

THE EFFECT OF PRODUCT QUALITY AND PRICE ON CUSTOMER LOYALTY MEDIATED IN MILKFISH PURCHASE DECISIONS
INFLUENCE OF PRODUCT QUALITY AND PRICE ON CUSTOMER LOYALTY, WITH THE ROLE OF PURCHASE DECISIONS REGARDING BANDANG FISH

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Abstract: The aim to analyze the effect quality of product product, price on loyalty of customer, with purchase decisions as a variable of mediating. Case study on milkfish customers at the Gresik Fish Auction Market. Study design/methodology/approach: The sample was determined used a purposive of sampling and respondents total 152. The analyzed of data using SEM PLS with SmartPLS 4.0. Findings: that first hypothesis of product quality: it's a positive and significant effect on customer loyalty; second, price: it's a positive and significant effect on purchase decisions; third, price: it's a positive and significant effect on customer loyalty; fourth, purchase decisions it's a positive and significant effect on customer loyalty; and fifth, price has a positive and significant effect on loyalty of customer mediated by purchase decisions. Originality/value: This research provides empirical evidence that product quality directly forms loyalty in traditional market commodities without needing a complex decision process. It is hoped that the results will be useful for local fish entrepreneurs to formulate effective pricing and quality control strategies.

Keywords: *Product Quality, Price, Customer Loyalty, Purchase Decision, SEM-PLS.*

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1. Introduction

The fisheries sector is crucial for supporting food security and economic growth in Indonesia. Within this context, milkfish is a strategic commodity due to its high demand and role as a source of animal protein for the community. Gresik Regency, East Java, is a key region in milkfish production and distribution. At the Gresik Fish Auction Market, milkfish is a highly sought-after commodity among various consumer groups, from retail buyers to businesses that use milkfish as a raw material. This demonstrates that the milkfish market in Gresik has economic value and demonstrates interesting consumer behavior dynamics worth studying. Despite the relatively high demand for milkfish, consumers in traditional markets do not base their purchasing decisions solely on product availability. Consumers also consider product price and quality simultaneously. In practice, milkfish prices tend to fluctuate due to seasonal changes, production costs, and market conditions. Furthermore, product quality is also inconsistent, both in terms of freshness, size, and physical condition. For fresh commodities like milkfish, discrepancies in quality can directly impact consumer perception, satisfaction,

and the likelihood of repeat purchases. Therefore, consumer evaluations of two key factors—price and product quality—likely form customer loyalty at the Gresik Fish Auction Market (Chen, 2023).

The relationship of all variables has been widely discussed in previous research. (Nopitasari et al., 2024) showed that price and product quality positively influence customer loyalty (Ardiansyah et al., 2024) also found that perceived price & quality of product it's a positive and significant influence. Meanwhile, (Budinarsih et al., 2018) proved that the price has influence on purchasing decisions, and (Ardiansyah et al., 2024) showed that purchasing decisions contribute positively to customer loyalty. These findings confirm that price, product quality, purchasing decisions, and loyalty are interrelated variables in consumer behavior. However, most previous research was conducted in the context of manufactured products, cosmetics, modern retail, or digital platforms, so there is still room to test this relationship in traditional market commodities, particularly milkfish at the Gresik Fish Auction Market.

In addition to the different contexts of the research objects, this study also positions purchasing decisions. This mediating variable placement is important because customer loyalty does not always form directly. On the one hand, a price perceived as reasonable can encourage consumers to make a purchase. On the other hand, a positive purchasing experience can strengthen consumers' tendency to shop again at the same place. Thus, purchasing decisions can act as a mechanism explaining how price perception ultimately contributes to loyalty. At the same time, this study also examines whether product quality can directly shape loyalty without having to go through a complex decision process. This focus is crucial because, for fresh commodities in traditional markets, quality is often the basis for rapid and direct assessments by consumers

2. Literature Review

2.1 Price

Lovelock (2011) states that price is one in the marketing that functions as a source of revenue, while other components incur costs for the company (Akbar, 2011, Yohans et al., 2025). Consumers assign a monetary value to receive a product or service, which is referred to as price. Because price directly impacts revenue, profits, and market competitiveness, it is often considered a critical component of a company's marketing strategy and financial management. Indicators of the price variable, according to Aprileny (2021), include: (1) Price affordability, (2) Price based on affordability or competitiveness, (3) Appropriateness of product or service price to quality, and (4) Appropriateness of price to benefits. more organized and standardized manner (García-Sánchez et al., 2022; Hussain et al., 2018).

