

# THE FACTORS AFFECTING THE DECISION OF CONSUMPTION AND PURCHASE OF PLANT-BASED MEAT PRODUCTS OF PEOPLE IN BANGKOK AND PERIMETER

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## ABSTRACT

This article aims to 1) To study the factors of marketing mix affecting the decision of consumption and purchase of Plant-based meat products of people in Bangkok and Perimeter. 2) To study the differences in demography that affect the decision of consumption and purchase of Plant-based meat products of people in Bangkok and Perimeter. and 3) To study the consumption behavior and purchase of Plant-based meat products of people in Bangkok and Perimeter.

In this study, the researcher used quantitative research. The aim is to study factors affecting the decision of consumption and purchase of Plant-based meat products of the people in Bangkok and Perimeter. Which is surveyed by online questionnaires The scope of the research was a sample population of 400 people in Bangkok and Perimeter who had consumption and purchase behavior of plant-based meat products and the statistics used for data analysis were One-Way ANOVA, Factor Analysis and Multiple Regression.

The results of the research revealed that most of the respondents were female. In the age range of 21 years - 29 years. Have a bachelor's degree. Career students and students The average monthly income is in the range of 5,001 - 10,000 baht, according to the study of the relationship between demographics and purchasing decision, it was found that different demographic factors did not affect the decision of consumption and purchase of Plant-based meat products of the people in Bangkok and Perimeter And from the analysis of the factors of marketing mix, it was found that there was a price factor. It is a factor affecting the decision of consumption and purchase of Plant-based meat products of the people in Bangkok and Perimeter. Statistically significant at 0.05

**Keywords:** Plant-Based Meat, Purchase Decision, Marketing Mix Factors

## INTRODUCTION

Nowadays, Consumers in society are constantly changing their purchasing habits, which affects a concept. In response to the consumption habits of such consumers, and now that many consumers are becoming aware of both their own health and the global environment, the trend

of plant-based meat products is very popular. There are also well-known brands or restaurant chains such as Black Canyon, Sizzler, and Penguin Eat Shabu. Plant-Based Meat menus have been added to the food list in response to healthy and environmentally conscious food consumption trends.

For Plant-Based Meat Products in Thailand, it is also likely to grow more as today's consumers prefer and pay more attention to their health. Referring to the perspective and vision of Mr. Apirak Kosayodhin, The CEO of V Foods (Thailand) Co., Ltd. said, "Thailand's plant-based meat market is worth approximately 10-20 million baht. It has a growth rate of about 30-40% per year. Therefore, next year it is expected to reach 30-40% million baht because the health care trend is coming" (Article titled Keep an eye on another step of 'More Meat', a pioneer in the Thai 'plant-based' market with 'V Foods' investment, 2020)

In addition, Krungthai COMPASS Research Center, Krungthai Bank has provided information on plant-based food consumption behavior in each country. It found that 53% of Thai consumers want to reduce meat consumption. The other 45% are interested in making the transition. Eat vegetarian, vegan, and plant-based foods (Krungthai COMPASS, Krungthai Bank, 2020)

It was also concluded that in phases 3-5. In the year ahead, the plant-based food market will grow rapidly following trends in consumers who prioritize health, animal welfare, and resource utilization. Plant-based food marketing trends of many food service businesses as an alternative to consumers. It will be a growth engine to make this market more attractive. However, most of the plant-based food market in Thailand is still in the early stages of the business cycle. Therefore, entrepreneurial marketing must be important to the sales channels and customer base that clearly supports it (Krungthai COMPASS, Krungthai Bank, 2020).

According to the data, the plant-based meat business in Thailand is growing in line with the current consumer behavior that is focusing on health and is an attractive market. Therefore, the researchers were interested in studying the factors that affect the decision to consume and buy plant-based meat products of the population in Bangkok and its vicinity. To enable entrepreneurs who are interested in plant-based markets to expand and develop their businesses or marketing strategies. To have the strength to operate the business in the competitive environment and the emergence of new brands effectively.

