
Marketing Mix Factors Influencing the Purchase Decisions of Crude Palm Oil Powder of Livestock Farmers in Suphanburi, Thailand

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ABSTRACT

This research investigates the marketing mix factors influencing the purchase decisions of crude palm oil powder of livestock farmers in Suphanburi, Thailand. This research is a quantitative survey research using questionnaires for data collection through convenience sampling. A total of 400 completed copies was for data analysis. The research hypotheses were examined with Pearson's Correlation analysis. The results showed that the marketing mix factors were positively related to the crude palm oil powder purchase decisions of livestock farmers in Suphanburi, Thailand. Price has the highest correlation with the purchase decisions, followed by promotion, product, and place, respectively. A qualitative approach and more variables are recommended for future research to obtain a more insightful result explaining purchase decisions in this sector.

Keywords: *marketing mix factors, 4Ps, purchase decision, livestock farmers, crude palm oil powder*

1. INTRODUCTION

1.1 Background of the Research

In the industrial business, there has been an increase in investment. Whether in the food and beverage industry, computer and electronics, and export industry. But the agro-industry has seen a decline in overall growth (Industry Team of Krungsri Bank, 2021), forcing many entrepreneurs to find ways to reduce expenses incurred in the organization. Or find ways to increase revenue for the organization to survive and comply with the current situation. Today, 'Innovation' is used to match business to become one of the critical variables in creating opportunities and differentiation for entrepreneurs to find a broader space in this business world. Many entrepreneurs use the available research from agencies or educational institutions as a guideline for product and service development. But not all research is commercially successful. In selecting research, one must also look at the suitability and possibility of the market. This research studied the agro-industry, which at present has overall decreased expansion. However, the situation of Crude Palm Oil (CPO) has increased demand and market expansion. Researchers recognize the importance of CPO, which plays a role in the agriculture and feed industry. Also, most animal feed uses CPO as part of the mix. So, for the benefit of the entrepreneurs who want to focus on selling more CPO products. Therefore, this research study was conducted on CPO powder, a new product in the market. New products in this style are called 'Additions to existing product lines' This is to add new products to the existing product line. The company's old product has increased in size, taste, colour, and form. Enter the market where these items were previously sold (Kummanee et al., 2014). CPO powder is still a new product, and bringing new products to the market is quite difficult. The research study was conducted for surveying consumer demand to responding the need and expectations is very useful and practical. However, several studies, such as Abdelhady et al. (2018), supported product and other marketing mix factors related to purchasing decisions, including price, place, and promotion.

1.2 Problem Statement

Crude palm oil (CPO) is popularly used in various animal feeds as a source of fat and energy. And it is cheaper than other vegetable oils such as soybean oil, bran oil. The use of palm oil in animal feeds should consider the limitations of use. Because palm oil contains linoleic acid. (Essential fatty acids) in small quantities and high in saturated fatty acids (P K & A.G., 2014). Therefore, the formula should be adapted to suit the animal species. CPO has a high solidification point, which is 32 °C. Below that 32 °C, CPO will start to solidify (Ahmad, n.d.). Therefore, during the rainy season or seasonal low temperatures in which the surrounding area is relatively cool. CPO tends to solidify. It will cause a problem in mixing raw materials to make feed mills for livestock farmers. Therefore, to solve this problem and when there is a technology that can apply crude palm oil to encapsulation, crude palm oil can remain an essential source of bioactive compounds (Mohammed et al., 2020). There is the potential to be applied in various industries that need to use crude palm oil powder as a part of the industry, mainly feed industry produces because it is a convenience of mixing for feed mills. This development also increases the convenience of transporting and storing the material. However, CPO powder is still a new product. And bringing new products to the market is quite difficult. The research contribution

could be helpful and practical for marketers and managers to create strategies that respond to the customer's needs and expectations toward the marketing mix (4Ps). The consumers' perceptions toward marketing mix factors related to the purchase decision of CPO powder still not many studies support this sector phenomenon in Thailand.

1.3 Research Objective

This research examines the relationship between marketing mix factors (product, price, place, promotion) and purchase decisions of crude palm oil powder of livestock farmers in Suphanburi province.

1.4 Research Question

How is the relationship between the marketing mix factors and purchase decisions of livestock farmers in Suphanburi province?