2.2 Product Quality

Product quality its ability to meet consumer needs and expectations (Sanjaya, et al., 2025). According to Tjiptono (2015), consumer perception of a product's performance in meeting their desires and needs is the primary indicator in assessing that quality. Product Quality Indicators by Mahira (2021): (1) Reliability, (2) Durability, (3) Conformity to Specifications

2.3 Customer Loyalty

In marketing, customer loyalty is an important concept that demonstrates a customer's commitment to continue purchasing or subscribing to a product or service over the long term, despite external influences that can change behavior (Griffin, 2005). Meanwhile, according to Hasan (2018), loyal customers tend to return to the same location for a product or service

because they trust of its quality. Therefore, a comprehensive understanding of these factors is crucial for companies in designing more effective marketing strategies to attract and retain customers (Hasan, 2018; Tjiptono, 2015). According to Daga (2022), customer loyalty has four main indicators: (1) emotional commitment, (2) switching costs, (3) word of mouth, and (4) cooperation.

2.4 Purchasing Decisions

According to Kotler and Armstrong (2012), purchasing decisions are formed after consumers consider several factors such as price, quality, promotion, and distribution in evaluating various options. Consumer decision indicators in making a purchase: (1) suitability to needs, (2) having benefits, (3) accuracy of purchase, and (4) repeat purchases by consumers.

3 Research Method

This design examines the quality of product, price, purchasing decisions, and customer loyalty among milkfish consumers at the Gresik Fish Auction Market. The analysis using SEM-PLS with SmartPLS 4.0 software, as this method is suitable for testing simultaneous relationships between latent variables while accommodating mediation models in the study. The sample size for the study was 152 respondents. The thesis also stated that respondents were selected from consumers who understand the price and quality of milkfish, so the sample was considered relevant to answer the research objectives.

A Likert scale from 1 to 5 for agreement with each research statement. This scale was intended to capture respondents' perceptions of price, product quality, purchasing decisions, and customer loyalty in a structured and quantitative manner.

The variables measured in this study consist of four constructs. Product quality (X1) is measured using 3 indicators. Price (X2) is 4 indicators. Purchase Decision (Z) has 4 indicators. Customer Loyalty (Y) is also measured using 4 indicators. In the thesis manuscript, price indicators include affordability, competitiveness, price-to-quality fit, and price-to-benefit fit. Product quality indicators include reliability, durability, and conformity to specifications. Customer loyalty is measured through emotional commitment, switching costs, word of mouth, and cooperation, while purchase decisions are measured through suitability to needs, benefits, purchase accuracy, and repeat purchases. For the journal version, the details of the statement items do not need to be displayed in full and are simply summarized in the variable operational table if required by the journal template.

4 Results and Discussion

4.1 Results

Research Instrument Testing

a. Validity Test

A research instrument is considered valid if it can measure what should be measured and accurately reveal each indicator of the variables being studied (Anggraini et al., 2022; Krisnawati, et al., 2024).

Table 1. Validity Test Results

Variable	Indicator	Pearson Correlation	Significance	Remarks
Product Quality	X1.1	0.841	0.001	Valid
	X1.2	0.885	0.001	
	X1.3	0.816	0.001	
Price	X2.1	0.776	0.001	Valid
	X2.2	0.716	0.001	
	X2.3	0.746	0.001	
	X2.4	0.695	0.001	
Purchase Decision	Z1	0.872	0.001	Valid
	Z2	0.778	0.001	
	Z3	0.706	0.001	
	Z4	0.803	0.001	
Customer Loyalty	Y1	0.869	0.001	Valid
	Y2	0.781	0.001	
	Y3	0.866	0.001	
	Y4	0.718	0.001	

b. Reliable Test

Reliability tests are used to measure the consistency or reliability of research instruments in producing the same data in different measurements (Pratama & Permatasari, 2021; Krisnawati, et.al., 2024).

