The Influence of Price, Product Quality, and Brand Image on Online Purchasing Decisions for Aquaponic Products at PT Tanikota

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ABSTRACT

The COVID-19 pandemic has encouraged all activities to be carried out completely online, including purchasing fresh products to meet daily food needs. PT Tanikota is a company located in Bandung that sells aquaponic products online. Behind the existing business potential, consumers of fresh produce are still not sure to make purchases online because they cannot see or choose directly the products they want to buy, given their perishable characteristics. The purpose of this study was to analyze the effect of price, product quality, and brand image on online purchasing decisions for aquaponics at PT Tanikota. The design of this research is using mixed methods. The results showed that price and product quality affected purchasing decisions for aquaponics products online at PT Tanikota, while brand image had no significant effect. Price, product quality, and brand image simultaneously have a significant effect on online product purchase decisions at PT Tanikota. The influence of price is 18.2%, product quality is 23.4% and brand image is 9.4%..

1. Introduction

At the beginning of 2020, the world was shocked by the spread of a virus that originated in Wuhan named Coronavirus Disease 2019 (COVID-19). The COVID-19 outbreak has spread all over the world, including in Indonesia. Large-Scale Social Restrictions (PSBB) are one of the government's efforts to prevent the spread of COVID-19 which will be held in stages in certain areas. Restrictions on community activities during the pandemic have an impact on increasing internet users. According to the Central Statistics Agency (BPS) in databoks (2021), 78.18% of households in Indonesia have used the internet. One of the reasons for the increase in 2020 is that more daily activities are carried out from home online.

According to the survey results of the Indonesian Internet Service Providers Association (2020), during the COVID-19 pandemic, most users accessed the internet for more than 8 hours in one day. Moreover, according to the results of a survey conducted by Mckinsey and Company (2020), the increase in online buying and selling activities has resulted in soaring sales of several products, including foodstuffs. This is in line with the results of the IPrice survey (2020), which states that the COVID-19 pandemic has increased online sales of agricultural commodities by nearly 400%.

Ideally, in purchasing fresh products such as vegetables, fruit, and fish, consumers want to see and choose the quality of these products directly.

Bulsara and Trivedi (2016) stated that the main thing that is concern consumers in purchasing fruits and vegetables online is the limitation to touch the vegetables and fruits directly, where vegetables have perishable characteristics.

Another obstacle is related to the delivery process which must arrive as soon as possible in the hands of consumers so that the condition of the product remains fresh. The existence of various obstacles does not become a barrier for PT Tanikota's online consumers who continue to make purchases. This is supported by data from the company which shows sales of aquaponic products per month which penetrate more than 100 kg per month.

Tjiptono (2008) describes product attributes as a series of product elements that are considered important by consumers and can be used as a basis for making purchasing decisions. PT Tanikota has the potential to increase its sales through the attributes of the aquaponic products it offers. The product attributes analyzed in this study consist of price, product quality, and brand image. Generally, consumers want prices that are not too high with good quality and brands that are known to be trusted by the public.

Based on the explanation above, the authors are interested in researching the influence of price, product quality, and brand image on online purchasing decisions for aquaponic products at PT Tanikota.

2. Methodology

This research uses a mixed-method design. The object studied in this study is the Influence of price, product quality, and brand image on online purchasing decisions for aquaponic products at PT Tanikota. Sources of data in this study consisted of primary data and secondary data. Primary data sources were obtained through interviews with informants, namely the director of PT Tanikota, as well as distributing questionnaires in the form of a google form to consumers who have purchased PT Tanikota's aquaponic products online.

Secondary data sources are obtained through several appropriate works of literature such as journals, books, the internet, results of previous research, the Central Bureau of Statistics and other agencies that can support the availability of related data and information. Data collection techniques in this study include interviews, questionnaires, and a literature study.

3. Results and Discussion

3.1 Characteristics of Respondents

Respondent characteristic data aims to determine online aquaponics products consumers at PT Tanikota. Characteristics of respondents in this study are seen from gender, age, occupation, income, domicile, and status. Based on the results of distributing questionnaires, It can be seen that consumers of PT Tanikota's aquaponic products are dominated by the female gender (77.1%). This is because in general, women who buy vegetable and fish products and are responsible for preparing household consumption are women. Consumers of PT Tanikota's aquaponic products are dominated by the 41 – 51-year-old (41.4%). This is because these age groups generally already have consideration and experience in shopping for fresh products, so they understand the vegetable and fish products to be purchased. In addition, consumers in this age range tend to be more selective in the products they consume to maintain their health of themselves and their families. This is different from consumers with an age range of 19-29 years who tend to buy instant food because it is easier and more practical.