2. LITERATURE REVIEW

2.1 Marketing Mix Factors (4Ps)

Kotler (2003) has defined the marketing mix as the controllable marketing tools in which the entity integrates these tools to meet the needs and create satisfaction for the target customers. The marketing mix consists of everything an entity uses to influence the demand for business products. The marketing mix is divided into four groups, also known as 4Ps: product, price, place, and promotion.

2.2 Purchasing Decision Process

Kanchanapa (2011) concluded that the purchasing decision process is the obtaining process of a product of consumers caused by triggers that may arise from within the consumer, such as hunger, or external stimuli, such as seeing an advertisement for that product. This stimulation induces cognitive processes. After evaluating options, consumers may decide not to buy. The purchase decision process consists of problem recognition, information search, alternative evaluation, purchase decision, and post-purchase behaviour.

2.3 Consumer Purchase Decisions

Suriyo (2005) stated that the factors that determine consumers behaviour consist of internal factors, which are marketing factors that entrepreneurs can control or change to meet the needs of the business. It is necessary to study to find market opportunities to enter the action. It becomes the guidelines for marketing operations, including its marketing factors, human resources, financial resources, and location. And external factors are the external environment of the consumer that affects the marketing operations in various fields. It is necessary to study these factors to be used as a basis for decision-making in planning or marketing operations following

the changes of these factors, including demographic factors, economic factors, natural factors, technology factors, political and legal, and cultural factors. However, the related purchase decision factors are marketing mix (4Ps) and do not include other factors.

2.4 Research Hypotheses Development

2.4.1 The relationship between product and purchase decisions

Kotler & Keller (2009) stated that a good product or good brand reliability influence consumers to make purchasing decisions easier. And the study of Changsirikarnkha (2008) concluded that buying behaviour of layer farms in Uttaradit province towards purchasing layer feed found the product is related to the buying behaviour of layer farms towards purchasing layer feed. Anggita & Ali (2017), Amanah et al. (2018) and Limpo et al. (2018) confirmed that product quality is simultaneously robust and significantly related to purchasing decisions.

H1: There is a positive relationship between product and purchase decision.

2.4.2 The relationship between price and purchase decisions

Price-related decisions include whether a uniform price will be charged across all markets or different prices for the same product in other markets (Singh, 2012). Kotler & Keller (2009) stated that the price of a product set by a manufacturer must vary according to the size of the package because setting different prices will allow consumers to purchase most demand accordingly. Chunraksa (2015) study concluded that the marketing mix affects entrepreneurs selecting pig feeds in Chiangmai province. The price in the marketing mix factor affects the swine farm operators choosing the swine feed in Chiangmai province. Goi (2009) supported that pricing is the essential marketing activity related to purchasing decisions. Moreover, Anggita & Ali (2017), Amanah et al. (2018), and Limpo et al. (2018) confirmed that price is significantly related to purchasing decisions.

H2: There is a positive relationship between price and purchase decisions.

2.4.3 The relationship between place and purchase decisions

The place is related to the decisions like where the product will be sold (Singh, 2012). Kotler & Keller (2009) stated that a place with direct access to customers increases the likelihood of more sales. And the research of Chongcharoensuk (2017) showed that the factors of the decision to buy instant pet food are related to the place. Consumers' perceived marketing mix factors for buying instant pet food, the place factor is highly essential. Brata et al. (2017) confirmed that place is related to purchase decisions.

H3: There is a positive relationship between place and purchase decisions.

2.4.4 The relationship between promotion and purchase decisions

Kotler et al. (2009) stated that promotion is essential in product communication and convincing customers to purchase a product or service. And the study by Chunraksa (2015)

showed that the marketing mix is related to selecting pig feeds in Chiangmai province. The sub-factors of the marketing mix that affects the swine farm operators in choosing the swine feed is promotion. The respondent perceived that the highest significant level is the promotion factor. Also, Brata et al. (2017) and Limpo et al. (2018) confirmed that promotion is positively related to purchase decisions.

H4: There is a positive relationship between promotion and purchase decisions.

