

The Decision to Buy an Inverter Type Air Conditioner in Bangkok

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Abstract—This research article The objectives were 1) to study the market mix factors in purchasing inverter type air conditioners 2) to study the purchasing decision of inverter type air conditioners To study the marketing mix factors affecting the decision to buy inverter air conditioner 400 questionnaires were used as a data collection tool and statistics were used for data analysis, i.e. percentage, mean and hypothesis testing. By analyzing t-test, F-test (One-Way ANOVA), Correlation and Multiple Regression Analysis, it was found that most of the respondents were female, aged between 26-35 years old, single status, bachelor degree. Occupation Private company employee Average monthly income 20,001-30,000 baht and the type of residence is a detached house The marketing mix factors for purchasing inverter air conditioners were found that in terms of products, prices, and distribution channels, marketing promotion, personnel, service process and the overall physical aspect of the marketing mix is at a very important level. The decision to buy an inverter type air conditioner found that the awareness of the problem information seeking Consideration of alternatives purchase decision and behavior after purchase Overall decision making is at a very important level. and the comparison of marketing mix factors influencing the purchasing decision of inverter type air conditioners, it was found that the marketing mix factors service process marketing promotion Product aspects, personnel aspects, physical characteristics, price and distribution channels. It has a large influence on the decision to buy inverter air conditioners. statistically significant at the .05 level.

Keywords— decision making, marketing mix inverter air conditioner.

I. INTRODUCTION

Inverter air conditioner is an air conditioning system controls the operation of the compressor for cooling. By converting alternating current (AC) to direct current (DC), which can adjust the speed of the compressor to cool the desired temperature precisely. The difference between inverter air conditioner and normal air conditioner is the compressor air conditioner without inverter. (Sheu, & Adagunodo, 2019) The compressor will cool 3-4 degrees cooler set temperature with room temperature is cooler temperature. The system will immediately cut off the compressor power. the temperature rises higher than the set system will order the compressor to run again lower of temperature again and again. This type of air conditioner is suitable for rooms. It is commonly used in

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places that require cooling without emphasizing the accuracy of temperature as a significant measure, such as living rooms, living rooms, etc. (Kissock,2005)

the part of the air conditioner with inverter The system will speed up the compressor motor when required cooling capacity is required. the motor speed when the room temperature is slightly cooler than the specified The compressor continues to work by reducing the cycle until it is in a state that almost stops spinning. the temperature rises above the set by about 1-2 degrees Celsius, (Mahamud, 2021) the compressor will gradually accelerate more to reduce the temperature. Therefore, the overall temperature in the room is closer to the temperature that the user sets than an air conditioner without inverter. Suitable for rooms that run continuously for several hours that needs silence and want to maintain room temperature regularly, such as bedroom, workplace, office, book room, etc. (Dahlan, Zulkifli, Nasution, Aziz, Perang, Jamil, & Zulkifli, 2014)

Air conditioners with inverter systems are more energy efficient because when the cold reaches the specified point The compressor will run slower. When the temperature changes, the system does not need to be reset just add more cycles The system of the compressor of the inverter air conditioner will help to save more on electricity bills, besides the issue of economy. Air conditioners with inverter systems are also quieter than normal air conditioners. Because the inverter air conditioner uses a method to reduce the duty cycle while the cooling is stable. When the temperature of the inverter air conditioner is changed, it only increases the duty cycle. (Sriamankul, Intarajinda, Tongsuk, Saengsuwan, Bhasaputra & Pattaraprakorn, 2011) Compared to normal air conditioners that will reset when the temperature in the room changes, it will cause a loud noise. Therefore, the air conditioner with inverter system is much quieter.

Air conditioners with inverter systems have many advantages. Energy efficiency and quietness are the hallmarks. However, with the high price causing those who will make a purchase decision to consider carefully from the aforementioned background, the researcher is interested in studying the market mix factors for purchasing inverter type air conditioners. in order to use the information for further development of the inverter air conditioner distribution strategy.

A. Study objectives

To study the market mix factors for purchasing inverter type

air conditioners.

B. The Hypothesis of the study

- Different personal data have different decisions to buy inverter air conditioners.

