

# THE INFLUENCE OF CONSUMER BEHAVIOR ON THE PURCHASE DECISION OF HYDROPONIC VEGETABLES IN PUCCAN HYDROPONIC, BLITAR CITY

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## Abstract

*The research aims to determine the effect of consumer behavior on purchasing decisions for hydroponic vegetables at Puccan Hydroponics. The results of the analysis show that there are 4 factors considered, namely Product, Price, Place, and Promotion on Purchase Decision using multiple linear regression analysis. The population is hydroponic vegetable consumers at Puccan Hydroponics with a total sample of 30 respondents. The sampling technique in this study was the accidental sampling method. Based on the research results, from the results of the F test it can be seen that the variables Product, Price, Place, and Promotion together have a significant effect on the Purchase Decision variable. From the results of the T test it can be seen that the price variable partially influences purchasing decisions, while the product, place, and Promotion does not partially influence the Purchase Decision. From the test results of the coefficient of determination, Product, Price, Distribution, and Promotion variables contribute 90% to the Purchasing Decision variable. While 10% is influenced by other factors.*

**Keywords:** *organic vegetables, consumer behavior, purchasing decision*

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## 1. INTRODUCTION

At present there is intense competition faced by producers engaged in the food sector. The intense competition is caused by the perfect food market competition structure. In a perfectly competitive market there are many sellers and buyers and the available goods are homogeneous. In this market structure, many producers compete with each other to produce various brands of food products, of the same type, but with different product specifications and quality. Competition between producers gives consumers the freedom to choose which food product they want. The decision to choose a product is usually based on the quality and price of the product offered, as well as how the product is distributed and promoted.

Hydroponic technology is a farming method without soil, but using a nutrient solution as a source. The advantages of hydroponics are that it is environmentally friendly, the products produced are hygienic, the growth of plants is faster, the quality of crop yields can be maintained, and quantity can more. The prospects for the hydroponic vegetable business for the next 10 years are very profitable. This is related to body health, where various developed countries have monitored the circulation of products whose maintenance uses pesticides [1]

In the city of Blitar, hydroponic vegetables are currently the new prima donna on the market

In modern times, although the price is still expensive or 20% above the price of non-hydroponic vegetables at Puccan Hydroponics, for example, the average hydroponic vegetables are sold at IDR 18,000 to IDR 24,000 per kilogram. Even though the price is expensive, people still hunt hydroponic vegetables because they consume hydroponic vegetables for health purposes and taste better than non-hydroponic vegetables. But the obstacle for consumers is the relatively expensive price, which is almost 3 times the price of non-hydroponic vegetables, so consumers have to spend it every day. Therefore, consumers must adjust the frequency of buying organic vegetables according to their needs.

Based on data from the Blitar hydroponic community, there are approximately 100 hydroponic producers with large scale production in the city and district of Blitar. For hydroponic producers on a large scale, the number of plants in the greenhouse is around 2,500 – 4,000 planting points. Hydroponic vegetable consumers in Blitar have increased every year from 2017 until now the number of hydroponic vegetable enthusiasts is around 800 people.

One of the largest hydroponic producers in the city Blitar namely Puccan Hydroponics which is located on Jalan. Brau Number. 5, Bendogerit, Kec. Sananwetan, Blitar City. Puccan Hydroponics isa company engaged in the cultivation of vegetables using a hydroponic system. The hydroponic cultivation system used at Puccan Hydroponics uses NFT (Nutrient Film

Techniques). Various types of cultivated vegetables are successful in this company. The types of hydroponic vegetables sold by Puccan Hydroponics include hydroponic mustard greens, caisim mustard, kale, green spinach, red spinach, kailan and lettuce.

The vegetable ordering system at Puccan Hydroponics Blitar uses the whatsapp group. First of all, Puccan Hydroponics will look at the sales trend a month after that after that it decides what vegetables to plant. After the harvest, Puccan Hydroponics will provide information to regular customers via the WhatsApp group and after that a buying and selling transaction using WhatsApp is made. However, customers can also buy directly at the Hydroponic Puccan garden.