## **RESEARCH OBJECTIVE**

- 1) To study the factors of marketing mix affecting the decision of consumption and purchase of Plant-based meat products of people in Bangkok and Perimeter.
- 2) To study the differences in demography that affect the decision of consumption and purchase of Plant-based meat products of people in Bangkok and Perimeter.
- 3) To study people's consumption behavior and purchase of Plant-based meat products in Bangkok and Perimeter.

## **RESEARCH METHODOLOGY**

### **1.1 Research design**

An online survey was conducted for the collection of data and a quantitative method was applied for data analysis. The statistical analysis from the samples group with the SPSS program.

### **1.2 Population and samples**

The population of this research was people who had consumed or purchased plant-

based meat products and live in Bangkok and the periphery.

The sample was selected for this research because the population of this research was people who had consumed or purchased plant-based meat products and live in Bangkok and the periphery, so that's large population size, and did not know the exact number of targets. Therefore, this research used a method of determining the sample based on an unknown number of cases, using the hypothesis that the data had a normal distribution. Based on a calculation formula that sets a confidence level of 95%, the optimal sample size can be calculated as 385 samples. We then increased the questionnaire by 4% to 400 samples.

### **1.3.3 Instrumentation**

This Research Tool used a questionnaire to collect data from the target population. A sample was drawn from people who had consumed or purchased plant-based meat products and live in Bangkok and Perimeter, using the Purposive sampling method, in 3 parts as follows:

**Part 1:** the initial screening question for respondents, and the type of answer is a checklist there are 2 items.

**Part 2:** provides demographic data of respondents, including gender, age, education level, occupation, and average monthly income, with a total of five close forms of structured questionnaires.

**Part 3:** questionnaire on food consumption habits and purchase of plant-based meat products of the population in Bangkok and Perimeter. There are a total of 7 close forms of structured questionnaires.

**Section 4** is an attitude questionnaire about product factors, price factors, etc. Distribution channel factors Marketing Promotion Factors. This questionnaire is a rating scale using an interval scale divided into 5 levels with scoring criteria as follows;

An average score of 4.21 – 5.00 means the effective factor in decision-making at the highest level

An average score of 3.41 – 4.20 means the effective factor in decision-making at a high level

An average score of 2.61 – 3.40 means the effective factor in decision-making at a medium level

An average score of 1.81 – 2.60 means the effective factor in decision-making at a small level

An average score of 1.00 – 1.80 means the effective factor in decision-making at the least level

### **Data collecting**

The researcher studied the concept, theory, and related documents for use as a reference to the conceptual framework of the research on the factors affecting the decision to consume and purchase plant-based meat products of people in Bangkok and the perimeter. This makes a questionnaire for data collection, the researcher conducts the online survey with a Google form questionnaire. Which collects primary data from sources, and the researchers distributed this online questionnaire to collect data from February to March 2021.

### **Data Analysis**

Descriptive Statistics Analysis

1) Part 1: It is a question of demographic information. Use data analysis by breaking down frequency and percentages.

2) Part 2 of the data raises questions about dietary habits and purchases of type products. Plant-based meat of the population in Bangkok and vicinity. Use data analysis by breaking down frequency and percentages.

3) Part 3 is an opinion question about product factors, price factors, distribution channel factors, and marketing promotion factors. Use data analysis by mean and standard deviation.

## **Inferential Statistics**

2.1 Factor Analysis to gather a group of variables in each of the related factors into one element.

2.2 Analysis of multiple regression equations to test the correlation of independent variables, namely market mix factors, and dependent variables, i.e. decisions on the consumption and purchase of plant-based meat products of the population in Bangkok and vicinity.

2.3 One-Way ANOVA analysis to compare differences between two variables to determine whether these factors affect the group's decision to consume and purchase plant-based meat.