2.5 Conceptual Framework

The conceptual framework was based on Changsirikarnkha, 2008; Kotler & Keller, 2009; Goi, 2009; Singh, 2012; Chunraksa, 2015; Chongcharoensuk, 2017; Brata et al., 2017; Anggita & Ali, 2017, Amanah et al., 2018, and Limpo et al., 2018.

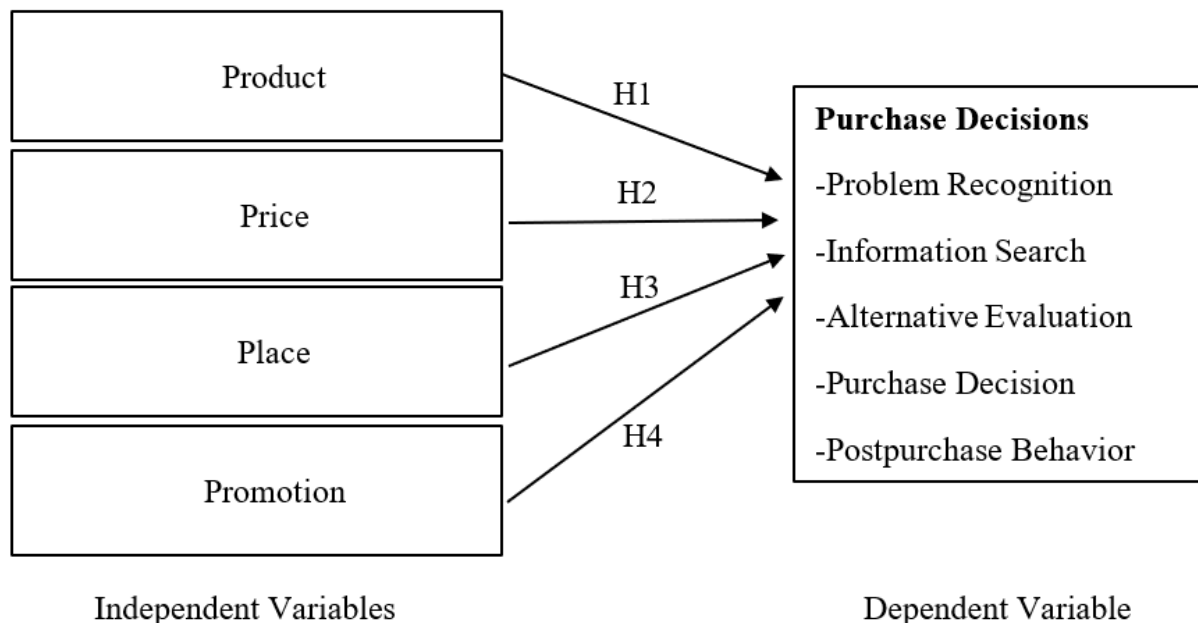


Figure 1. Conceptual Framework

3. RESEARCH METHODOLOGY

3.1 Population & Sample

This study is quantitative designed research. The population was 32,648 livestock farmers of Suphanburi, Thailand (Suphanburi Provincial Livestock Office, 2021). The sampling method used in this study employed convenience sampling based on Krejcie & Morgan's. The sample size determination table is derivative from Krejcie & Morgan (1970). The sample size was calculated was based on $p = 0.5$ and assumed standard error = 0.05. The population was livestock farmers of Suphanburi, Thailand, with 32,648 people. The samples in this research were 379 respondents. The researchers have reserved 21 additional samples to reduce the discrepancy from the incomplete questionnaire. Therefore, the total sample size was 400.

3.2 Research Instrumentation

The measurements in this study were developed based on valid and reliable sources. The questionnaire consists of four (4) parts as follows:

Part 1 The questions are about the respondents' demographics, livestock farmers in Suphanburi province. The questions created by the researchers inquired about gender, age, education level, income, the most-raising animals, and form of ownership of premises for livestock (houses and land). It was a checklist questionnaire.

Part 2 Consumers' perceptions toward the level of marketing mix factors to buy crude palm oil powder of livestock farmers in Suphanburi province. The content covers four aspects: product, price, place, and promotion. The questionnaire was a rating scale with criteria for determining the weight of the assessment at five levels according to Likert's method (Sereerat & Laksitanonsuporn, 1995). Ratings are from 5 (strongly agree) to 1 (strongly disagree) (Zikmund et al., 2003).