Puccan Hydroponics is still very new in the hydroponic vegetable marketing business, so it is still trying to expand its market share located in the Blitar area. The hydroponic vegetables sold at Puccan Hydroponics are hydroponic agricultural products with a certification label, which guarantees consumer confidence in the quality of these vegetables. Consumers who are part of the Puccan Hydroponic market segment are consumers from the lower middle class to the upper middle class with a relatively large level of knowledge. Not only that, the location of Puccan Hydroponics, which is located in the city center, is very supportive for bringing the product closer to its target consumers.

There are different ideas about the decision process that consumers try. Because each decision that the consumer tries to logistically compares several options in terms of the amount of money received to obtain satisfaction. There are many factors that affect consumer satisfaction with the decision to buy hydroponic vegetables, namely the quality and quantity of vegetables that are good for supporting health and a good lifestyle for humans.

An interesting phenomenon that emerged in the interim research was that even though hydroponic vegetables were relatively more expensive, there were some consumers who preferred to choose consumption of vegetables to hydroponic vegetables along with increased income and public knowledge of the importance of nutrition for health. The reason for the importance of nutrition from consuming hydroponic vegetables shows that a person purchases hydroponic vegetables not solely depending on price or income level but also seen from appearance factors (packaging), continuity of availability of vegetables, area of residence, and others. Thus there are certain factors that influence purchasing decisions made by consumers where these aspects not only come from factors that can be seen and measured directly, but also come from factors whose mental processes cannot be seen directly, let alone quite difficult.

[2] Marketing as “A social and managerial process by which individuals and groups obtain their needs and wants with produce,offer something of value.”

Thus marketing is an effort to satisfy the needs of buyers and sellers. It can be concluded that marketing is not merely an activity to sell goods or services, but rather emphasizes activities that lead to the transfer of goods or services from producers to consumers in a very efficient and effective way.

### **Marketing Mix**

In marketing there is a marketing strategy that has an important position in influencing consumers to buy products and services offered by the industry. The marketing mix is a collection of marketing variables that can be controlled and used by the company to achieve marketing objectives.

According to Kotler and Armstrong [5] the marketing mix is "equipment marketing Which controllable, and used by the organization to complete a response that is desired by consumers. The number of variables contained in the marketing mix is very large. The marketing tool itself consists of 4P namely:

#### **1. Product**

Product is the first and most important element in the marketing mix. Strategy product needcoordinated decision making in product mix, product line, branding and packaging and labeling .The competitive advantage of a product is one of the determining factors for the success of a new product, where the success of the product is measured by the parameter of the number of product sales [3].

#### **2. Price**

According to Alma [4] ,price is the value of an item or service expressed in money. Price is the only element of the marketing mix that generates revenue while the other elements generate costs. The importance of price stated by C for any organization, a pricing strategy designed and implemented effectively requires an in- depth understanding of consumer pricing psychology and a systematic approach to setting, adjusting and changing prices.

#### **3. Place**

Place is a marketing activity that seeks to expedite and facilitate the delivery of goods and services from producers to consumers so that their use is as needed. The distribution channel is a group of intermediaries who are closely related to each other and who distribute products to buyers. Argue that distribution channels are a series of organizations that are interdependent and involved in the process of making a product or service ready for use or consumption [3].

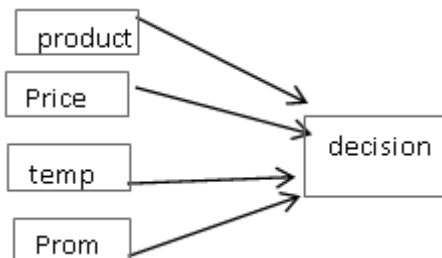
#### **4. Promotion**

Promotion is a form of marketing communication which is a marketing activity that seeks to disseminate information, influence and remind the target market of the company and its products so that they are willing to accept, buy and be loyal to the products offered by the company concerned. The definition of promotion according to Kotler and Armstrong [3] is that promotion is a specific blend of advertising, sales promotion, public relations, personal selling, and direct marketing tools used company For persuasively communicate customer value and build customer relationships. Consumer behavior.