- Marketing mix factors are related to purchasing decision of inverter type air conditioner.

- Marketing mix factors influence the purchasing decision of inverter type air conditioner.

C. Theory of marketing mix

Definition of Marketing Mix Today, marketers have given ideas about The "marketing mix" known as the 4P's, which has been redeveloped as a rather narrow view, does not cover some aspects of service management. and incomplete to be applied to the Service. which has unique characteristics that are different from general products, has proposed a new concept in the marketing mix for services especially the marketing mix for services It consists of the original marketing mix or 4P's (including Product, Price, Place and Promotion) as well as additional 3P's components (People, Process and Physical Evidence) as follows: (Ivy, 2008).

D. Product

Product factor means anything that is presented to the market. To meet the needs of customers and create value (Value) to occur and the creation of services to provide valuable services. Companies need to tailor their services to the needs of specific customers and create value. and meet the needs of customers to create satisfaction The products offered to customers must have core benefits (Core Benefit), must be products that customers expect (Expected Product) or exceed expectations (Augmented Product), including the presentation of products with potential (Potential Product) for the purpose of Future competitiveness, the products offered for sale may or may not exist. (Doyle, 2003)

E. Price

Price is the amount of money exchanged for a product. by the buyer and the seller agreed Price is one of the factors of the marketing mix that will produce it. consumer satisfaction If the product is assessed as having value and generating utility Appropriate for the price or amount paid. Setting a reasonable price for the product to be offered for sale before setting the price of the product. Businesses must have goals that will set the price for profit or to expand market share (Market share) or for other goals In addition, there must be a strategy in setting the price that will gain acceptance from the target market and fight with competitors. (Pokhrel, & Thapa, 2007)

F. Distribution channel

Product distribution channels (Channel of distribution) focus on the study of the type. of the distribution channel that will use the method of selling products to consumers directly or selling products through various intermediary institutions The role of intermediaries such as wholesalers, retailers and agent middleman in the market Another part of the distribution

activities is the physical distribution. consumer choice of means of transport (Transportation) that is suitable to help distribute goods. Transport media include air, car, rail, ship and pipeline. Marketing executives must consider which medium is the best. The cost is low and the product reaches the customer on time. Another important step in the distribution of products is the process of storing products to wait for distribution in a timely manner that consumers want. (Išoraitė, 2016)

G. Marketing promotion

Marketing promotion is the study of communication processes. to the target market Marketing promotion is a method of telling customers about a product that is being offered for sale. The purpose of marketing promotion is to tell customers that a product is available. released in the market try to persuade customers to buy and to remind the consumer Marketing promotion has to be studied in the communication process. (Communication process) to understand the relationship between the receiver and the sender. There are four types of marketing promotion tools that are used together, known as the promotion mix: (Rossiter, & Percy 1987)

H. People

The personnel factor refers to those who are involved in all products, including both customers. sales personnel and the person who provides after-sales service Service personnel are required to be recruited for training. and have incentives In addition, the personality, dress, attitude and behavior of employees will also influence the perception of customer service, including how to treat other customers or customer-to-customer interactions in order to create satisfaction. and differentiate from competitors. (Goi, 2009)