Table 2. Reliable Test Results

Variable	Indicator	Cronbach's Alpha if <i>item deleted</i>	Cronbach's Alpha	Remarks
Product Quality	X1.1	0.787	0.857	Reliable
	X1.2	0.784		
	X1.3	0.826		
Price	X2.1	0.824	0.812	Reliable
	X2.2	0.731		
	X2.3	0.720		
	X2.4	0.776		
Purchase Decision	Z1	0.862	0.882	Reliable
	Z2	0.806		
	Z3	0.880		
	Z4	0.840		
Customer Loyalty	Y1	0.781	0.872	Reliable
	Y2	0.893		
	Y3	0.816		
	Y4	0.846		

The results of the reliability test for all indicators were declared reliable (Sanaky et al.,2021)

Data Processing Process

In the next text, all sample data will be tested using SEMPLS.

Outer Model Test Results

There are 3 criteria for assessing for the outer model, namely validity of convergent and discriminant, as well as composite reliability.

Convergent Validity

Convergent validity has been determined based on calculating the outer loading value per indicator, while the EVE of a variable meets the criteria if it converges to an outer loading value > 0.7 and AVE value > 0.5 .

Table 3. Outer Loading & AVE

Variable	Indicator	Outer Loadings	Average Variance Extracted (AVE)	Remarks
Product Quality	X1.1	0.840	0.664	Valid
	X1.2	0.846		
	X1.3	0.794		
Price	X2.1	0.834	0.687	Valid
	X2.2	0.785		
	X2.3	0.829		
	X2.4	0.810		
Purchase Decision	Z1	0.885	0.684	Valid
	Z2	0.814		
	Z3	0.814		
	Z4	0.783		
Customer Loyalty	Y1	0.809	0.680	Valid
	Y2	0.831		
	Y3	0.825		
	Y4	0.848		

Discriminant Validity

Discriminant validity is produced in the form of cross loading, an indicator is declared valid if the value of its loading factor is greater than other latent variables.

Table 4. Cross Loading

Fornell Larker Criterion	Price	Purchase Decisions	Product Quality	Customer Loyalty
Price	0.815			
Purchase Decisions	0.651	0.829		
Product Quality	0.617	0.633	0.827	
Customer Loyalty	0.625	0.611	0.612	0.825

Composite Reliability

Composite reliability is between 0 and 1. The condition for an indicator to be said to be reliable is with a value criterion of > 0.6 .

Table 5. Composite Reliability

Construct	Cronbach's Alpha	Cronbach's Alpha	Remarks
Price	0.831	0.835	Reliable
Purchase Decisions	0.848	0.849	Reliable
Product Quality	0.769	0.776	Reliable
Customer Loyalty	0.843	0.853	Reliable

Measurement Model Evaluation

The outer loading values of all indicators were above 0.70, ranging from 0.783 to 0.885, indicating adequate representation of the latent construct. In addition, the AVE values for all constructs ranged from 0.664 to 0.687, exceeding the minimum threshold of 0.50 and confirming convergent validity. These results indicate that the measurement instrument is more internally consistent than suitable for further analysis of structural properties.

Table 6. Outer Model Evaluation

Variable	Number of Indicators	Outer Loading	AVE	Cronbach's Alpha	Composite Reliability	Remark
Product Quality	3	0.783–0.885	> 0.50	> 0.70	> 0.70	Valid & reliable
Price	4	0.783–0.885	> 0.50	> 0.70	> 0.70	Valid & reliable
Purchase Decision	4	0.783–0.885	>0.50	>0.70	>0.70	Valid & reliable
Customer Loyalty	4	0.783–0.885	>0.50	>0.70	>0.70	Valid & reliable

Structural Evaluation of Model and Hypothesis

The inner model evaluation indicates that the structural model had adequate explanatory and predictive power. Meanwhile, the R-squared value for customer loyalty was 0.503, indicating that product quality, price, and purchase decision jointly explained 50.3%. Furthermore, the Q-square value was 0.714, showing that the model had good predictive relevance for the endogenous constructs.

The bootstrapping results show that all direct hypotheses were supported. Price had the strongest direct effect on purchase decision ($\beta = 0.651$; $T = 10.276$; $p = 0.000$), followed by price on customer loyalty ($\beta = 0.297$; $T = 3.001$; $p = 0.003$), product quality on customer loyalty ($\beta = 0.275$; $T = 3.123$; $p = 0.002$), and purchase decision on customer loyalty ($\beta = 0.244$; $T = 2.678$; $p = 0.007$). In addition, the indirect effect test shows that Price has a significant effect on customer loyalty through purchase decisions ($\beta = 0.159$; $T = 2.428$; $p = 0.015$), indicating a partial mediation effect. Overall, all of the hypotheses were accepted.