The majority of consumers of PT Tanikota's aquaponic products work as private employees (31.4%). These work groups generally do not have enough time or energy to buy

products offline whereas purchasing aquaponics products online is more practical. The majority of consumers of PT Tanikota's aquaponic products have an income of 9,500,001 (42.9%), and the consumer group with this income belongs to the upper middle class.

PT Tanikota's aquaponic products are free from pesticides or chemical fertilizers, so they have a relatively higher price compared to other vegetables that are cultivated conventionally. The relationship between consumer income and the relatively high price of aquaponic products shows the ability and willingness of consumers, the majority of whom come from the upper middle class, so they are willing to spend more to get safer and quality products (free from pesticides and chemical fertilizers). The majority of consumers of PT Tanikota's aquaponics products are domiciled in Bandung City (60%). This is because consumers who live in the city of Bandung are closer to PT Tanikota, so the shipping costs for PT Tanikota or Gojek services are lower, and the estimated delivery time is faster than shipping outside the city of Bandung. The majority of consumers of PT Tanikota's aquaponic products are married (81.4%). This indicates that most consumers are married and require the consumption of healthy vegetables or fish for daily family food needs, whereas generally young and unmarried children or adolescents rarely buy and cook their vegetables due to limited knowledge and ability to cookcare still busy with school or work, and awareness of the health benefits of vegetables is generally still low.

3.2 Validity and Reliability Test

A validity test is used to measure the answers or responses of respondents. The measurement results with SPSS 25 state that the number r calculated for all items used to measure the price variable (X1), product quality (X2), brand image (X3), and online purchasing decisions (Y) is greater than the r table number of 0,2319 or it can be said r count r table. Thus, it can be concluded that all items used to measure the variables in this study are valid. Reliability is a measure of a respondent's stability and consistency in answering or responding to statements from the distributed questionnaire. According to (Hamdi and Bahruddin, 2014), the reliability test results are declared reliable if the Alpha value > 0.60. The results of the reliability test in this study stated that all variables had Cronbach's Alpha values > 0.60, so it can be concluded that the results of the reliability test used to measure all variable items are reliable.

3.3 Classic Assumption Test

3.3.1 Normality Test

The normality test as a step in the classical assumption test is carried out to determine whether the residuals are normally distributed or not. P-Plot Regression Standardized Residual chart shows the spread of the points around the diagonal line, so it can be concluded that the residual value meets the assumption of normality which can be seen in Figure 1.
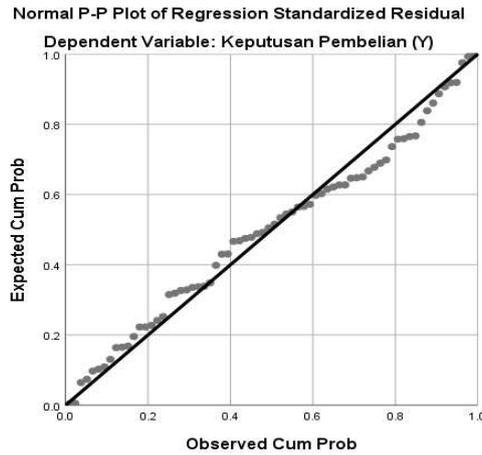
Figure 1. P-Plot Regression Standardized Residual Chart

3.3.2   Multicollinearity Test

A multicollinearity test was conducted to determine whether there were symptoms or correlations between independent variables. Symptoms of multicollinearity can be seen from the amount of Variance Inflation Factor (VIF) and Tolerance. The guidelines in this study use a multicollinearity-free regression model where the Tolerance value is> 0.10 or VIF < 10. The results of the multicollinearity test can be seen in Table 1.

Table 1. Multicollinearity Test Results

Model	Collinearity Statistics	
	Tolerance	VIF
Price (X1)	0.904	1.106
Product Quality (X2)	0.751	1.332
Brand Image (X3)	0.691	1.448

Source: Primary Data Processed

3.3.3   Heteroscedasticity Test

A good regression model is a homoscedasticity. Detection of whether or not heteroscedasticity symptoms occur can be seen from the scatterplot graph obtained from SPSS 25. Based on Figure 2., it can be seen that the points are randomly distributed, do not narrow, nor form a certain pattern, and are spread above and below the number 0 on the Y-axis. So, it can be concluded that there is no symptom of heteroscedasticity in the regression model of this study.
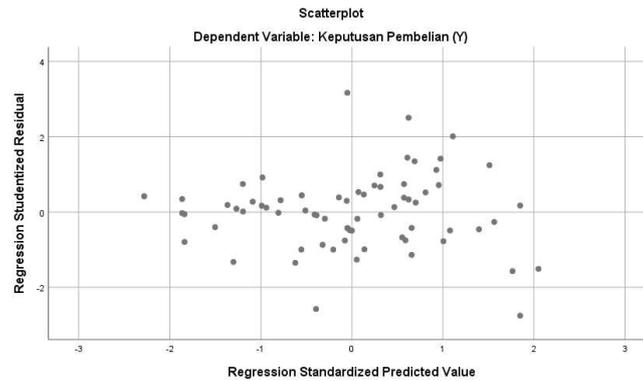
Figure 2. Scatterplot Graph