I. Process

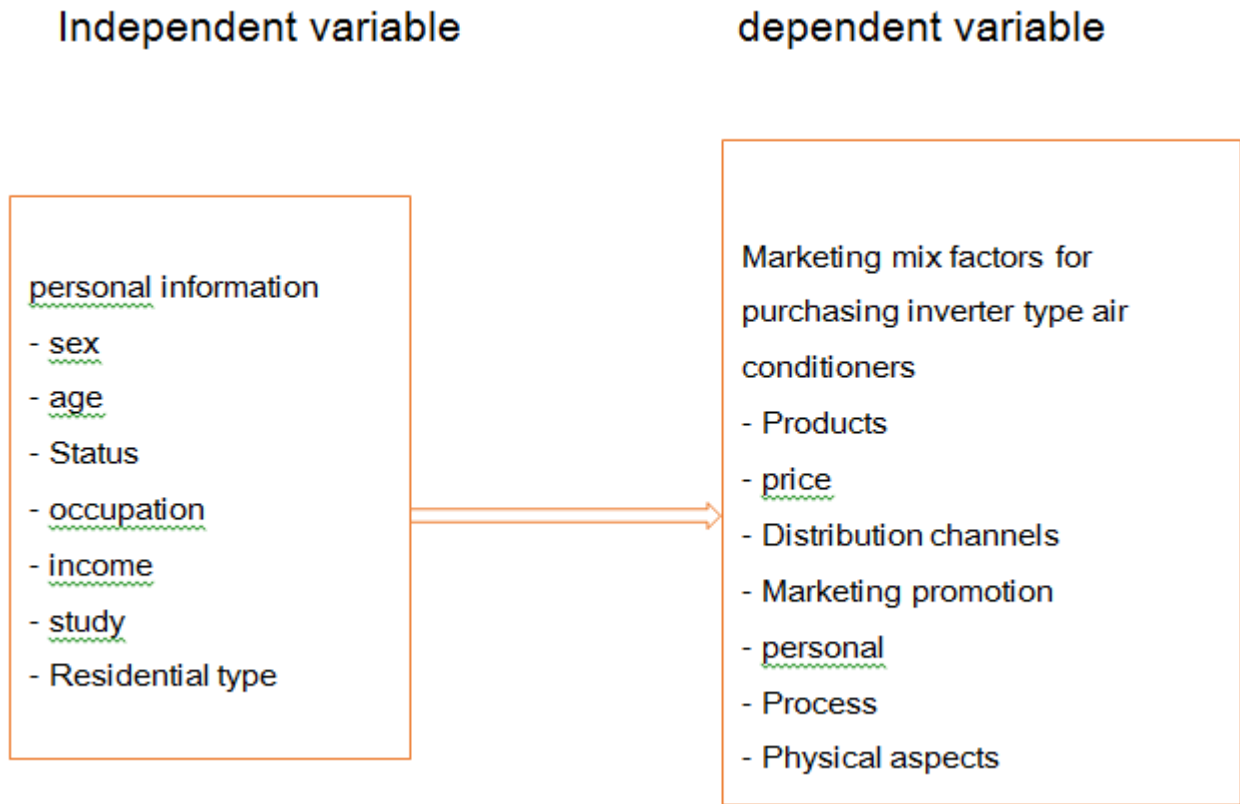
Stated that service factors refer to the methodology, mechanism and movement of activities that occur in both the distribution system of products and services, which must be accurate, fast, and where Satisfied and impressed with the feelings of consumers Due to the complexity of the service process Therefore, it is necessary to integrate these processes together. to make the process run smoothly can meet the quality requirements that customers expect (Londhe, 2014)

(Physical Evidence)The constructive and physical presentation factor refers to the representation of the quality of the service as the service is an abstract offering. intangible thus demonstrating the quality of service through the use of visible evidence such as Creating an environment of corporate premises segmentation decoration design or the department of the area used to provide services that can attract customers for customers to see the image or the value of the service delivered and clearly superior to competitors including any components as is evident which facilitates operations or communication Service work. Things that show customers a concrete service, such as equipment, signs, advertising sheets,

envelopes, letter paper, service vehicles, and the cleanliness of the premises, etc., can reflect the quality of the service. (Kotler, Armstrong, Saunders, Wong, Miquel, Bigné, & Cámara, 2000).

II. CONCEPTUAL FRAMEWORK

From the study of documents, concepts, theories and related research It can be used to define conceptual frameworks as follows:



III. RESEARCH METHODOLOGY

A study of the decision to purchase an inverter type air conditioner The objective of this study was to study the marketing mix for purchasing inverter type air conditioners. The decision to buy an inverter type air conditioner Compare the decision to buy an inverter air conditioner, classify personal information. Relationship between marketing mix and purchasing decision of inverter type air conditioner and marketing mix factors influencing the decision to purchase inverter air conditioners. The data from the study can be used as a guideline for analyzing and laying out marketing strategies and improving product quality. to meet the needs of consumers in the future The methodology for the study was defined as follows: (Constantinides, 2006)