Part 3 Consumers' attitude toward purchasing (purchase decisions) crude palm oil powder by livestock farmers in Suphanburi province. The contents cover five aspects: problem recognition, information search, alternative evaluation, purchase decision, and post-purchase behaviour. This part is a five-rating scale question.

Part 4 Additional suggestions for the decision to purchase crude palm oil powder by livestock farmers in Suphanburi province.

3.3 Data Collection

The researchers distributed questionnaires to a sample group by convenience sampling in Suphanburi in 400 sets for data collection. The response rate was 100% (400 respondents).

3.4 Data Analysis

The researchers analyzed descriptive statistics to describe the characteristics of common data found and analyzed. The inferential statistics using Pearson Correlation test the research hypothesis and test the relationship between the marketing mix factors (product, price, place, promotion) and the purchase decisions for purchasing crude palm oil powder of livestock farmers in Suphanburi province by using Pearson's Correlation coefficient.

4. RESULTS

Most respondents were male (71.3%), the age was between 40-49 years old (35%), held below bachelor's degree (93.1%), and earned a monthly income of 10,001-15,000 baht (30.8%). The samples represented livestock farmers' crude palm oil powder consumers in Suphanburi, Thailand.

Table 1. Mean, Standard Deviation and Interpretation.

Items	Mean (S.D.)	Interpretation
Product		
1. Crude palm oil powder has a certification mark.	3.863 (0.514)	Agree
2. Crude palm oil powder is easy to use and easy to mix with other raw materials.	4.323 (0.674)	Strongly Agree
3. Crude palm oil powder comes in a variety of packaging.	4.293 (0.694)	Strongly Agree
4. The packaging of crude palm oil powder has a clear description of the nutritional value.	3.893 (0.694)	Agree
<i>Total of Product</i>	<i>4.093 (0.444)</i>	<i>Agree</i>
Price		
	Mean (S.D.)	Interpretation
1. Crude palm oil powder at a reasonable price.	2.525 (0.852)	Disagree
2. Raw material stores can negotiate the price of crude palm oil powder.	3.653 (0.760)	Agree
3. Crude palm oil powder has a clear price indication.	3.983 (0.783)	Agree
<i>Total of Price</i>	<i>3.387 (0.589)</i>	<i>Neutral</i>
Place		
	Mean (S.D.)	Interpretation
1. Crude palm oil powder can be purchased easily and conveniently.	2.070 (0.870)	Disagree
2. Raw material stores have enough crude palm oil powder to meet the demand.	2.475 (0.801)	Disagree
3. Raw material shop provides transportation of crude palm oil powder.	2.888 (0.952)	Neutral
<i>Total of Place</i>	<i>2.478 (0.777)</i>	<i>Disagree</i>
Promotion		
1. Crude palm oil powder has a marketing promotion such as a promotion by reducing the price.	3.620 (0.801)	Agree
2. Crude palm oil powder is advertised through various media such as radio, billboards, flyers, television.	2.618 (0.841)	Neutral
3. Salespeople have good human relations, speak politely, and provide clear information.	3.720 (0.744)	Agree
4. There are promotional activities for customers to enjoy, such as sweepstakes.	2.468 (0.704)	Disagree
<i>Total of Promotion</i>	<i>3.106 (0.533)</i>	<i>Neutral</i>

Purchase Decisions	Mean (S.D.)	Interpretation
1. You will buy crude palm oil powder because it meets the nutritional needs of your animals.	3.933 (0.801)	Agree
2. You will buy crude palm oil powder because it is more convenient to use than crude palm oil.	4.273 (0.628)	Agree
3. Before purchasing crude palm oil powder, you have researched information about crude palm oil powder products.	3.163 (0.865)	Neutral
4. You buy crude palm oil powder based on the quality mark.	3.780 (0.658)	Agree
5. You buy crude palm oil powder based at a reasonable price.	4.385 (0.627)	Strongly Agree
6. You buy crude palm oil powder based on the convenience of purchasing, e.g., Shop nearby. There is a freight service.	4.240 (0.717)	Agree
7. Promotion of crude palm oil powder such as discounts plays an important role in your purchasing decisions.	4.463 (0.674)	Strongly Agree
8. You will repurchase crude palm oil powder in the next opportunity.	3.890 (0.792)	Agree
<i>Total of Purchase Decisions</i>	<i>4.016 (0.354)</i>	<i>Agree</i>

Each item and the overall level falls into the standard deviation values were lower than 1, indicating a high agreement among respondents.