Table 7. Path Coefficients

	Original Sample (β)	T-Statistic	P-value	Remarks
X1 \rightarrow Y	0.275	3.123	0.002	Significant
X2 \rightarrow Z	0.651	10.276	0.000	Significant
X2 \rightarrow Y	0.297	3.001	0.003	Significant
Z \rightarrow Y	0.244	2.678	0.007	Significant
X2 \rightarrow Z \rightarrow Y	0.159	2.428	0.015	Significant

4.2 Discussion

The first finding confirms that the result implies that in the context of fresh traditional market commodities, customers may form loyalty directly based on their perception of product quality, particularly the freshness, cleanliness, and physical condition of the milkfish. In practical terms, consumers who repeatedly find that the milkfish sold in the Gresik Fish Auction Market meets their expectations to return and maintain relationships. This finding is important because it shows that loyalty in traditional fish markets does not always require a complex decision process; instead, quality can directly become the basis of repeat patronage.

The second finding shows that price is the strongest determinant of purchase decisions. With the highest path coefficient and T-statistic among all direct relationships, price appears to play a central role in shaping consumers' buying decisions. This is understandable in the context of traditional fish markets, where consumers are generally highly sensitive to price fairness, affordability, and value for money. When consumers perceive that the offered price is reasonable and proportional to the benefits received, they are more likely to make immediate purchase decisions. Therefore, price should not be viewed only as a transactional variable but also as a strategic factor in consumer behavior formation.

The third finding indicates that price also has an effect on customer loyalty. Then the reality that customer loyalty in the milkfish market is not only built on product quality but also on a stable and acceptable pricing perception. Consumers who perceive price as transparent, fair, and consistent tend to feel more secure in maintaining repeated purchases from the same sellers. In traditional markets, where trust and routine transactions often shape long-term customer relationships, pricing consistency may reinforce both satisfaction and attachment to the market.

The fourth finding proves that purchase decisions have a positive and significant effect on customer loyalty. This means that loyalty can develop from repeated satisfactory purchase experiences. Consumers who feel that their buying decisions are accurate, beneficial, and aligned. Customers whose needs are met are more likely to continue purchasing from the same market. In other words, a purchase decision is not merely the end point of consumer consideration but also an important stage in transforming one-time transactions into sustained loyalty.

The mediation test further reveals that purchase decisions are partial, and the result indicates that the influence of price on loyalty occurs through two mechanisms. First, price affects loyalty directly, suggesting that fair pricing itself already contributes to customer retention. Second, Price also influences loyalty indirectly by encouraging purchase decisions, which subsequently strengthen loyalty through positive buying experiences.

The mediation is partial rather than full because the price remains significant even after the inclusion of the mediating variable. This finding enriches the explanation of how customer

loyalty is formed in traditional market settings, particularly for fresh fish commodities where economic considerations and transactional experience are closely linked.

From a managerial perspective, the findings imply that business actors in the Gresik Fish Auction Market should maintain product quality as a fundamental basis for loyalty, while also implementing fair and transparent pricing strategies. In addition, the purchasing process should be made as convenient and satisfying as possible, because a positive purchase experience strengthens the pathway from price perception to customer loyalty. Thus, loyalty building in this context requires a combined strategy that integrates quality assurance, pricing appropriateness, and transaction convenience.

5 Conclusion

This study concludes that product quality was found to directly strengthen customer loyalty, indicating that in traditional market commodities, loyalty can be formed through consumers' direct evaluation of product freshness, cleanliness, and overall condition. In addition, research showed that price was the strongest factor influencing purchase decisions and has a direct positive effect on customer loyalty. The purchase decision itself significantly affected customer loyalty, showing that positive buying experiences contribute to repeated patronage and long-term attachment. Furthermore, purchase decisions were found to partially mediate the effect of price on customer loyalty, which means that fair pricing not only encourages immediate purchases but also reinforces loyalty through satisfactory transaction experiences. Overall, this study provides empirical evidence that loyalty in traditional fish markets is shaped by the combined role of all variable decisions. These findings imply that business actors should prioritize product quality control, maintain fair and transparent pricing, and improve transaction convenience in order to sustain customer loyalty.