According to Kotler and Keller [3] defining consumer behavior is: "The study of how individuals, groups, and organizations choose, buy, use. And how goods, services, ideas, or experiences to satisfy their needs and wants.

According to [7] defines consumer behavior as "the actions involved direct in get, consume, and spend the product or service, including process Which precedes and follows this action." Buying decision Schiffman and Kanuk [8] define a decision as choosing an action from two or more alternative choices. A consumer must have an alternative selection. A decision with no other choice is called a "Hobson choice". Purchasing decisions are the process of identifying needs, searching for information, evaluating alternatives, purchasing decisions, and post-purchase behavior [3].

### Research Conceptual Framework



## 2. RESEARCH METHODS

The research approach used is quantitative. The population in this study were hydroponic vegetable consumers at Puccan Hydroponics. The number of samples in this study were 30 respondents. The method of determining the sample used is accidental sampling. The types of data used are primary data and secondary data. Primary data is data taken directly from respondents who buy hydroponic vegetables at Puccan Hydroponics. Secondary data is data obtained by citing reports or documents from government agencies or institutions related to this research. Data collection techniques are carried out by observation, interviews, and recording.

The data collection method in this study used a questionnaire given to consumers directly. Variable measurement is done with a Likert scale. Test the research instrument used is test validity and reliability. Then, it is continued with the classical assumption test which consists of multicollinearity test and heteroscedasticity test. Then, a multiple linear regression analysis was carried out, followed by hypothesis testing and a test of the coefficient of determination.

### **3. RESULTS AND DISCUSSION**

Description of Respondents' Characteristics From the results of distributing the research questionnaire, it was obtained description about the characteristics of the respondents who became the sample in this study were:

1. Gender of respondents is dominated by women with a percentage of 86.7%
2. The age of the respondents is dominated by the age of 31-40 years with a percentage of 60%.
3. Respondents' work is dominated by private employees with a percentage of 33.4%,
4. The last education is dominated by S1 graduates with a percentage of 57.7%
5. Respondents' monthly income ranges from IDR 3,000,000- 4,000,000 with a percentage of 50%
6. The subscription period is dominated by consumers who subscribe for more than 3 months with a percentage of 50%.
7. The most dominant type of vegetable purchased is mustard greens with a percentage of 30%.

#### **3.1 Research Instrument Test Results**

The results of the validity test show that all statement items used have a value between 0.577-0.889, which means  $r_{count} > r_{table}$ , namely  $0.577-0.889 > 0.3061$ , and the value significance  $0.000 < 0.05$ . So it can be concluded that all of the statement items are valid.

The results of the reliability test showed that all variables had a Cronbach's Alpha value between 0.785-0.919 which means  $> 0.60$ . So it can be concluded that all these variables are reliable.

### 3.2 Classical Assumption Test Results

The multicollinearity test results show that all variables have a Tolerance value between 0.210-0.393 which means  $> 0.10$ , and the Variance Inflation Factor (VIF) value between 2.543-4.751 which means  $< 10$ , so it can be concluded that in this regression model there are no symptoms of multicollinearity on each variable.

The results of the heteroscedasticity test based on the Scatterplot test show that the points are spread randomly and spread above and below zero on the y axis. Therefore, it can be concluded that there is no heteroscedasticity.

### 3.3 Results of Multiple Linear Regression Analysis

Based on the results of multiple linear regression analysis, the results are obtained with the following equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e \quad Y = 0.678 + 0.025X_1 + 0.484X_2 + 0.255X_3 + 0.182X_4 + e$$

a) Information:

The constant is 0.678, meaning that if the value of the product, price, distribution and promotion is considered constant, then the purchasing decision level is 0.678.

b) The regression coefficient  $X_1$  is 0.025, meaning that if the other independent variables have a fixed value and the value of the product increases by one unit, then the level of purchasing decisions will increase by 0.025.

c) The regression coefficient  $X_2$  is 0.484 meaning that if the other independent variables have a fixed value and the value of the price increases by one unit, then level of purchasing decisions will increase by 0.484.

d) The  $X_3$  regression coefficient is 0.255, meaning that if the other independent variables have a fixed value and the value of the distribution increases by one unit, then the level of purchasing decisions will increase by 0.255.

e) The  $X_4$  regression coefficient is 0.182, meaning that if the other independent variables have a fixed value and the value of the promotion increases by one unit, then the level of purchasing decisions will increase by 0.182.

