

The Effect of Product Quality, Prices, and Consumer Knowledge Levels on Product and Socio-Economic Status on Organic Rice Customer Satisfaction in Klaten, Central Java

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Abstract. Recently organic food has become people's choice and the market demand on organic foods has been increasing. Research done by Maastricht Ageing Netherland shows that chemical substances, especially pesticide, within our daily food consumption may generate cognitive disfunction. This research because of those two propositions. Independent variables used within this research were product price, product quality, product service, customer product knowledge level, and customer economic status. The dependent variable used was customer satisfaction. This research was done in Klaten regency using 95 respondents. These 95 respondents were organic rice customers. The research employs a census method while the data acquired through a questionnaire. The analysis uses validity and reliability tests as its test instrument whilst double linear regression analysis, determination coefficient test, t-test, F test, and classic assumption test as its hypothesis test. The result of regression the shows independent variable has positive effect on dependent variable. The R2 test result shows that the variability of customer satisfaction of the dependent variable on independent variables is 77,6% while the test 22,4% is explained on other variables that have a positive effect on the dependent variable. T-test result drives the conclusion that every independent variable; product price, product quality, product service, customer product knowledge level, and customer economic status has positive and significant effects on customer satisfaction. F test result drives the conclusion that all independent variables combined affect towards customer satisfaction.

Keywords: *product price, product quality, product service, customer product knowledge level, and customer economic status, customer satisfaction*

INTRODUCTION

Klaten Regency which is one of the rich producing areas in Central Java has successfully developed organic rice. Organic rice is rice produced from organic planting processes using

organic fertilizer. Until 2007, there were 8.15 hectares of organic rice fields with an average production of 7 or 8 tons per hectare. The current Klaten Regency government is also pioneering the development of organic agriculture for other commodities such as melons, peanuts, soybean, green beans, and vegetables [1].

The number of farmer groups of organic farmers in Klaten also increased. There were 10 groups of farmers when the program initiated in 2006 then increased to 15 groups with 37 farmers in 2007. Thus, organic rice production increased sharply. In 2006, the production reached 24 tons of milled rice and in 2007 was nearly 65.2 thousand tons of milled rice. This development cannot be separated from the rice demand of society continues to increase [1].

The development of organic rice numbers circulating in the community cannot be separated from many factors. Starting with prices in the amount of money that, us be spent in getting the reside item. Organic rice circulated in the market is three times more expensive compared to ordinary rice.

METHOD

The object of this study is in the form of organic rice, which has become a superior product of Klaten Regency. In terms of customer satisfaction which is influenced by price variables, quality of organic rice products, service outlets that sell these products, consumer knowledge on products, and socio-economic status [2].

Validity Test is useful to find out how far the level of accuracy of the measuring instrument used can measure the dimensions or characteristics of variables is desired by the researcher [3], [4]. Assuming that each item in an expression variable is concerned, the item score must have a positive score with a variable score. Correlation capital used was the moment correlation model and calculated using SPSS version 11.5. The Formula:

$$r^{xy} = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{\{n\sum x^2 - (\sum x)^2\} \{n\sum y^2 - (\sum y)^2\}}}$$

The results of the calculation of the significant value will be compared to the 5% significant rate. If the calculation result of the product-moment correlation significance value below the 5% significance rate, the questions in the questionnaire are declared valid. The reliability test in this study used a Cronbach Alpha score with a 95% confidence level. The reliability is expressed by an alpha coefficient that has a range between 0 to 1. The closer to 1 means the higher the reliability will be. Generally, reliability with Alpha Cronbach value of 0.60 is said to be bad if the Alpha Cronbach values in the range of 0.70 to 0.80 are acceptable and the Cronbach Alpha value of more than 0.80 is considered good. Alpha Cronbach calculations are [4], [5]:

$$R^i = \frac{k}{(k-1)} \frac{1 - \sum s_i^2}{S^2}$$

Multiple Linear Regression Analysis is used to determine whether there is a relationship between the dependent variable and the independent variable. If there are more than one independent variable. Multiple regression analysis is also used to test the research hypothesis. The analysis is based on the significance of the regression coefficient of the regression equation. The independent variables are price, product quality, product service, level of consumer knowledge of the product, and social-economic status while the item used as the dependent variable is consumer satisfaction. Thus the regression equation can be arranged as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Description:

Y	= Customer satisfaction
A	= Constan quality ta
b_1, b_2, b_3, b_4, b_5	= The coefficient of each variable
X_1	= Price
X_2	= Product
X_3	= Sevice
X_4	= The level of consumer knowledge on the product
X_5	= Socuseconomic status
e	= error

The adjusted R2 test is to see some of the proportions of independent variables together in influencing the dependent variable. If R2 obtained from the calculation results is greater of closer to 1 then it can be said that the contribution to the variation of the dependent variable is greater. This means that the model used is stronger to explain the dependent variable. Conversely, If the R2 value is close to zero, it means that the independent variable does not affect the dependence so that the model used is less precise [6].

The t-test is used to determine whether the independent variables individually affect the

dependent variable. In this study, the t-test is used to test the hypothesis which is to determine whether the variables of price, product quality, service, the level of consumer knowledge on the product, and socioeconomic status individually affect consumer satisfaction. F test is used to determine whether the independent variables simultaneously affect the dependent variable. From the F test, it can be known whether the variable of the price, product quality, service, the level of consumer knowledge on the product, and socioeconomic status simultaneously affect consumer satisfaction.

(P-value) or a significant value below 0.05 (significance level). The level of trust used in this study is 95%. This method is to compare the p-value or probability number with the level of significance (α) specified. If the probability or sig number is greater than alpha, the H_0 accepted, and H_a is rejected. In principle, a decision made based on comparing F count and F table will produce the same conclusion based on comparing the probability numbers with the level of significance (α). However, for convenience and practicality, the use of probability numbers is more often used as an inference decision.

The normality Test is used to check whether the data is filtered and each variable is a normal distribution or not. The normality test aims to determine whether the distribution of the two collected data is normal. The normality used in this study is the Column-Smirnov Test. The analysis was carried out using the SPSS 10.0 computer program. The linearity Test is to test the linearity of the analyzed data:

$$\sum Y^2_1 = \frac{(\sum Y_2)^2}{n} + JK (a/b) + JK (Res)$$

The Heteroscedasticity test aims to test whether, in a regression model, there is no variance inequality from residuals from observation to another observation. If the residual variance from another observation is fixed, it is called Homoscedasticity and if the variance is different, it is called heteroscedasticity or heteroscedasticity does not occur. The multicollinearity test aims to test whether the regression model determines the correlation between independent variables.

RESULT AND DISCUSSION

This study discusses the effect of price variables, product quality, service, the level of consumer knowledge on the product, and simultaneously and partial socioeconomic status on customer satisfaction of users of organic rice products. The subject of the study was the use of organic rice with only the research area of Klaten Regency.

This study discusses the effect of price variables, product quality, service, the level of consumer knowledge on the product, and simultaneously and partial socioeconomic status on customer satisfaction of users of organic rice products. The subject of the study was the use of organic rice with only the research area of Klaten Regency. The type of research used is the survey that is to collect information systematically from respondents to understand the behavioral aspect of the population studied. The research analyzes data obtained from the respondent as many as 95 respondents based on a list of questions that have been compiled. The 95 of these respondents are consumers of organic rice in the districts of Klaten. The Vision and Missi of the Klaten Regency Agriculture Office are as follows:

Vission

A. Characteristic of Respondent

The characteristic of respondents in this study was grouped by gender. age and level of education

a. Composition of respondents based on gender

Table 1. Composition of Respodents Gender

No	Gender	Amount	Percentage (%)
1	Male	51	53,68
2	Female	44	46,32
	Total	95	100

b. Composition of respondents based on age

Table 2. Age Composition of Respondent

No	Age	Amount	Percentage (%)
1	<20	9	9,47
2	20 s/d 30 th	15	15,79
3	31 s/d 40 th	51	53,68
4	Diatas 40 th	20	21,05
	Total	95	100

c. Composition of respondents based on education level

Table 3. Composition of The Respondents Education Level

No	Education Level	Amount	Percentage (%)
1	High School	15	15,79
2	D3	18	18,95
3	Bachelor/ DIV	50	52,62
4	Post Graduate	12	12,63
	Total	95	100