## **RESULTS AND FINDINGS**

### **3.1. Demographic data analysis**

The general data analysis of the respondent using descriptive statistics including frequency and percentage distribution. To describe the general characteristics of respondents. Gender, age, education, occupation, and average monthly income, which is shown in the following table:

3.1.1 In terms of gender, found that most of the females at 76.3 percent followed by males at 18.3 percent, and another gender at 5.5 percent.

3.1.2 In terms of age, the age range was 62 percent between 21 and 29 years old, followed by 30-39 years old at 12.5 percent, third place was under 20 years old at 10.5 percent, fourth place was 40-49 years old at 8.5 percent, and the last place was 50 years old or above at 6.5 percent.

3.1.3 In terms of education level, found that most of a bachelor's degree at 64 percent, followed by postgraduate education at 25.3 percent and the least had an undergraduate education level at 10.8 percent.

3.1.4 In terms of occupations, it was found that the first was occupations, students at 48.8 percent, the second employees of private companies at 22.3 percent, the third was civil servants and state enterprise employees at 12.5 percent, fourth is Freelance at 8.3 percent, and fifth is a trade and private business. It accounted for 7.3 percent, and lastly, other occupations accounted for 1 percent.

3.1.5 Average monthly income It was found that the first had an average income of 5,001 - 10,000 baht or 20.5 percent, second place was with an average income of 20,001 - 30,000 baht or 19.8 percent, third place was with an average income of less than 5,000 baht and 10,001 - 20,000 baht or 16.3 percent, fourth place was with an average income of 30,001- 40,000 baht or 15.5 percent, and the last place was an average income of more than 40,001 baht or 11.8 percent.

3.2. The data analysis on the population's food consumption habits and purchases of plant-based meat in Bangkok and Perimeter. The general data analysis of respondents used data analysis using descriptive statistics, i.e. frequency and percentage distributions, to describe respondents' behavior, i.e. frequency of consumption, popular brands, consumption, etc. The amount spent on each purchase, the process of how to choose to consume, the trend of a source of the product, and the reason for choosing this product and also an influencer. As the following table:

3.2.1 In terms of frequency of food consumption and shopping, it was found that the first place is 1-2 times/month or 30%, second place is infrequently (24.8%), third is 2-3 times/month (18.3%), fourth is 1-2 times/week (14.5%), fifth is daily (9%) and lastly, other frequency levels are 3.5%.

3.2.2 Popular consumer brands found that the first is Meat Avatar at 33 percent, followed by the second is More Meat at 22 percent, the third is Let's plan meet at 19.5 percent, the fourth is another brand at 13.3 percent, the fifth is OMN! Meat at 6.3 percent and the last one is Beyond Meat at 5 percent.

3.2.3 Amount spent on each consumption, the first place is 100 - 299 baht or 57 percent, the second place is 300 – 499 baht or 16.8 percent, the third place is 500 baht or more or 15.5 percent, and the last place is less than 100 baht or 10.8 percent.

3.2.4 How to choose to consume, it was found that the most popular food is self-catering (50.5%), the second is the popularity of vegan/vegetarian restaurants (49%), and the last is the popularity of other forms of food (0.5%).

3.2.5 In terms of shopping channels, it is found that the first is department stores/supermarkets. The second place was an online channel with 18.5 percent, third place was general dealers at 8.8 percent, and the last place was 0.5% purchases through other channels

3.2.6 In terms of the reasons for choosing to consume, the survey found that 33.7 percent of respondents were healthy, 33.7 percent were not surrounded by animals, and 16.2 percent were environmentally conscious, 15.2 percent, 3.8 percent were in favor of current popularity, and 3.8 percent were in religion. 1.7 percent, seventh place is credibility. 1 percent and the last place is other reasons accounting for 0.1 percent.

3.2.7 In terms of individuals influencing consumption, the first was self (58.5%), second was family (25.8%), and third was celebrities/influencers / Youtubers (8.3%), friends (7.3%), and other people (0.3%).

