The Influence of Product Quality, Price, and Income on Rice Purchasing Decisions at Pt. Komoditi Tani Indonesia

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ABSTRACT

The high level of rice consumption in Indonesia makes it the fourth largest rice consumer in the world. PT. Komoditi Tani Indonesia as a producer, distributor and retailer of rice must know the extent to which the quality of the products and prices provided are acceptable to the public so as to expand the market and increase the number of sales. This study was conducted to describe the characteristics of consumers who shop for rice at PT. Komoditi Tani Indonesia, analyzing the influence of product quality on rice purchasing decisions at PT. Komoditi Tani Indonesia, analyzing the influence of price on rice purchasing decisions at PT. Komoditi Tani Indonesia, analyzing the influence of income on rice purchasing decisions at PT. Komoditi Tani Indonesia. The number of samples in this study were 50 respondents and used accidental sampling techniques. The analysis method used is descriptive analysis and Structural Equation Modeling (SEM) based on Partial Least Square (PLS). The results of this study indicate that the characteristics of rice consumers at PT Komoditi Tani Indonesia are female, over 41 years old, working as housewives, income of Rp. 2.000.000 – Rp. 3.000.000 in a month, and have a family of 4 – 6 people. Product quality has a positive and significant effect on rice purchasing decisions at PT. Komoditi Tani Indonesia. Price has a positive and significant effect on rice purchasing decisions at PT. Komoditi Tani Indonesia. Income has a positive and significant effect on rice purchasing decision at PT. Komoditi Tani Indonesia.

Keywords— product quality; price; income; purchase decision; rice

INTRODUCTION

Food is one of the main human needs related to survival and must continue to be fulfilled by humans, so food commodities are the main priority for population consumption. Rice is a very primary food need for humans, especially Indonesian people who mostly consume rice (Sari et al., 2022). Rice is a potential commodity to be developed because there is an increase in the need for rice every year. Indonesia is the fourth largest rice consumer in the world, consuming 35.3 million metric tons in 2022/2023.

As rice consumption increases, so does the demand for rice. The government classifies rice as a basic need of the Indonesian people that is kept in safe and stable supply and price stability. However, rice found in the market in reality has a varied price depending on the quality of the rice. The rice commodity has an interesting problem in terms of its marketing, namely the price increase at any time of the month. The increasing amount of rice consumption accompanied by increasing rice prices makes consumers have to adjust between their income when making rice purchase decisions with certain quality and price. Rice has various qualities such as premium, medium, and out of quality. The following is data on monthly rice prices

by quality in 2023.

Table 1. Average Monthly Rice Price at Mill Level by Quality (IDR/Kg) in 2023 (January-July)

Kualitas Beras	1	2	3	4	5	6	7
Premium	11345	11818	11681	11672	11623	11525	11537
Medium	10801	11300	11121	11049	11005	11079	11120
Luar Kualitas	10227	10467	10475	10564	10428	10315	10302

Source: BPS, 2023

PT. Komoditi Tani Indonesia is a rice producer, distributor and retailer located in Sidoarjo since 2021. This pioneering company always maintains product quality and strives to offer the best prices to attract consumer interest in making purchasing decisions. PT. Komoditi Tani Indonesia hopes to enter a larger market and increase the number of sales. Product quality is one factor that influences purchasing decisions. Consumers often buy products that have high quality at low prices. Product quality is a form of identity and product characteristics of a company to be introduced to consumers and to differentiate a product from competitors (Deccasari & Amin, 2021). Rice products sold at PT. Komoditi Tani Indonesia vary from premium quality rice with the Sultan Aji brand and medium quality with the Djoeragan Moeda brand. Good product quality must be in accordance with consumer expectations and desires. In addition, price is a factor that influences purchasing decisions. Price has the aim that the product has value and is most important to attract consumers so that they have a desire that leads to product purchasing decisions (Lestari & Pardi, 2022). Consumer income is an important part for consumers in making purchasing decisions, consumers will choose the desired product quality and price according to their abilities.