A. Population and samples used in the study

The population used in the study was the decision-maker to purchase inverter type air conditioners. A total of 400 samples were selected for this study. (Serlin, 2000) unidentified sample size was calculated at the 95% confidence level as follows:

$$n = P (1-P)(Z^2) / (e^2)$$

$$n = (.50)(1-.50)(1.962)^2 / (.052)$$

$$n = (.5)(.5)(3.8416) / .0025$$

$$n = .9604 / .0025$$

$$n = 384.16$$

In the calculations, 385 samples were obtained, but in order to prevent mistakes that may occur in answering the questionnaire Incomplete Information The researcher therefore used a sample of 400 people

B. Study results

Study subject The decision to buy an inverter type air conditioner The study sample was a population of people who had purchased air conditioners. 400 sets of questionnaires were used as a tool to collect data and 400 were returned.

C. Analysis of marketing mix factors influencing the decision to purchase inverter air conditioners

Marketing mix	B	Std. Error	Beta	t	Sig.	Test
(Constant)	0.518	0.148		3.501	0.001	yes
Product	0.169	0.043	0.179	3.905	0.000*	yes
Price	0.088	0.042	0.098	2.100	0.036*	yes
Channels of Distribution	0.074	0.032	0.097	2.312	0.021*	yes
Promotion	0.172	0.037	0.209	4.627	0.000*	yes
Personal	0.160	0.041	0.171	3.862	0.000*	yes
Process	0.226	0.039	0.258	5.743	0.000*	yes
Physic	0.115	0.029	0.161	3.968	0.000*	yes

* Statistically significant at .05 (2-tailed) level

Comparison of marketing mix factors influencing the purchasing decision of inverter type air conditioner found that marketing mix factors service process marketing promotion Product aspects, personnel aspects, physical characteristics, price and distribution channels. It has a large influence on the decision to buy inverter air conditioners. statistically significant at the .05 level.

IV. RESULTS, DISCUSSION AND RECOMMENDATIONS

A study on the decision to buy an inverter type air conditioner To study the market mix factors for purchasing inverter type air conditioners. Study the decision to buy an inverter type air conditioner. To compare the decision to buy inverter air conditioners classified by personal information. Study the relationship between marketing mix factors and purchasing decision of inverter type air conditioner. and to study the factors of marketing mix that affect the decision to buy an inverter type air conditioner 400 sets of questionnaires were used as data collection tools and statistics were used for data analysis, i.e. percentage, mean, t-test, F-test (One-Way ANOVA), Correlation and Multiple Regression Analysis. Data analysis can be summarized as follows:

A. Information on the importance of market mix factors in purchasing inverter type air conditioners.

From the study of information on the importance of marketing mix factors in purchasing inverter type air conditioners, it was found that in terms of products, prices, distribution channels, marketing promotion, personnel, service process and physical characteristics Overall, the marketing mix is at a very important level. The details are as follows.

1. Product side The results of the study were found to be in a very important level. The details of importance are at the most important level, 4 items, consisting of strength and durability of the product. There is an air filter system to eliminate odors and germs. The brand is famous and of good quality. There is a warranty period for the machine and

suitable parts. and a very important level, 1 item, consisting of a shop that sells air conditioners in particular

2. In terms of price, the results of the study found that it was in the most important level. The details of importance are in the most important 3 items, consisting of: convenience of payment such as cash, credit card or installment payment, clearly marked with a price tag at the point of sale, the price is appropriate for the quality. and 1 very important level consisting of inexpensive and reasonable spare parts

3. Distribution channels The results of the study were found to be in a very important level. with important details It is in the level of high importance, consisting of 3 items as follows: There are distribution channels in department stores. The location is convenient and there is enough parking. and stores have online sales services

4. Marketing promotion The results of the study were found to be in a very important level. with important details It is in the most important level, 1 item, consisting of a free installation / cleaning service after the sale. There are 3 items of high importance, consisting of promotional activities such as discounts, exchanges, giveaways, regular advertisements and public relations through various media, and advertisements with famous people as Product presenter

5. In terms of people, the results of the study were found to be at the highest level of importance. with important details The 3 items were in the most important level, consisting of employees who have human relations and customer care. Employees are knowledgeable and understand the product very well. Employees are good at solving immediate problems. and is in a very important level, 1 item, consisting of employees who are dressed in company or shop uniforms

6. Service process The results of the study were found to be at the highest level of importance. with important details 3 items are in the most important level, consisting of after-sales service and support service centers. have fast delivery and correct at the appointed time and payment is fast, accurate and accurate

7. Physical appearance The results of the study were found

to be in a very important level. with important details In the level of very important 3 items, consisting of stores decorated with modern and organized products into categories. The store has spacious corridors, neat and comfortable. And shops have drinking water, product catalogs.

