



The Impact of Brand Image, Product Quality, and Price on Ultra High Temperature (UHT) Milk Purchase Decisions Among Urban Consumers

Andi Nurmasythi¹, I Putu Gede Didik Widiarta^{1*}, Prihutomo Suharto², Kirana Dara Dinanti Adiputra¹

¹ Department of Animal Science, Faculty of Agriculture, Mulawarman University, Jl. Kuaro, Gunung Kelua, Samarinda 75119, Indonesia

² Department of Animal Science, Faculty of Animal Science, Maritime Affairs and Fisheries Nusa Cendana University, Jl. Adisucipto Penfui Kupang 85000, Indonesia

*Corresponding Author. E-mail address: didikwidiarta9@gmail.com

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ABSTRACT

Perceptions of brand strength, product quality, and pricing increasingly shape urban consumer preferences for milk. This study examines the impact of brand image, product quality, and price on the purchase decisions of Ultra High Temperature (UHT) milk among urban consumers in Samarinda, East Kalimantan. A quantitative approach was applied using descriptive and causal-comparative methods. A total of 150 respondents were selected through convenience sampling, and data were gathered via an online structured questionnaire. Analysis included descriptive statistics and multiple linear regression. The findings reveal that brand image, product quality, and price all have a significant and positive influence on purchase decisions. Product quality has the most substantial impact, followed by brand image and price. Consumers tend to favor products that offer consistent taste, packaging, and nutritional value, aligning with their expectations. The results suggest that producers should focus on enhancing product quality and strengthening brand reputation to attract and retain consumers. This study provides practical insights for companies aiming to enhance their marketing strategies and customer engagement in competitive dairy markets, particularly in urban areas where demand for convenient, high-quality milk products is increasing.

ABSTRAK

Persepsi terhadap kekuatan merek, kualitas produk, dan harga semakin membentuk preferensi konsumen perkotaan terhadap produk susu. Penelitian ini mengkaji pengaruh citra merek, kualitas produk, dan harga terhadap keputusan pembelian susu Ultra High Temperature (UHT) pada konsumen di Kota Samarinda, Kalimantan Timur. Pendekatan kuantitatif digunakan melalui metode deskriptif dan kausal-komparatif. Sebanyak 150 responden dipilih dengan teknik convenience sampling, dan data dikumpulkan melalui kuesioner daring terstruktur. Analisis dilakukan menggunakan statistik deskriptif dan regresi linier berganda. Hasil penelitian menunjukkan bahwa citra merek, kualitas produk, dan harga berpengaruh positif dan signifikan terhadap keputusan pembelian. Di antara ketiga variabel tersebut, kualitas produk memiliki pengaruh paling dominan, diikuti oleh citra merek dan

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harga. Konsumen cenderung menyukai produk yang menawarkan konsistensi rasa, kemasan, dan nilai gizi yang sesuai dengan ekspektasi mereka. Hasil penelitian ini menyarankan agar produsen lebih fokus pada peningkatan kualitas produk dan penguatan reputasi merek guna menarik dan mempertahankan konsumen. Penelitian ini memberikan wawasan praktis bagi perusahaan dalam menyusun strategi pemasaran dan keterlibatan konsumen yang lebih efektif di pasar produk susu yang kompetitif, khususnya di wilayah perkotaan yang menunjukkan peningkatan permintaan terhadap produk susu berkualitas dan praktis.

1. Introduction

Milk is one of the nutritious animal-based food commodities widely produced in Indonesia. According to data from the Central Statistics Agency (BPS) in 2024, fresh milk production in Indonesia reached 808,352,840 tons. The high level of fresh milk production has led to a wide variety of processed dairy products, including UHT (Ultra High Temperature) milk. UHT milk contains essential nutrients such as protein, fat, lactose, vitamins and minerals, even after undergoing high-temperature processing. In addition, UHT milk has a long shelf life, is practical, and comes in modern packaging, making it popular among urban consumers (Safitri, 2022).

Public perceptions of dairy products also influence the characteristics of UHT milk. Consumer perception of UHT milk is an important factor that affects purchasing decisions. This perception is shaped by various aspects, such as brand, price, and product quality. Research shows that a strong brand image can increase consumer trust and significantly influence purchasing decisions (Astati et al., 2025). When consumers have no prior experience with a product, they tend to trust well-known brands (Roisah & Riana, 2016). Price is also an important aspect that affects purchasing decisions. If the price set by a company is appropriate and matches consumers' purchasing power, the product is more likely to be accepted by consumers (Kuengo et al., 2022).

Fresh milk production in East Kalimantan Province in 2024 was recorded at 76,152 tons (BPS, 2024), reflecting the region's substantial potential for developing dairy-based products, particularly UHT milk. The considerable market potential has led to intense competition among companies in the packaged milk industry. Understanding consumer preferences and behaviour is essential for formulating effective marketing strategies. Various studies have shown that consumers in different countries have diverse preferences for packaged milk attributes, such as size, flavour, packaging, price, and labelling information (Nugroho et al., 2021; Judijanto et al., 2025). This study aims to

analyze the role of brand image, product quality, and price in influencing UHT milk purchasing decisions among urban consumers in Samarinda City.