Based on the description above, the authors are interested in conducting research on "The Influence of Product Quality, Price, and Income on Rice Purchasing Decisions at PT. Komoditi Tani Indonesia". The objectives in this study are as follows:

1. Describe the characteristics of consumers who shop for rice at PT. Komoditi Tani Indonesia.
2. Analyzing the influence of product quality on rice purchasing decisions at PT. Komoditi Tani Indonesia.
3. Analyzing the influence of price on rice purchasing decisions at PT. Komoditi Tani Indonesia.
4. Analyzing the influence of income on rice purchasing decisions at PT. Komoditi Tani Indonesia.

RESEACH METHODS

The study's population comprised all consumers who visited the retail store of PT. Komoditi Tani Indonesia with sampling techniques using accidental sampling, namely consumers who happened to meet the researchers at the research location (Sugiyono, 2019). The sample size in this study uses Cohen (1992) in Sholihin & Ratmono (2021), To ascertain the minimum sample size, considering the largest number of arrows leading to the dependent variable as three, with a significance of 5% and R2 0.50 so as to obtain a sample size of 38 samples. The model can be estimated with a small sample size of 35-50. In general, the larger the sample, the more likely it is to reflect the population and is expected to reflect better results. So that this study made the number of samples 50, because the maximum sample size is small. Data collection was obtained from a questionnaire. The questionnaire used used a five-point Likert scale. The analysis technique used is descriptive data analysis for the first research objective and SEM-PLS for the second, third, and fourth research objectives with WarpPLS 8.0 software.

RESEACH RESULTS AND DISCUSSION

Characteristics of Respondents

Table 2. Characteristics of Rice Consumers at PT. Komoditi Tani Indonesia

Gender	Amount	Percentage (%)
Man	3	6
Woman	47	94
Total	50	100
Age	Amount	Percentage (%)
17 – 21	0	0
22 – 26	4	8
27 – 31	2	4
32 – 36	6	12
37 – 41	4	8
> 41	34	68
Total	50	100
Work	Amount	Percentage (%)
Students	4	8
Government employees	3	6
Self-employed	10	20
Private employees	5	10
Housewife	28	56
Doesn't work	0	0
Others (Freelancers)	0	0
Total	50	100
Income	Amount	Percentage (%)
< 1.000.000	10	20
1.000.000 – 2.000.000	8	16
2.000.000 – 3.000.000	14	28
4.000.000 – 5.000.000	10	20
> 5.000.000	8	16
Total	50	100
Number of Families	Amount	Percentage (%)
1 – 3	16	32
4 – 6	33	66
7 – 9	1	2
Total	50	100

Source: Primary Data, 2023 (processed)

The characteristics of rice consumers at PT. Komoditi Tani Indonesia are female, over 41 years old, working

as housewives, income Rp. 2.000.000 – Rp. 3.000.000 in a month, and have a family of 4 – 6 people.

SEM-PLS (Structural Equation Modeling-Partial Least Square)

PLS-SEM analysis consists of stages outer model and an inner model which is done with WarpPLS 8.0 software.

Outer Model

Convergent Validity

Table 3. Loading Factor, P-value, and AVE

Indicator	Loading Factor	P-value	AVE	Requirement	Conclusion
X1.1	0.952	< 0,001			Valid
X1.2	0.905	< 0,001	0.844		Valid
X1.3	0.898	< 0,001			Valid
X2.1	0.887	< 0,001			Valid
X2.2	0.888	< 0,001	0.774		Valid
X2.3	0.865	< 0,001		Loading Factor > 0,70	Valid
X3.1	0.905	< 0,001			Valid
X3.2	0.949	< 0,001	0.828	AVE > 0,50	Valid
X3.3	0.874	< 0,001			Valid
Y1.1	0.887	< 0,001			Valid
Y1.2	0.885	< 0,001	0.768		Valid
Y1.3	0.873	< 0,001			Valid
Y1.4	0.860	< 0,001			Valid

Source: Primary Data, 2023 (processed)

Based on the table above, all question items in the questionnaire have a loading factor value above 0.708 and a p-value < 0.001, meaning they are valid. So it can be interpreted that the question items can be explained by their variables and are significant, which indicates that they have met the criteria for discriminant validity. The AVE value > 0.50 has met the requirements, so it can be interpreted that each research variant can explain or represent more than half of the items and indicators, namely 50%.

