & Gunarto, 2020). The company's location must differentiate the company from its competitors. 4) Green promotion. The promotion of products and services to the target market includes advertising, public relations, sales promotion, direct marketing and field promotion (Khayru et al., 2021). Smart green marketers will be able to strengthen environmental credibility by using sustainable marketing and communication tools and practices. The key to a successful green marketing mix is credibility.

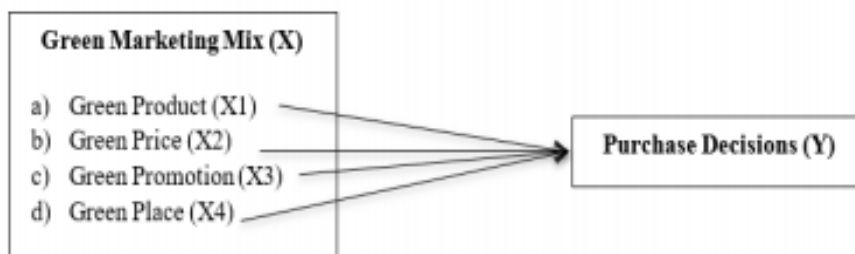
Overview of purchase decision-making

Consumer decision-making is a problem-solving process that is conducted with a goal in mind. Consumer decisions are closely related to the information possessed and various factors that are influenced by the consumer's knowledge of the product to be purchased (Shafaat & Sultan, 2012; Kumar, 2015; Siagian et al., 2022; Bagali et al., 2024). The consumer decision model will begin with the emergence of a consumer desire for a product they want to buy, and then after the consumer recognizes that their desire is part of a problem solution, the consumer will seek information to satisfy his knowledge of the product he wants (Kumar et al., 2014). At its core, consumer decision making is an integrative process that combines knowledge to evaluate two or more alternative actions and choose one of them (Muchsinati & Le Xuan, 2024). "Consumer decision making encompasses a process by which consumers identify a problem, search for a solution, evaluate options, and choose between options (Cabigiosu, 2022). The study demonstrates that green products and green pricing have a significant positive impact on purchase intention, highlighting the importance of these factors in green marketing strategies. However, green place and green promotion do not show a significant correlation with purchase intention, suggesting that their impact on consumer behavior may be limited. Additionally, significant correlations among the 4P's indicate interdependencies between these factors in the context of green marketing.

Methodology

Quantitative research method was used in this study. The main data of this study are from the results of distributing questionnaires to consumers of Panasonic branded electronics sold in the Bangkok area. First, the personal information of the respondents was investigated, and then the correlation analysis was conducted. The sample used was all Panasonic electronics consumers in Bangkok, Thailand. By random sampling method, 230 samples were distributed. After screening the questionnaire filling content, the final sample number was 210 respondents, with an effective rate of

91%. According to the factors that influenced consumer purchase decisions including product, promotion, price and location, the independent and dependent variables were defined, and the research framework was constructed, as shown in Picture 1.



Picture 1: Research map

This study made the hypothesis that:

- H1: Green products have a significant impact on the decision of Thai consumers to buy Panasonic electrical appliances.
- H2: The green price has a significant impact on the decision of Thai consumers to buy Panasonic electrical appliances.
- H3: Green promotion has a significant impact on the decision of Thai consumers to buy Panasonic electrical appliances.
- H4: The green location has a significant impact on the decision of Thai consumers to buy Panasonic electrical appliances.

Results

1). Descriptive Statistical Analysis

The overview of descriptive statistical analysis can be found in Tables 1 to 2.

According to the data in Table 1, this survey collected data on respondents of different ages, for a total of 210 respondents. The following is the frequency and its percentage distribution of respondents by age group: under 25 years: 24 respondents, or 11.43% of the total number. 25-30 years old: there were 86 respondents, accounting for 40.95% of the total number, which was the largest age group in the survey. 31-40 years old: 64 respondents, or 30.48% of the total number. Over 40 years old: 36 respondents, accounting for 17.14% of the total number. In conclusion, the survey sample covered each major age group, with the highest proportion of respondents aged 25–30 years, and nearly half of the total population.

According to the data in Table 2, frequency and percentage distribution of respondents per income level: below 5,000 yuan: a total of 43 respondents, accounting for 20.48% of the total number. 5000-8000 yuan: 61 respondents, accounting for 29.05% of the total number. 8001-10000

yuan: 79 respondents, accounting for 37.62% of the total number, is the largest number of people in the survey. More than 10,000 yuan: a total of 27 respondents, accounting for 12.86% of the total number. In conclusion, the survey sample covered all major income segments, with the highest proportion of respondents with an income level of 8001-10000yuan, accounting for 37.62% of the total number.

