Decision Purchasing Malaysian Rice at Border Region

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Abstract. Sebatik region was border region which located near by Malaysia. The study objectives to identify characteristics and perceptions in purchasing rice in border areas from 42 respondent out of 757 population. Statistically, the questionnaire data were analyzed using classic assumption test analysis and multiple regression. The results show that consumers' perceptions in purchasing rice in border areas were effected by cheap price (71.4%), brand (66.7%), and the quality (92.9%). Based on the first multiple regressions in R Square test variable X mostly affected by variable Y with amount of 0.635. The t-test results show the variables were effected by gender with significance of 0.008, education with sig of 0.026, family income with sig of 0.049, price with sig of 0.019, and quality with sig of 0.003.

1. Introduction
Development of business has grown rapidly and led to strict competition. Consumers face various kinds of product offered by some company in order to fulfill the consumers’ needs and desires. Consumers at the market have a selection for the rice variety based on the eating and cooking quality, nutritive values and their medicinal properties [1]. Consumers’ preference is based on their post-visit ranking of the stores. The research is useful for marketers and researchers to understand perceived value base on customer purchase intention for residential property sector among Malaysians and the tested model will be of great utility to property developers to devise appropriate value proposition based on consumer perceived value [2].

Aji Kuning region borders on Malaysia that locates far from the industrial center or big companies in Indonesia. That is why the Malaysian products are more dominant than the Indonesian ones. The Malaysian products have used to fulfill the needs of the local community and they cannot be separated from community’s life in Aji Kuning Village [3]. The Malaysian products are easier to enter to Sebatik due to it is easily accessible and closer distance, so that the merchants who live in Aji Kuning Village of Nunukan Sub district purchase the merchandises from Malaysia due to cheaper cost of transportation. The most wanted products from Malaysia that come in Aji Kuning Village are basic foods, and one of them is rice. Rice as staple food is the most wanted product, which is certainly bought by the consumer. Distribution of the Malaysian rice in Aji Kuning Village makes the public has product selection. Concerning with the problem, we should recognize characteristics of the consumers and their perception to buy the Malaysian rice at the border region, as well as factors that affect them. Rice has become an important food crop which people consume almost every day. It is the most popular grain that supports two-thirds of the world’s population as it supplies energy, nutrient-rich complex carbohydrates, fiber, vitamins and mineral needed to support to human life. In Malaysia, many varieties of rice can be found on the market. These include local white rice and imported white rice, brown rice and specialty rice such...
as Basmati rice, fragrant rice, parboiled and glutinous rice. There are also many types of rice brands competing for the consumer demand in Malaysia, such as Cap Rambutan, Jasmine, Teak Wood, Faiza and Sunflower. This rice has different characteristics determining price: taste, texture, grain length and quality. Most of the consumers in Malaysia prefer rice as the main source of energy instead as opposed to other food sources [4]. The results of this study indicate that consumers’ response to grain quality characteristics changes over income classes. Generally speaking, low-income consumers appear to have less pronounced preferences for rice based on physical and chemical characteristics. Or more likely, these consumers do not have the economic power to express their preferences. Additionally, the absence of preference may result from homogeneity in the rice consumed by this income class. High-income consumers have the largest variability in rice grain quality attributes and concurrently appear to have the most pronounced preferences among consumers. High income consumers also spend more money per kg as their consumption increases, while the opposite has been observed for the middle-income class [5].

Consumer behavior regarding organic agriculture products have received great attention in the economics literature with numerous results clarifying many aspects of consumer behavior, such as clarification who are the customers as well as their characteristics, their attitudes, and preferences, willingness to buy, purchasing decisions, and the level of consumption of organic agricultural products in many countries [6]. Perceived superiority is defined as consumer finding about a product performance and how this product compared with their expectation. Superiority can also be defined as the whole features and characteristics of a product or services that bear on its ability to satisfy stated or implied needs [7].