Table 2. Pearson's Correlation (r)

Variables	Correlation (r) with Purchase Decisions	p-value	Actions
Product	0.193**	0.000	Support H1
Price	0.267**	0.000	Support H2
Place	0.138**	0.006	Support H3
Promotion	0.208**	0.000	Support H4

** Correlation is significant at the 0.01 level (2-tailed).

5. DISCUSSION

5.1 Discussion of the Research Finding

The hypotheses were tested and supported. The result showed that marketing mix factors positively correlate with purchase decisions toward crude palm oil powder of livestock farmers

in Suphanburi, Thailand. Price has the highest correlation with purchase decisions ($r=0.267$, $p=0.000$ at two-tailed), followed by promotion ($r=0.208$, $p=0.000$ at two-tailed), product ($r=0.193$, $p=0.000$ at two-tailed) and place ($r=0.138$, $p=0.006$ at two-tailed), respectively. The results supported the previous studies of Kotler & Keller (2009), Changsirikarnkha (2008), Anggita & Ali (2017), Amanah et al. (2018), and Limpo et al. (2018) that product positively correlates with purchase decisions. The results supported the previous studies of Kotler & Keller (2009), Chunraksa (2015), Anggita & Ali (2017), Amanah et al. (2018), and Limpo et al. (2018) that price positively correlates with purchasing decisions. The results supported that promotion is positively related to purchase decisions, the same as the previous studies of Kotler et al. (2009) and Chunraksa (2015). The place has a significant positive correlation with purchase decisions of crude palm oil powder of livestock farmers in Suphanburi, Thailand. The results are inconsistent with previous studies of Kotler & Keller (2009), Chongcharoensuk (2017), and Brata et al. (2017).

5.2 Research Contribution

This research investigates marketing mix factors (4Ps) related to the purchase decisions of crude palm oil powder of livestock farmers in Suphanburi, Thailand, and has never been done before. It provided additional information to support the relevant theories of the marketing mix factors and consumers' purchase decisions. The results could be used as a guideline for entrepreneurs to reduce the risk of failing to approach crude palm oil powder.

5.3 Conclusions

The study has performed the marketing mix factors related to the purchase decisions of crude palm oil powder of livestock farmers in Suphanburi, Thailand. The price is the highest related to consumers' purchase decisions. The marketers should pay attention to the product price by setting it reasonably. Moreover, promotion is the way to attract new and loyal customers. The quality of the product is also essential and related to customers' purchase decisions. The place is convenient for customers, easily accessible, and conveniently attracts more customers. Once the livestock farmers find the available store and suitable promotional activities that respond to customers' needs and expectations, they will repeat purchases. Therefore, marketing mix factors (4Ps) are essentials and related to consumers' purchase decisions. The entrepreneur should focus on price, promotion, product, and place to increase customers' purchase decisions.

5.4 Limitations & Recommendations

This research is only quantitative and may not have a comprehensive study. Consequently, it is recommended to study in-depth or qualitatively in further research. The researchers examined four variables: product, price, place, and promotion related to purchasing decisions. Other variables were not included. Therefore, the researchers should consider more variables. This research is about the only raw material product, crude palm oil powder. It may not be possible to explain other raw material products in the agro-industry market. This research

was conducted in a sample of livestock farmers in Suphanburi province. Therefore, it cannot be explained for populations in other areas. The researchers recommended that the sample should represent the population in other provinces. From the study, it was learned that some limitations might affect the results of this research. For example, the questionnaire tool may have biased questions or some bias in answering. And most of the respondents were older, which made it difficult to answer the questionnaire, such as poor eyesight and poor reading skills. More preparation may be needed to ensure respondents' ease of answering the questionnaire in further study. Moreover, Sereerat & Laksitanonsuporn (1995) suggested that demographics such as gender, age, status, education, occupation, and income are essential variables and statistically indicative, so these variables can effectively determine the target market segment for further study.

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