Discriminant Validity

Tabel 4. Cross Loading

	Product Quality (X1)	Price (X2)	Income (X3)	Purchase Decision (Y)
X1.1	(0.952)	-0.244	-0.081	0.113
X1.2	(0.905)	0.062	0.098	-0.020
X1.3	(0.898)	0.197	-0.012	-0.100
X2.1	-0.225	(0.887)	0.462	-0.047

X2.2	-0.222	(0.888)	-0.397	0.367
X2.3	0.459	(0.865)	-0.066	-0.329
X3.1	-0.012	-0.097	(0.905)	0.178
X3.2	0.221	-0.129	(0.949)	0.008
X3.3	-0.227	0.240	(0.874)	-0.192
Y1.1	-0.320	0.508	-0.106	(0.887)
Y1.2	0.286	-0.044	-0.031	(0.885)
Y1.3	0.119	0.031	0.411	(0.873)
Y1.4	-0.085	-0.511	-0.276	(0.860)

Source: Primary Data, 2023 (processed)

Table 4 the cross loading value marked in parentheses on each indicator item has a greater value than the cross loading value of the indicator items in the same row. This can be interpreted that an indicator variable is really different from other constructs and can be used as a good measure for the variable.

Table 5. Square Root of AVE

Variable	Product Quality (X1)	Price (X2)	Income (X3)	Purchase Decision (Y)
Product Quality (X1)	(0.919)	0.778	0.696	0.848
Price (X2)	0.778	(0.880)	0.740	0.862
Income (X3)	0.696	0.740	(0.910)	0.853
Purchase Decision (Y)	0.848	0.862	0.853	(0.876)

Source: Primary Data, 2023 (processed)

The square root AVE value, enclosed in parentheses for all variables, exceeds the correlation with other latent variable constructs. This Means that the variable instrument has good discriminant validity.

Reliability

Table 6. Reliability Test

Variable	Cronbach's Alpha	Composite Reliability	Requirement	Conclusion
Product Quality (X1)	0.907	0.942		Reliabel
Price (X2)	0.854	0.911	Loading Factor > 0,70	Reliabel
Income (X3)	0.895	0.935		Reliabel
Purchase Decision (Y)	0.899	0.930		Reliabel

Source: Primary Data, 2023 (processed)

The Cronbach alpha and composite reliability values have met the criteria because they have a value of > 0.70, so they can be said to be reliable or consistent in measuring latent variables.

Inner Model

R-square and Q-square

Table 7. R-square and Q-square

Variable	R-square	Q-square
Purchase Decision (Y)	0.884	0.882

Source: Primary Data, 2023 (processed)

The purchasing decision variable has R-square value is 0.884, categorizing it as strong. This suggests that 88.4% of the variance in purchasing decisions can be attributed to the variables of product quality, price, and income. The remaining 11.6% of the variability in purchasing decisions is affected by additional factors that this study did not particularly look at. Q-square is a metric used to gauge the goodness of fit between estimated parameters and measured values. In this case, the purchasing decision variable exhibits a Q-square value of 0.882, representing 88.2%. These results indicate that the research model possesses high predictive relevance based on the established criteria.

Model Fit

Table 8. Model Fit Test

	Mark	Criteria	Conclusion
Average path coefficient (APC)	0.339, P < 0,001	P < 0,05	Fit
Average R-squared (ARS)	0.884, P < 0,001	P < 0,05	Fit
Average adjusted R-squared (AARS)	0.877, P < 0,001	P < 0,05	Fit
Average block VIF (AVIF)	3.345	Acceptable if < 5, ideally < 3.3	Fit
Tenenhaus GoF (GoF)	0.843	Small > 0.1, medium > 0.25, large > 0.36	Fit

Source: Primary Data, 2023 (processed)