B. Research Instrument Test

a. Validity Test

Question item validity for price variables (X1)

Table 4. Correlation of Question Items To Price Variables

Question Items	I_{item}	I_{tabel}	Description
X1_1	0,364,	0,202	Valid
X1_2	0,489,	0,202	Valid
X1_3	0,567,	0,202	Valid
X1_4	0,521,	0,202	Valid
X1_5	0,420,	0,202	Valid
X1_6	0,423,	0,202	Valid
X1_7	0,418,	0,202	Valid
X1_8	0,310,	0,202	Valid
X1_9	0,265,	0,202	Valid
X1_10	0,202,	0,202	Valid

Correction of question items to valid variables has I_{items} bigger than I_{table} is a valid question item in explaining the variable. Table 4 shows that all of the 10 question items are valid.

Question item validity for product quality variables (X2)

Table 5 Correlation of question items to product quality variables

Question Items	I_{item}	I_{tabel}	Description
X1_1	0.525	0,202	Valid
X1_2	0.511	0,202	Valid
X1_3	0.218	0,202	Valid
X1_4	0.491	0,202	Valid
X1_5	0.541	0,202	Valid
X1_6	0.504	0,202	Valid
X1_7	0.498	0,202	Valid
X1_8	0.549	0,202	Valid
X1_9	0.451	0,202	Valid
X1_10	0.281	0,202	Valid

Correlation of question items to variables that have a value of I_{items} bigger than I_{table} is a valid question item in explaining the variables. Table 5 shows that all of the 10 question items are valid.

Question items validity for Service Variable (X3)

Table 6. Correlation of Question Items to Service Variables

Question Item	I_{item}	I_{tabel}	Description
X1_1	0,393.	0,202	Valid
X1_2	0,344.	0,202	Valid
X1_3	0,266.	0,202	Valid
X1_4	0,398.	0,202	Valid
X1_5	0,496.	0,202	Valid
X1_6	0,400.	0,202	Valid
X1_7	0,461.	0,202	Valid
X1_8	0,511.	0,202	Valid
X1_9	0,296.	0,202	Valid
X1_10	0,265.	0,202	Valid

Correlation of question items to variables that have a value of I_{items} bigger than I_{table} is a valid

question item in explaining the variable. Table 6 shows that all of the 10 question items are valid.

Question items for a variable level of knowledge Consumer Product (X4)

Table 7. Correlation of Question Items to The Variable Level of Consumer Knowledge on Products

Question Item	I_{item}	I_{tabel}	Description
X1_1	0,254,	0,202	Valid
X1_2	0,355,	0,202	Valid
X1_3	0,300,	0,202	Valid
X1_4	0,366	0,202	Valid
X1_5	0,401,	0,202	Valid
X1_6	0,405,	0,202	Valid
X1_7	0,276,	0,202	Valid
X1_8	0,266,	0,202	Valid
X1_9	0,231,	0,202	Valid
X1_10	0,231,	0,202	Valid

The validity of the item question for the socio-economic status variable (X5).

CONCLUSION

- Multiple linear regression model using independent price variables, product quality, service, consumer knowledge on products, and socioeconomic status of the dependent variable consumer satisfaction shows the results of the following equation:

$$Y = 1,174 + 0,138 X1 + 0,218 X2 + 0,219 X3 + 0,215 X4 + 0,285 X5 + e$$

(0,612) (0,013) ** (0,001)**
(0,003)** (0,001)**

- The most dominant variable influencing consumer satisfaction is the socioeconomic status variable [7].
- From the results of t shows all independent price variables, product quality, service, consumer knowledge on the product, and socioeconomic status has a significant value below alpha 0.05 which means that all parts have a positive and significant effect on the variable customer satisfaction [8].

- There is a significant effect simultaneously between the independent variables of price, product quality, service, consumer knowledge on the product, and socioeconomic status on consumer satisfaction. This is indicated by the results of F count of $66,306 > F_{table} 2,467$ with a significance value of $0,000 < 0,05$
- The result of the coefficient of determination with the adjusted R2 value of 0,776 means that the independent variable price, product quality, service, consumer knowledge on the product, and socioeconomic status can explain the dependent variable consumer satisfaction by 77.6% while the remaining 32.4% is influenced by other variables outside this research.

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