2. Methods
The research was conducted at Aji Kuning Village, Sebatik Tengah Sub district of Nunukan Regency. Samples of the research were determined using purposive sampling method in accordance with consumer’s criteria of Malaysian rice. The study objectives to identify characteristics and perceptions in purchasing rice in border areas from 42 respondent out of 757 population.

Data type used in this research was primary data, which was obtained from interview using questionnaires with the respondents that related to price and any reason of them why they chose to consume the Malaysian rice. Moreover, the secondary data was derived from literatures that supported the research, such as data from the Central Bureau of Statistics, reference books, and previous research.

Data analysis used descriptive analysis and multiple linear regressions. Descriptive analysis is explanation or description in words, clearly and in detail. Regression analysis is a statistical technique to investigate and make a model from the relation among variables. Multiple linear regressions are frequently applied to overcome the problem of regression analysis that result the relation of two or more independent variables, and this analysis was conducted using SPSS. Equation of the multiple linear regression is determined as follow:

$$ Y = a + b_1 x_1 + b_2 x_2 + \ldots + b_8 x_8 + e $$

(1)

Notes :
Y = Decision of the Buyer, a = Constant, b₁, b₂ = Coefficient of Regression,
X₁ = Age, X₂ = Gender, X₃ = Last Education, X₄ = Workforce, X₅ = Family Income
X₆ = Price, X₇ = Brand, X₈ = Quality, e = Error

3. Result and Discussions
Aji Kuning Village, Sebatik Sub district of Nunukan Regency covers the area of 645 Ha with the population of 3,269 peoples that consist of 1,730 male dan 1,566 female. Most of the populations are farmers and merchants. Characteristics of the consumer who buy the Malaysian rice are as follow: most of the respondents are between 46-60 years old (45.2%), female (88.1%), graduated from Junior/Senior High Schools (45.2%), unemployed (54.8%) and earn Rp 500,000.00 – Rp 1,500,000.00.
3.1 Perception of the Consumer to Buy the Malaysian Rice
Perceptions of the consumer to buy the Malaysian rice include three aspects, such price, brand, and quality. Table 1 below presents the consumer’s perception to buy rice.

Perception of the consumer to buy the Malaysian rice is due to price of the Malaysian rice is cheaper (71.4%) than the Indonesian rice and because the marketing channel of the Malaysian rice is shorter and Sebatik is closer to Malaysia. Communities in Sebatik buy the Malaysian rice in lower price, Rp 8,900.00/kg, than the Indonesian rice, Rp 14,000/kg. The respondents prefer to buy the Nasional brand (66.7%) that has good quality (92.9%).

### Table 1. Consumer’s Perception to Buy the Malaysian Rice

| Interval     | Frequency (People) | Percentage (%) |
|--------------|--------------------|----------------|
| **Price**    |                    |                |
| Cheap        | 30                 | 71.4           |
| Medium       | 7                  | 16.7           |
| Expensive    | 5                  | 11.9           |
| **Brand**    |                    |                |
| Nasional     | 28                 | 66.7           |
| Pandan Rice  | 9                  | 21.4           |
| Zazara Rice  | 5                  | 11.9           |
| **Quality**  |                    |                |
| Low          | 0                  |                |
| Medium       | 3                  | 7.1            |
| Good         | 39                 | 92.9           |

3.2. Factors that Affect the Purchase of Malaysian Rice
Based on results of analysis, the multiple linear regression equation as follow:

\[
Y = 1.608 + 0.079x_1 - 0.383x_2 - 0.194x_3 + 0.084x_4 + 0.251x_5 - 0.067x_7 + 0.514 x_8 + e
\] (2)

Model summary describes that X variables, which include age, gender, last education, workforce, family income, price, brand, and quality affect on Y variables, such as consumer’s decision 0.635 or 64%, and the rest, 36%, is affected by other factors outside the model.

Results of F-test in this research are presented in Table 2. Table 2 describes that Anova Test/F-test shows significant value 0.000 < 0.05, therefore it can be concluded that independent variables have simultaneously affected numbers of the dependent variables.