2. Materials and Methods

2.1. Research Approach

This study employs a quantitative approach, utilizing both descriptive and explanatory designs. The quantitative approach is chosen as it allows for objective explanations of phenomena through numerical data, which can be analyzed statistically (Creswell, 2017). The descriptive design aims to identify and map the characteristics of respondents and consumer behavior. The explanatory design is applied to examine and explain the causal relationships between independent and dependent variables, in line with multiple linear regression analysis (Mardia et al., 2024). The conceptual framework of this study is derived from a theoretical model that links brand image, product quality, and price as predictors of consumer purchase decisions regarding UHT milk.

This research is conducted in Samarinda, East Kalimantan Province, a significant urban growth hub in eastern Indonesia. The choice of location is based on the increasing relevance of the UHT milk market, which is expanding due to the growing young population and changes in urban consumer lifestyles.

2.2. Population and Sampling Technique

The target population for this study includes all consumers of UHT milk residing in Samarinda. Given the heterogeneous nature of this population and the challenges associated with probabilistic sampling, the study employs a non-probability sampling technique, specifically convenience sampling (Etikan et al., 2016). The sample comprises 150 respondents who were selected via an online survey. The inclusion criteria are as follows: (1) residency in Samarinda, (2) age 17 years or older, (3) consumption of UHT milk within the past three months, and (4) voluntary participation in completing the questionnaire. This method is selected for its operational efficiency and ease of access to participants via social media, local online communities, and student or young professional networks in Samarinda.

2.3. Data Collection

Primary data was collected using a structured questionnaire created in a digital format via Google Forms. The research instrument consists of two main sections: (1) respondent demographic information and characteristics, and (2) theoretical constructs reflecting the research variables. Each construct was measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) (Joshi et al., 2015).

2.4. Variable Operationalization

This study includes three independent variables: brand image (X_1), product quality (X_2), and price (X_3), as well as one dependent variable: the purchase decision (Y). Brand image is operationalized as the consumer's perception of a brand's appeal, promotion, and reputation. Product quality encompasses evaluations of taste, freshness, quality, and halal status of UHT milk. The price reflects perceptions of affordability and the alignment between the price and the product benefits. Purchase decision refers to satisfaction evaluation, repurchase intentions, and the match between product expectations and reality. Each construct is measured using four statement items on a five-point Likert scale, and the final score is derived from the average value of each indicator.

2.5. Data Analysis

Data analysis is performed in stages, beginning with descriptive statistics followed by inferential statistics, as outlined below:

2.5.1. Descriptive Statistical Analysis

This analysis provides an overview of the demographic characteristics of the respondents and their perceptions of each study variable. Indicators such as frequency distribution, percentage, mean, and standard deviation are used (Nugraha, 2022).

2.5.2. Inferential Statistical Analysis

To examine the relationships between independent and dependent variables, multiple linear regression analysis is employed. The regression model is formulated as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y	: Purchase Decision
X_1	: Brand Image
X_2	: Product Quality
X_3	: Price
β_0	: Constant
$\beta_1, \beta_2, \beta_3$: Regression Coefficients
ε	: Error Term

The level of statistical significance for the tests is set at $\alpha = 0.05$, consistent with the conventions of inferential social and economic analysis.

3. Results and Discussions

3.1. Respondent Characteristics

Descriptive analysis of 150 respondents provides a clear overview of the sample's characteristics. The sample is predominantly female (60.7%) and significantly concentrated in the student demographic (63.3%), with relatively low income levels. This finding is consistent with the research of Ihwah et al. (2020), which showed that female adolescents dominate the consumer base for UHT milk, with a majority being students.

Table 1. Demographic profile and consumption of respondents

Characteristic	Category	Frequency (N=150)	Percentage (%)
Gender	Female	91	60.7
	Male	59	39.3
Occupation	Student/College	95	63.3
	Private Employee	24	16.0
	Other	31	20.7
Income/Month	≤ Rp. 1,000,000	68	45.3
	Rp. 1,000,001 - Rp. 1,500,000	24	16.0
	Rp. 1,500,001 - Rp. 2,000,000	13	8.7
	≥ Rp. 2,000,001	45	30.0
Preferred Brand	Ultra Milk	110	73.3
	Indomilk	8	5.3
	Milo	8	5.3
	Dancow	7	4.7
	Other	17	11.4
Package Size	250 mL (Top Choice)	76	50.7
	1000 mL	30	20.0
	125 mL	19	12.7

Source: Primary Data Analysis (2025)

Ultra Milk shows remarkable dominance, with 73.3% of respondents choosing it as their preferred brand, while the 250 mL packaging is the most popular (50.7%). This profile consistently directs the research focus towards younger consumers, who are price-sensitive and exhibit a strong brand preference. This can be attributed to positive perceptions of the Ultra Milk brand. Producers can shape consumer perceptions in various ways, including through brand image (Halawa & Dewi, 2019). Brand image refers to the perception of a brand as reflected through brand associations in the consumer's memory (Judijanto et al., 2025).