Table 8 shows that Average path coefficient (APC), Average R-squared (ARS), Average adjusted R-squared (AARS), Average block VIF (AVIF), dan Tenenhaus GoF (GoF) meet the model fit criteria.
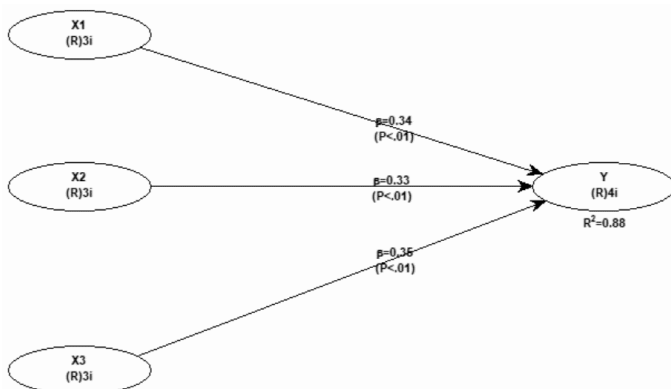
Hypothesis Test

Figure 1. Research Path Model

Table 9. Path Coefficient, P-value, and Effect Size

Hypothesis	Path Coefficient	P-value	Effect Size	Criteria	Conclusion
Product Quality → Purchase Decision	0.337	0.005	0.297	The hypothesis is accepted if the P-value < 0.05, and rejected if the P-value > 0.05	Hypothesis Accepted
Price → Purchase Decision	0.327	0.006	0.285		Hypothesis Accepted
Income → Purchase Decision	0.354	0.003	0.303		Hypothesis Accepted

Source: Primary Data, 2023 (processed)

The Influence of Product Quality on Purchasing Decisions

The p-value for the product quality variable is 0.005, signifying the acceptance of the hypothesis and indicating a significant impact on purchasing decisions. The path coefficient associated with the product quality variable is 0.337, suggesting a positive influence on purchasing decisions. The effect size, measured at 0.297, implies that 29.7% of purchasing decisions are affected by the product quality variable, with the remainder influenced by other factors. This underscores that favorable consumer perceptions of product quality indicators lead to an increased likelihood of purchasing products. Consumers express satisfaction with their rice purchases, attributing it to meeting quality expectations and maintaining its taste and deliciousness when used in other food products.

The Influence of Price on Purchasing Decisions

The p-value associated with the price variable is 0.006, indicating the acceptance of the hypothesis and underscoring a significant impact on purchasing decisions. The path coefficient for the price variable is 0.327, suggesting a positive correlation with purchasing decisions. The effect size, measured at 0.285, signifies that 28.5% of purchasing decisions are influenced by the price variable, with other factors contributing to the remainder. This underscores that favorable consumer perceptions of price indicators lead to an increased likelihood of purchasing products. The price of rice products in retail stores PT. Komoditi Tani Indonesia's retail stores are cheaper and can compete with rice of similar brand and quality in other stores. This makes housewife consumers household consumers make purchasing decisions at the PT. Komoditi Tani Indonesia retail store.

The Influence of Income on Purchasing Decisions

The income variable exhibits a p-value of 0.003, affirming the acceptance of the hypothesis and indicating a significant influence on purchasing decisions. The path coefficient for the income variable is 0.354, indicating a positive impact on purchasing decisions. With an effect size of 0.303, it is evident that 30.3% of purchasing decisions are influenced by the income variable, while other variables contribute to the remaining percentage. This underscores the notion that more positive consumer perceptions of income indicators result in an increased likelihood of making purchasing decisions for products. Importantly, the qualities and prices of rice offered by PT. Komoditi Tani Indonesia align with the income levels of consumers. This allows consumers to make purchase decisions that are in harmony with their income and individualneeds.

CONCLUSION

Based on the research findings, the following conclusions were drawn:

1. The characteristics of rice consumers at PT Komoditi Tani Indonesia are female, over 41 years old, working as housewives, income of Rp. 2.000.000 – Rp. 3.000.000 in a month, and have a family of 4 – 6 people.
2. Product quality has a positive and significant effect on rice purchasing decisions at PT. Komoditi Tani Indonesia.
3. Price has a positive and significant effect on rice purchasing decisions at PT. Komoditi Tani Indonesia.
4. Income has a positive and significant effect on rice purchasing decision at PT. Komoditi Tani Indonesia.

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