3.4 Multiple Linear Regression Test

Multiple linear regression analysis is a form of regression analysis with more than one independent variable being tested. This analysis technique is used to determine whether there is a significant effect of two or more independent variables (X1, X2, Xn..) on the dependent variable (Y) (Supranto, 2004).

Based on the results of data processing with SPSS 25, the regression model in this study is as follows:

$$Y = 11.771 + 0.565 \ X1 + 0.621 \ X2 + 0.236 \ X3 + ei$$

Y   = Online Purchase Decision
0   = Constant
1   = Price Regression Coefficient
2   = Product Quality Regression Coefficient
3   = Brand Image Regression Coefficient
Xi1 = Price
Xi2 = Product Quality
Xi3 = Brand Image
i   = Standard error

The regression model shows the product quality coefficient has the highest value, meaning that consumers tend to prioritize product quality and feel that the quality of PT Tanikota's aquaponics products has the greatest influence among the other two variables in influencing purchasing decisions.

3.5 T-Test

The t-test aims to determine whether, in the test mode, the independent variables (price, product quality, and brand image of PT Tanikota's aquaponics products) partially or individually have a significant effect on the dependent variable (online purchasing decisions). The results of the t-test can be seen in Table 2.

Based on Table 2., it can be seen the value of the t count of each independent variable. Before deciding, it takes the value of the t table which can be known in the following way:

T table = (:2; nk-1)$\frac{\alpha}{2}$

   = (; 70-3-1)$\frac{0,05}{2}$

   = 0.025; 66, so it can be seen that the t table value is 1,997.

Table 2. T-Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	11.771	3.614		3.257	.002
Price	.565	.130	.394	4.347	.000
Product Quality	.621	.142	.435	4.368	.000
Brand Image	.236	.133	.184	1.776	.080

It can be seen in Table 2. The t value of the price variable (X1) is 4.347 and the significance value is 0.000. The test results show that the value of t arithmetic > t table (4.347 > 1.997) and a significance value of < 0.05 (0.000 < 0.05). In the product quality variable (X2) the value of t count > t table (4,368 > 1,997) and the significance value < 0.05 (0.00 < 0.05). While on the brand image variable the value of t count < t table (1.776 < 1.997) and the significance value > 0.05 (0.05 > 0.08). The conclusion from the results of the analysis is that H1 and H2 are accepted, while H3 is the t-test hypothesis of this study.

3.6 F-Test

The F test was conducted to determine the effect of the independent variables simultaneously (simultaneously) on the dependent variable. The F test is carried out by comparing the calculated F value with the F table obtained from the analysis results.
Before making a decision, it takes the value of table F which can be known in the following way:

F table = (k; nk)
         = (3; 70-3)
         = (3; 67)
         = 2.74. So it can be seen that the value of the F table is 2.74.

Table 3. F Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	546.296	3	182.099	22.799	.000b
Residual	527.147	66	7.987		
Total	1073.443	69			

Based on Table 3., it can be seen that the significance value is 0.000 and the calculated F value is 22.799. The test results show that the calculated F value > F table (22.799 > 2.74) and the significance value < 0.05 (0.000 < 0.05), it can be concluded that the variables of price, product quality, and brand image simultaneously have a significant effect. on the decision to purchase aquaponic products online at PT Tanikota. The conclusion from this statement is that H0 is rejected and H4 is accepted in the F test hypothesis of this study.

3.7 Coefficient of Determination Test

The coefficient of determination test is carried out to determine the magnitude of the influence of the independent variables described by the dependent variable and the rest that cannot be explained are part of variations from other variables that are not included in the regression model. The results of the coefficient of determination test (R Square) value is 0.509 or 50.9%. It states that the contribution or ability of price (X1), product quality (X2), and brand

image (X3) in influencing online aquaponic product purchasing decisions at PT Tanikota is 50.9%, while the remaining 49.1% (100 %-50.9%) is influenced by other variables that cannot be explained in this study.

4. Conclusion

Based on this research result it can be concluded that price and product quality have a significant effect on aquaponic product online purchasing decisions at PT Tanikota, meanwhile, the brand image doesn't.

Acknowledgements

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