### **3.4 t test results (partial test)**

The results of the t test show that the t value of the variable X1 (Product) is 0.024

$< 2.056$  t table and the variable X3 (Place) has a t value of 1.959  $< 2.056$  t table, and the variable X4 (promotion) t count is 1.589

$< 2.056$  t table, so it can be concluded that these three variables do not have a significant influence on purchasing decisions. While the calculated t value of variable X2 (price) is 4.103  $> 2.056$  t table, so it can be concluded that these two variables have a significant influence on purchasing decisions

### **3.5 F Test Results (Simultaneous Test)**

From the results of the F test, it was obtained that F count was 56.455  $> 2.62$  F table, and a significance value of 0.000  $< 0.05$ . Thus, there is a significant influence simultaneously on product, price, place, promotion variables on purchasing decision variables.

Results of Analysis of the Coefficient of Determination (R<sup>2</sup>)

From the results of the R<sup>2</sup> analysis, an R Square value of 0.900 is obtained, which means that the product, price, place, and promotion variables influence the purchasing decision variable by 900%, while 10% is influenced by other variables outside this study.

### **3.6 Product Influence on Purchasing Decisions**

Based on the results of hypothesis testing, it shows that the product variable does not have a positive and significant influence on purchasing decisions as indicated by the Sig value. for the effect of X1 on Y is 0.817  $> 0.050$  and the tcount is 0.024  $<$  ttable 2.056, so it can be concluded that Ho is accepted and Ha is rejected.

### **3.7 Effect of Price on Purchasing Decisions**

Based on the results of hypothesis testing, it shows that the price variable has a positive and significant influence on purchasing decisions as indicated by the Sig value. for the effect of X2 on Y is 0.000  $< 0.050$  and the tcount is 4.103  $>$  ttable 2.056, so it can be concluded that Ho is rejected and Ha is accepted.

### **3.8 The Effect of Place on Purchasing Decisions**

Based on the results of hypothesis testing, it shows that the distribution variable does not have a positive and significant influence on purchasing decisions as indicated by the Sig value. for the effect of X3 on Y is 0.061  $< 0.050$  and the tcount is 1.959  $<$  ttable 2.056, so it can be concluded that Ho is accepted and Ha is rejected.



### 3.9 The Effect of Promotion on Decisions

Purchase Based on results hypothesis testing shows that the promotion variable has no significant effect positive and significant to purchase decision indicated by the value of Sig. for the effect of X4 on Y is  $0.125 < 0.050$  and the tcount value is  $1.589 > t_{table} 2.056$ , so it can be concluded that  $H_0$  is accepted and  $H_a$  rejected.

## 4. CONCLUSION

Based on the results of the analysis of data obtained from 30 samples of Hydroponic Vegetable consumers at Puccan Hydroponics Blitar which have been described in the analysis of the data contained in the previous chapter, the following conclusions can be drawn:

- 1) Simultaneous results (F test) show that the variable product (X1), price (X2), place (x3), and promotion (X4) together influential on purchasing decisions, where the calculated F count is  $56,455 > F_{table} 2.76$  with a significance level of 0.000.

2)

Results kindly	Partial	(test t)
Show	That	Variable
Product (X1)	With	T count

$(0.024) < t_{table} (2.056)$ , Place (X3) with t count  $(1.959) < t_{table} (2.056)$ , Promotion (X4) with t count  $(1.589) < t_{table} (2.056)$  partially does not affect the decision to purchase hydroponic vegetables in Puccan Hydroponics, while for the price variable (X2) with t count  $(4.103) > t_{table} (2.056)$  it partially influences purchasing decisions.

Vegetable hydroponics in Puccan hydroponics

## 5. SUGGESTION .

There is further research on the economic analysis of hydroponic vegetable cultivation

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