Table 2. Descriptive statistics of variables

Variable	Number of Items	Mean	Standard Deviation	Category
Brand Image (X_1)	8	4.19	0.58	Good
Product Quality (X_2)	7	4.35	0.51	Very Good
Price (X_3)	2	4.30	0.62	Good
Purchase Decision (Y)	3	4.38	0.55	Very Good

Source: Primary Data Analysis (2025)

Descriptive analysis of the research variables reveals the general perception of respondents regarding the brand image, product quality, and price of the UHT milk they consume. The mean scores for all variables are above 4.0 on a 5-point scale, indicating that respondents generally have positive perceptions. Product Quality (X_2) and Purchase Decision (Y) yield the highest mean scores, indicating that consumers attach significant importance to quality and are generally satisfied with their purchase decisions. When making product choices, consumers evaluate product categories based on consistency in product quality and benefits. Therefore, they tend to consider product attributes such as taste, aroma, freshness, brand, expiration date, packaging, price, and halal certification (Triandini et al., 2025).

3.2. Classical Assumption Testing

The results of the normality, multicollinearity, and heteroskedasticity tests are presented in Table 3.

Table 3. Classical assumption test results

Assumption Test	Method	Statistic	p-value	Conclusion
Normality	1-Sample K-S	0.068	0.200	Data is normally distributed
Multicollinearity	VIF	$X_1 = 1.85;$ $X_2 = 1.92;$ $X_3 = 1.55$	-	No multicollinearity detected
Heteroskedasticity	Glejser Test	$X_1 = 0.712;$ $X_2 = 0.453;$ $X_3 = 0.881$	-	No heteroskedasticity detected

Source: Primary Data Analysis (2025)

The results show that all classical assumptions have been met. The Kolmogorov-Smirnov normality test produced a significance value of 0.200 (> 0.05), indicating that the residuals are normally distributed. The multicollinearity test showed that the VIF values for all independent variables are below 10, indicating no high correlation between the independent variables. The heteroskedasticity test using the Glejser method yielded significance values for all variables above 0.05, indicating that the model is free from heteroskedasticity. With all assumptions satisfied, the regression model is valid for hypothesis testing.

3.3. Regression Analysis Results

A multiple linear regression analysis was performed to assess how brand perception, product quality, and pricing impact consumer buying behavior. This analysis provides understanding of how each independent variable plays a role in explaining variations in the dependent variable, particularly the purchasing decision. The findings below emphasize the importance and intensity of the associations among the independent variables and consumer behavior. The statistical significance of the overall model is determined through the F-test, while the individual contributions of each variable are assessed using the t-test. The findings provide valuable insights into the role of these factors in shaping consumer choices, with significant implications for marketing strategies (Yuen & Chan, 2021; Zhang & Gao, 2020; Li & Cheng, 2021).

Table 4. Multiple linear regression analysis on purchase decision

Variable	B Coefficient	Std. Error	β Value	t Value	Sig. (p-value)
Constant	0.542	0.211	-	2.571	0.011
Brand Image (X_1)	0.285	0.064	0.301	4.453	0.000
Product Quality (X_2)	0.482	0.071	0.455	6.789	0.000
Price (X_3)	0.177	0.055	0.198	3.218	0.002

Note: Dependent Variable = Purchase Decision (Y); $R^2 = 0.658$; Adjusted $R^2 = 0.651$; F-statistic = 92.451; Sig. F = 0.000; N = 150.

Source: Primary Data Analysis (2025).

The F-test results indicate that the model is significant with an F-value of 92.451 and a p-value of 0.000 (< 0.05), meaning that brand image, product quality, and price significantly influence purchase decisions simultaneously. The Adjusted R^2 value of 0.651 indicates that 65.1% of the variation in purchase decisions can be explained by the three independent variables, while other factors outside the model account for the remaining 34.9%. This R^2 value is considered strong for research using primary cross-sectional data.

The t-test results show that all independent variables have a positive and significant effect on purchase decisions, as all p-values are < 0.05 . Based on the standardized β coefficients, the strength of the influence is as follows: product quality ($\beta = 0.455$), followed by brand image ($\beta = 0.301$), and price ($\beta = 0.198$).

4. Conclusion

This study concludes that brand image, product quality, and price collectively have a significant influence on UHT milk purchase decisions among urban consumers in Samarinda. Among these variables, product quality exerts the most decisive influence, followed by brand image and price. These findings highlight that consumers tend to favor products that deliver both functional and emotional value, such as consistent taste, practical packaging, and assured quality. Consequently, enhancing product quality and reinforcing brand perception are essential strategies for increasing competitiveness in the UHT milk market. Future research is encouraged to explore additional variables, such as brand loyalty, health consciousness, or the influence of digital media, to develop a more comprehensive understanding of consumer behavior in the evolving dairy industry landscape.

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