**Predictors:** (Constant), Quality, Brand, Gender, Age, Workforce, Last Education, Family Income, Price and Dependent Variable: Consumer’s Decision

### Table 2. F-Test

| Model    | Sum of Squares | Df  | Mean Square | F     | Sig. |
|----------|----------------|-----|-------------|-------|------|
| Regression | 3.268           | 8   | .408        | 7.188 | .000a|
| Residual | 1.875           | 33  | .057        |       |      |
| Total    | 5.143           | 41  |             |       |      |
The t-Test was applied to find out significance of the independent variables effect, partially or individually, on the dependent variables. Results of t-test in this research are presented in Table 3. Based on Table 3, partial effects of the multiple linear regression equation are described as follow: (1) Age (X1) has sig 0.083 higher than 0.05, and it can be concluded that age has no effect on decision to buy; (2) Gender (X2) has sig value 0.008 smaller than 0.05, and it can be concluded that gender has affected the dependent variable (decision to buy Malaysian rice). Along with opinion by Widawati (2011) who suggested that gender has significant effect on unplanned buyer; (3) Last education (X3) has sig value 0.026 smaller than 0.05, and it can be concluded that last education affects the decision to buy the Malaysian rice due to the significant level is below 0.05. The higher education level of consumer, the lesser level of the buyer to buy the Malaysian rice; (4) Workforce (X4) has sig value 0.243 higher than 0.05, and it can be concluded that workforce does not significantly affect on decision to buy the Malaysian rice; (5) Family income (X5) has sig value 0.049 smaller than 0.05, so that family income effects on decision to buy the Malaysian rice. It confirmed that income level has positive effect on purchase intention of the consumer; (6) Price (X6) has sig value 0.019 smaller than 0.05, therefore it can be concluded that price affects on decision to buy the Malaysian rice and it has negative relation, which means the higher price of the Malaysian rice offered, the lesser number who buy the Malaysian rice; (7) Brand (X7) has sig value 0.558 higher than 0.05, and it can be concluded that brand variable has not significantly affected on decision to buy the Malaysian rice, it is due to most of the consumers assume that all brands of the Malaysian rice, whether “Nasional”, “Pandan Rice” and “Zazara Rice” brands are cheap and have good quality; therefore, brand does not affect on decision of the consumer. Quality has sig value 0.003 smaller than 0.05, so that rice quality affects on decision to buy the Malaysian rice. The better quality of the Malaysian rice, the higher increase of the consumer’s decision will be to buy the Malaysian rice.

Table 3. t-Test

| Model       | Unstandardized Coefficient | Standardized Coefficient | T     | Sig. |
|-------------|----------------------------|--------------------------|-------|------|
|             | B                          | Std. Error               | Beta  |      |
| (Constant)  | 1.608                      | .509                     | 3.160 | .003 |
| Age         | .079                       | .044                     | .203  | 1.788| .083 |
| Gender      | -.383                      | .135                     | -.354 | -2.829| .008 |
| Last Education | -.194                     | .083                     | -.399 | -2.330| .026 |
| Workforce   | .084                       | .071                     | .215  | 1.188| .243 |
| Family Income | .251                      | .123                     | .497  | 2.042| .049 |
| Price       | -.304                      | .123                     | -.601 | -2.465| .019 |
| Brand       | -.067                      | .113                     | -.134 | -.592 | .558 |
| Quality     | .514                       | .158                     | .379  | 3.248| .003 |

4. Conclusion
Consumer perceptions to buy rice include affordable price 71.4%, “national” brand: 66.7% and good quality 92.9 %. Determinant coefficient of R Square (R²), whereas X variable has simultaneously affected Y variable for about 0.635 or 64%, F-test showed that F significance has significant level of 0.000, so that it can be concluded that independent variables have simultaneously affected the dependent variables, Y variable. Partially, X variable affects on decision to buy rice that include gender (X2) sig 0.008, education (X3) sig 0.026, family income (X5) 0.049, price (X6) 0.019, and quality (X8) sig 0.003.

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