References

- Akbar, J. S. (2021). The effect of return on assets and return on equity on price to book value on banking companies listed on the Indonesia Stock Exchange. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 5(3), 1677-1688
- Anggraini, F. D. P., Aprianti, A., Setyawati, V. A. V., & Hartanto, A. A. (2022). Pembelajaran statistika menggunakan software SPSS untuk uji validitas dan reliabilitas. *Jurnal Basicedu*, 6(4), 6491–6504. <https://doi.org/10.31004/basicedu.v6i4.3206>
- Aprileny, I., Imalia, I., & Emarawati, J. A. (2021). Pengaruh harga, fasilitas dan lokasi terhadap keputusan pembelian (Studi kasus pembelian rumah di Grand Nusa Indah Blok J, Cileungsi Pada Pt. Kentanix Supra Internasional). *Ikraith-Ekonomika*, 4(3), 243-252.
- Ardiansyah, T. E., Dara, N., & Nasution, D. A. (2024). Product quality, price perception, customer loyalty on IM3-Indosat SIM card's users. *International Journal of Management and Business Intelligence*, 2(4), 331–348. <https://doi.org/10.59890/ijmbi.v2i4.2416>
- Budiningsih, S., Santoso, M., & Dahyanti, N. (2018). Pengaruh harga dan kemasan terhadap keputusan pembelian produk. *Jurnal Manajemen Kewirausahaan*, 14(2), 165-174. DOI: <https://doi.org/10.33370/jmk.v14i2.103>
- Daga, R., & Andi Jenni Indriakati. (2022). Religiosity, social and psychological factors on purchase decisions and consumer loyalty. *Jurnal Manajemen*, 26(3), 469–491. <https://doi.org/10.24912/jm.v26i3.941>

- Hasan, A. (2018). Marketing dan kasus-kasus pilihan. CAPS.
- Pratama, S., & Permatasari, R. (2021). Pengaruh penerapan standar operasional prosedur dan kompetensi terhadap produktivitas kerja karyawan divisi ekspor PT. Dua Kuda Indonesia. *Jurnal Ilmiah M-Progress*, 11(1) 38-47. <https://doi.org/10.35968/M-Pu.V11i1.600>
- Kotler, P. and Armstrong, G. (2012). *Principles of marketing*. 14th Edition, Pearson Education, Inc., Upper Saddle River.
- Krisnawati, E., Artanti, K.D.; & Umar, N.H (2024). Validity and reliability test of research instruments on husbands' support on barriers to using long-term contraceptive methods among multiparous active acceptors in Surabaya. *Media Gizi Kesmas*, 13(2), 659-664. <https://doi.org/10.20473/mgk.v13i2.2024.659-664>
- Lovelock, C. H., & Wirtz, J. (2011). *Services marketing: people, technology, strategy*. 7th Edition
- Mahira, M., Hadi, P., & Nastiti, H. (2021). Pengaruh kualitas produk dan kualitas pelayanan terhadap kepuasan pelanggan Indihome. *Konferensi Riset Nasional Ekonomi Manajemen dan Akuntansi*, 2(1), 1267-1283.
- Nopitasari, N., Sentosa, E., & Nursina, N. (2024). Pengaruh harga dan kualitas produk terhadap loyalitas pelanggan melalui kepuasan pelanggan (Studi kasus pada pengguna produk kosmetik make over di kelurahan Pulogadung). *IKRAITH-EKONOMIKA*, 7(2), 76–86. <https://doi.org/10.37817/ikraith-ekonomika.v7i2.3337>
- Sanaky, M.M., Soleh L.M. & Titaley, H.D. (2021). Analisis faktor faktor penyebab keterlambatan pada proyek Pembangunan Gedung asrama man 1 Tulehu Maluku Tengah. *Jurnal Simetrik*, 11(1), 432 – 438. DOI: <https://doi.org/10.31959/js.v11i1.615>
- Sanjaya, D. A, Gunadi, B. P, & J.E.Sutanto (2025). The influence of product quality, price and service quality customer satisfaction at dingin pulung café in pulung district Ponorogo Regency. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 9 (2), 222 – 227. DOI: <http://jurnal.stie-aas.ac.id/index.php/IJEBAR>
- Tjiptono, F. (2015). *Strategi pemasaran*. Edisi ke-4. Yogyakarta: Andi.
- Yohans, S., Aurelia, J. & J.E.Sutanto. (2025). The effect of price, product quality, and service quality on purchase decisions at GAG PTC Surabaya. *International Journal of Economics, Business and Accounting Research (IJEBAR)* 9(2), 250 -257. DOI: <http://jurnal.stie-aas.ac.id/index.php/IJEBAR>