Table 1: Sample age analysis

Age	Frequency	Percentage
25years old below	24	11.43%
25-30	86	40.95%
31-40	64	30.48%
Over 40 years old	36	17.14%
TOTAL	210	100

Table 2: Income Analysis

Income	Frequency	%
Below 5000 yuan	43	20.48%
5000-8000 yuan	61	29.05%
8001-10000 yuan	79	37.62%
Over 10000 yuan	27	12.86%
TOTAL	210	100

2) Reliability and Validity Analysis of the Scale

Reliability and validity analysis is applicable to attitude and opinion surveys of respondents, usually distributed and designed in the form of scales (Pitri & Gunarto, 2020); Table 3 and Table 4 provides a detailed indication of the reliability and validity values, as follows:

Table 3: Reliability Analysis

Items	Cronbach α Coefficient
Green Product	0.736
Green Price	0.802
Green Place	0.766
Green Promotion	0.748

Table 4: Validity Analysis

Sample a sufficient Kaiser-Meyer-Olkin metric.		0.748
The sphericity test of the Bartlett	Approximate chi square	529.832
	df	120
	Sig.	0.000

From the above table, The Cronbach α coefficient was used to assess the internal consistency reliability of the four green marketing factors. The Cronbach α coefficient of the green product term is

0.736, indicating a good internal consistency of this term. The Cronbach α coefficient of the green price term is 0.802, indicating a very good internal consistency. The Cronbach α coefficient of the green channel term is 0.766, indicating a good internal consistency of this term. The Cronbach α coefficient of the green promotion item was 0.748, indicating a good internal consistency of this term. Overall, the Cronbach α coefficients of each green marketing factor were between 0.736 and 0.802, indicating that the internal consistency of all factors is good and suitable for subsequent analysis, and the KMO value is 0.746, ranging from 0.7 to 0.8. This research data is applicable for information extraction.

3) Correlation Analysis

The study performed a correlation analysis among various variables, as demonstrated in Table 5, revealing the existence of correlations between them. The Pearson correlation coefficient, denoted by the letter 'r', was employed to measure these correlations. The coefficient values range from [-1, 1] (Suwarno, 2022).

Table 5: Correlation analysis

	1	2	3	4	5
Purchase intention	1				
Green Product	0.528**	1			
Green Price	0.541**	0.589**	1		
Green Place	-0.163	-0.343**	0.303**	1	
Green Promotion	-0.061	-0.006	-0.052	0.294**	1

From Table 5 good relationships between variables can have a positive impact on identifying 4Ps marketing strategies to attract more consumers. Table 4-2 presents the results of correlation analysis conducted among the variables: Purchase intention, Product, Price, Place, and Promotion.

Discussion

Inferential analysis involves testing hypotheses to make inferences about the population based on sample data (Cabigiosu, 2022). Below Table 6 are the hypotheses, paths in the model, standardized regression weights, critical ratio (C.R.), and p-values.

In this study, four hypotheses were tested and significance was assessed by standardized regression coefficients, critical ratios (C.R.) and P-values. The results showed that green products, green prices, green channels and green promotion all had significant positive effects on purchase intention, with standardized regression coefficients of 0.534, 0.519, 0.289 and 0.782, respectively, corresponding P values less than 0.01, indicating that these effects were statistically significant. This indicates that green marketing strategies have a significant positive effect on consumers' purchasing intentions. Therefore, Panasonic should continue to promote green marketing strategies to achieve

sustainable development goals.

Table 6: Summary of Research Hypotheses

	Hypotheses and Paths in the Model	Standardized regression weights	Critical ratio (C.R.)	P-value
H1	Green Product → Purchase Intention	0.534 (.079)	1.271	.006**
H2	Green Price → Purchase Intention	.519(.137)	2.793	.004**
H3	Green Place → Purchase Intention	.289(.288)	6.879	.003**
H4	Green Promotion → Purchase Intention	.782 (.413)	5.124	.009**

Note: Figure shown in each cell indicated the unstandardized coefficient

Figure in the brackets indicated the standardized coefficient

C.R. are significant at *p<.05, **p<.01, ***p<.001, NS: Non-Significant

Conclusions

This study adopts a quantitative research method, mainly collecting data by conducting a questionnaire survey on consumers of Panasonic brand electronic products sold in the Bangkok area. The survey sample includes all consumers of Panasonic electronic products. 230 questionnaires were distributed through random sampling, and the final valid sample was 210, with an efficiency of 91%. The research framework is based on the factors that affect consumer purchasing decisions, including products, promotions, prices and channels, and defines independent variables and dependent variables, and constructs a research model. According to the empirical analysis results, changes in the green marketing mix (including green products, green prices, green promotions, and green place) will have an impact on the purchase decision of Panasonic electronic products, with an impact of up to 96.8%, and only 3.2% of the impact is caused by other factors. Table 4-3 partially shows the impact of the four sub-variables in the green marketing mix on the purchase decision of Panasonic electronic products. Therefore, the biggest impact on the purchase decision is price, place, promotion, and the product itself.

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