3.3 Analysis of opinion data on market mix factors affecting the decision to consume and buy plant-based meat products of the population in Bangkok and Perimeter It is an analysis of opinion data about product factors, and price factors. Distribution channel factors and marketing promotion factors are calculated for mean and standard deviation as follows:

Table 1 shows the mean and standard deviation of the overall market mix factor.

<b>The factor of the Marketing mix</b>	<b>Men</b>	<b>S.D.</b>	<b>Opinion Level</b>
1. The factor of product	4.35	0.75	The highest
2. The factor of price	4.23	0.76	The highest
3. The factor of place	4.37	0.71	The highest
4. The factor of promotion	4.17	0.79	High

According to the table, the mean and standard deviations of the overall market mix factors are displayed, as follows, the product factor averaged 4.35 (The highest agreed). The price factor has an average of 4.23 (The highest agreeable). The factor of a place averaged 4.37 (The highest agreed) and the marketing promotion factor averaged 4.17 (a high agreeable).

3.4 Analysis of demographic factors and consumption decisions Plant-based meat of the population in Bangkok and Perimeter

To study the relationship between demographic factors to whether they affect the consumption and purchase of plant-based meat products in Bangkok and its vicinity. The hypothesis test uses a one-way ANOVA analysis to test the characteristics of a sample's demographics.

Table 2 shows the results of a one-way variance analysis of samples with overall demographic factors.

<b>The factor of the demographic</b>	<b>F</b>	<b>Sig</b>
1. Gender	0.257	0.774
2. Age	1.694	0.151
3. Education	0.975	0.378
4. Occupation	0.595	0.704
5. Average monthly income	2.085	0.066

According to the table, analyzes the characteristics of demographic factors and the decision to consume and purchase plant-based meat products as a whole. It was found that each calculated value has a Sig., value, which is greater than the significance level of 0.05, so it can be concluded that the demographics, gender, age, education, occupation, and average monthly income factors that affect the decision to consume and buy plant-based meat products are not different. Therefore, demographic factors of consumers do not affect the decision to consume and buy plant-based meat products of the population in Bangkok and Perimeter

3.5 Analysis of market mix factors affecting the decision to consume and purchase plant-based meat products of the population in Bangkok and Perimeter

### 3.5.1 Factor Analysis

The 15 variables were extracted using PCA, it was found that there were 5 groups of initial eigenvalues greater than 1, which could be regrouped into 5 groups of factors, with the ability to describe the variance of the independent translator at 67.371% as follows;

Table 3 compares the factors from the review and the factors derived from the analysis of factors.

<b>Factors from the literature review</b>	<b>Factor group from factor analysis</b>
<b>1. The factor of product</b>	<b>1. The factor of brand image and packaging</b>
1. The logo brand had influenced by the decision to consume and buy goods. 2. Brand Image and packaging had influenced by the decision to consume and buy goods. 3. The certificate of the brand influenced the decision to consume and buy goods. (e.g. FDA, Halal) 4. Clearly labels of product ingredients influenced the decision to consume and buy goods. 5. Taste and texture influenced the decision to consume and buy goods.	1. The logo brand had influenced by the decision to consume and buy goods. 2. Brand Image and packaging had influenced by the decision to consume and buy goods.

<b>2. The factor of Price</b>	<b>2. The factor of perceptual of information product</b>
<ol style="list-style-type: none"> <li>1. The product is priced appropriately for quality.</li> <li>2. The product has a product price that is similar to the actual meat price in the market.</li> <li>3. The product has a reasonable price for the quantity.</li> <li>4. The product is priced appropriately for the nutritional value it receives.</li> </ol>	<ol style="list-style-type: none"> <li>1. Taste The smell, color, and texture of the product affects the decision to consume and buy the product.</li> <li>2. Products with a certified mark affect the decision to consume and purchase products (e.g. FDA, Halal).</li> </ol>
	<ol style="list-style-type: none"> <li>3. Clear labels of product components affect the decision to consume and purchase goods.</li> <li>4. The product has a product price that is similar to the actual meat price in the market.</li> <li>5. The product is priced appropriately for the nutritional value it receives.</li> </ol>
<p>3. The factor of place (channels)</p>	<p>3. The factor of price</p>
<ol style="list-style-type: none"> <li>1. Able to access distribution channels Convenient to purchase goods.</li> <li>2. There are various distribution channels for products (e.g. online, app, department supermarket).</li> <li>3. There is an easy-to-access placement of goods. See clearly Convenient to shop</li> </ol>	<ol style="list-style-type: none"> <li>1. The product is priced appropriately for quality.</li> <li>2. The product has a reasonable price for the quantity.</li> </ol>
<p>4. The factor of promotion</p>	<p>4. Product access and convenience factors</p>