Hypothesis that the marketing mix factors are related to the purchasing decision of inverter type air conditioner.

The study found that Marketing mix factors for purchasing inverter type air conditioners Product, price, marketing promotion, human resource and service process Overall, it is related to the decision to buy inverter type air conditioners. high degree of correlation in the same directions for the marketing mix factors in deciding to buy inverter type air conditioners. distribution channel and physical characteristics Overall, it is related to the decision to buy inverter type air conditioners. The level of relationship is moderate in the same direction.

B. Hypothesis

That marketing mix factors influence the purchasing decision of inverter type air conditioner.

The study found that Marketing mix factor Product, price, distribution channel Promotion of marketing, personnel, service process and physical characteristics Influence on the decision to buy inverter type air conditioner at a statistically significant level of .05.

C. Discussion of the results of the recommendations from the study of The decision to buy an inverter type air conditioner

The students had important issues to discuss as follows:

Manufacturer feedback

1. What manufacturers should take into account and meet the needs of consumers For a longer service life, the strength and durability of the product is required. There is a technology system that filters the air, eliminates odors and germs. The brand must have a reputation and quality in the inverter type air conditioner. There is a warranty period for the machine and spare parts that are worth the cost when it comes to repairs.

2. Manufacturers should have new innovations and technologies in production to save energy, be environmentally friendly and have a modern design.

3. Manufacturers should produce a variety of air conditioners as an alternative to consumers, such as residential air conditioners and commercial air conditioners.

4. Manufacturers should have production standards that are accepted both at home and abroad, along with continuous product development teams to meet consumer.

D. Dealer store suggestions

1. Product side Dealers should choose products from reliable manufacturers that meet production standards and have many brands for consumers to decide to buy.

2. In terms of price, dealers should have convenience in terms of payment such as payment, cash, credit card or installment payment. There is a price tag clearly displayed at

the point of sale so that the viewer can make an initial decision when they see the price tag. And the price should be appropriate for the quality to satisfy customers in every target group. In addition, the price of spare parts is not expensive and reasonable.

3. Distribution channels For convenience, there should be distribution channels in department stores. It has a convenient location and enough parking. and stores have online sales services To increase the option of facilitating customers to suit the current era

4. Marketing promotion It is considered one of the important factors that will enable dealers to increase sales from this channel. Whether it is a free installation / cleaning service after the sale, there are marketing promotion activities such as discounts, exchanges, giveaways according to festivals or important days, regular advertising through various media. so that customers still remember the product and advertising with famous people as presenters to attract customers to be interested in the product

5. Personnel is another main selling point that must be impressive and provide accurate and sincere customer information. The employees should have human relations and care for customers. Good knowledge and understanding of products And when unexpected problems arise, employees are able to solve immediate problems well. Including the dress of employees with company or dealer uniforms for order

6. Service process Dealers, after the customer has completed the trading process, should have after-sales service and have a service center to help when there is a problem with the product. Fast and accurate delivery on time and has a fast, accurate and accurate payment process to create customer satisfaction.

7. Physical appearance The dealers have modern store decorations and organize their products into categories. The corridors inside the store are spacious, orderly and comfortable. It doesn't feel too crowded and offers wifi, drinking water, or product catalogs. To make customers feel that it is convenient to buy products and to allow customers to feel the sincerity of service This may cause the decision process to buy more inverter air conditioners.

V. SUGGESTIONS FOR THE NEXT STUDY

In the next study, the decision to buy inverter type air conditioners for each size should be studied. and rooms equipped with inverter type air conditioners including the brand that customers decide to buy and areas in each region in Thailand as a guideline for decision-making among consumer groups for further study and analysis in each group of consumers.

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