<ol style="list-style-type: none"> <li>1. The use of various advertising and public relations materials across various channels.</li> <li>2. Promotional activities are held through various channels on a regular basis.</li> <li>3. Special privileges or discounts are offered to existing customers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Easy access to distribution channels Convenient to purchase goods.</li> <li>2. There are various distribution channels for products (e.g. online, app, department stores and supermarkets).</li> <li>3. There is an easy-to-access placement of goods. See clearly Convenient to shop</li> </ol>
	<p>5. Marketing Promotion Factors</p>
	<ol style="list-style-type: none"> <li>1. The use of various advertising and public relations materials across various channels.</li> <li>2. Promotional activities are held through various channels on a regular basis.</li> <li>3. Special privileges or discounts are offered to existing customers.</li> </ol>

### 3.3.1 Analysis of multiple regression equations

The researcher used multiple regression equations to determine the relationship between factor analysis factors that affect the population's decision to consume and buy plant-based meat products in Bangkok and metropolitan areas. By using a questionnaire that has completely validated the data, a significance level of 0.05., and the results of the analysis were as follows:

Table 4: The results of the regression analysis of factors affecting the decision to consume and buy plant-based meat products of the population in Bangkok and Perimeter

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Con	3.991	0.365		10.925	0.000
The Packaging image factors	-0.058	0.057	-	-1.006	0.315
The factor of product	0.135	0.114	0.08	1.181	0.238
The factor of price	0.205	0.080	0.17	2.570	0.011
The factor of place	-0.154	0.089	-	-1.729	0.085
The factor of promotion	<b>-0.056</b>	<b>0.069</b>	-	<b>-0.813</b>	<b>0.417</b>



## CONCLUSION

The results of the analysis of factors affecting the decision to consume and buy plant-based meat products of the population in Bangkok and Perimeter. It is divided into 5 groups of factors derived from the regrouping of factors. It was found that there is only one factor that affects the decision to consume and buy plant-based meat products, namely, the price factor, which can be explained, as follows;

Price factors have a positive impact on the population's decision to consume and purchase plant-based meat products in Bangkok and its surrounding areas, which includes: Because plant-based meat products are the food of choice for health enthusiasts or those in need of meat substitutes, the product is priced according to quantity and the product is priced according to quality. As a result, consumers pay close attention when selecting this type of product. Furthermore, there are plant-based meat products with a variety of brands on the market, giving consumers more options and price comparisons before making purchasing decisions in order to get the most value and satisfaction in buying for themselves. The study found that price factors influence consumers' choice of vegetarian-friendly restaurants in Chiang Mai.

## SUGGESTION

The results found that in the terms of demographic characteristics, Food consumption patterns, the purchasing of meat substitutes, and the marketing mix's four components— product factors, price factors, etc.—all have a role. Factors affecting the distribution route and marketing promotions, to acquire a competitive edge in the market, plant-based meat substitute product manufacturers can use this data to better understand and implement their marketing strategy. The following is how the researcher summed up the suggestions:

Entrepreneurs should pay attention to price factors because they influence the population's decision to consume and buy plant-based meat products in Bangkok and surrounding areas. Consumers will buy such products even if the price is higher. As a result, entrepreneurs should communicate with consumers about the value and differentiation of plant-based meat products in order to increase value and build product loyalty.

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