Published by University of Muhammadiyah Makassar

DOI: 10.26618

e-ISSN 2714-6332 | p-ISSN 2714-6324

Jurnal Ilmu Manajemen Profitability

journal homepage: https://journal.unismuh.ac.id/index.php/profitability

The Influence of Product and Service Quality on Consumer Loyalty at Bone Star Wholesale Store in Sorong City

Akmal Ridwan[1] Munifa[2]* Renni Mayasari[3] Kamaluddin[4] Widya Digor Mufti[5]
STMIK Widya Cipta Dharma[3] Univeristas Muhammadiyah Sorong[1,2,4]
Email: akmalridwan@um-sorong.ac.id

ARTICLE INFO

Keywords
product quality, service quality, consumer loyalty, traditional retail, Signal Theory, Indonesia

Article History
Submitted August 16, 2025; Revised August 17, 2025; Revised January 25, 2026; Accepted February 13, 2026; Revised February 14, 2026; Published February 14, 2026.

ABSTRACT

Customer loyalty remains a critical determinant of sustainability in the traditional retail sector, particularly in emerging regions where modern retail competition is intensifying. However, limited empirical studies have examined the determinants of loyalty in small-scale grocery businesses in Eastern Indonesia. This study investigates the effect of product quality and service quality on consumer loyalty at Bone Star Wholesale Store in Sorong City. Grounded in Signal Theory, product and service quality are conceptualized as positive signals that influence consumer trust and repeat purchase behavior. A quantitative approach was employed using purposive sampling, involving 102 customers. Data were analyzed using multiple linear regression. The findings reveal that both product quality ($\beta = 0.525$; $p < 0.001$) and service quality ($\beta = 0.370$; $p < 0.001$) have positive and significant effects on consumer loyalty, both partially and simultaneously. The model explains 66.7% of the variance in customer loyalty (Adjusted $R^2 = 0.667$), indicating strong predictive power. The results highlight that the synergy between reliable products and responsive service strengthens long-term customer relationships. The study contributes to the limited literature on traditional retail loyalty in developing regions and provides practical implications for small grocery businesses seeking to enhance customer retention through quality-based competitive strategies.

1. Introduction

The retail industry has experienced significant structural transformation over the last decade, driven by digitalization, supply chain integration, and increasing consumer expectations regarding value and experience. Globally, competition in the retail sector has shifted from price-based rivalry to value-based differentiation, where product quality and service quality play a decisive role in sustaining consumer loyalty (Shankar, Grewal, & Sunder, 2022). In contemporary retail markets, customers evaluate not only functional product attributes but also experiential aspects such as responsiveness, reliability, and personalized interaction (Rather & Hollebeek, 2021). Consequently, consumer loyalty has emerged as a strategic asset that determines long-term profitability and business sustainability.

Recent empirical studies confirm that high product quality enhances perceived value and trust, which in turn strengthens repurchase intentions (Munafis, 2024; Kasiri et al., 2022). Similarly, service quality significantly influences customer satisfaction and emotional attachment, which are critical antecedents of loyalty (Han, Yu, & Kim, 2021). In competitive retail environments, the synergy between product and service quality creates a holistic shopping experience that fosters long-term relational bonds Maimunah, S. (2020).

In Indonesia, the retail landscape reflects both modernization and the persistence of traditional wholesale and grocery stores. While

DOI: 10.26618

urban centers witness rapid growth of minimarkets and digital commerce platforms, traditional retailers remain essential in secondary cities and peripheral regions. Sorong City, located in Southwest Papua, represents a growing economic hub in Eastern Indonesia. Despite modernization trends, local grocery and wholesale stores continue to dominate daily consumer transactions. However, increasing competition from modern retail chains compels traditional retailers to enhance product reliability and service responsiveness to maintain customer loyalty.

Bone Star Wholesale Store operates within this dynamic local context. As a traditional grocery retailer serving diverse community segments, its sustainability depends on its ability to retain loyal customers amid evolving consumer expectations. Given the socio-economic characteristics of Sorong City, where relational trust and service interaction are highly valued, examining the influence of product and service quality on loyalty becomes both academically and practically relevant.

Although extensive research has examined the determinants of customer loyalty, several limitations remain. First, many recent studies focus on large-scale supermarkets, hospitality businesses, or e-commerce platforms rather than traditional wholesale grocery stores (Rather & Hollebeek, 2021; Shankar et al., 2022). The dynamics of consumer loyalty in small-scale, community-based retail settings remain underexplored.

Second, prior research often emphasizes customer satisfaction as a mediating variable, without directly examining the simultaneous and comparative effects of product quality and service quality on loyalty in localized retail contexts (Kasiri et al., 2022). While product quality and service quality are widely acknowledged as predictors of loyalty, empirical evidence regarding their relative contribution in peripheral regions such as Eastern Indonesia is limited.

Third, contextual variations—such as cultural interaction patterns, income levels, and regional market structures—may influence consumer loyalty formation differently from metropolitan areas. However, few studies provide empirical evidence from geographically underrepresented regions like Sorong City. This indicates a clear research gap concerning how product and service quality function as loyalty determinants in traditional retail sectors within developing regional economies.

Therefore, this study addresses the need for localized empirical validation and contributes to filling the gap in understanding loyalty formation in traditional wholesale grocery settings.

Based on the background and identified gaps, the research problem can be formulated as follows:

1. To what extent does product quality significantly influence consumer loyalty at Bone Star Wholesale Store in Sorong City?
2. To what extent does service quality significantly influence consumer loyalty at Bone Star Wholesale Store in Sorong City?
3. Do product quality and service quality simultaneously influence consumer loyalty in a measurable and statistically significant manner?

These problems are specific, measurable, and aligned with quantitative causal analysis. They logically arise from the need to empirically test the combined and partial influence of product and service quality in a localized traditional retail context.

In line with the identified research problem, the objectives of this study are:

1. To analyze the partial effect of product quality on consumer loyalty at Bone Star Wholesale Store.
2. To analyze the partial effect of service quality on consumer loyalty.
3. To examine the simultaneous effect of product quality and service quality on consumer loyalty.

These objectives form the basis for hypothesis development, quantitative measurement, and multiple linear regression analysis. The alignment between objectives,

DOI: 10.26618

methodology, and empirical testing ensures the internal consistency of the research design.

From a theoretical perspective, this study enriches marketing and retail management literature by empirically validating the combined influence of product quality and service quality on consumer loyalty within a traditional wholesale retail setting. It extends the application of service quality and product quality constructs beyond large-scale retail or digital commerce contexts. Furthermore, by integrating Signal Theory, this research demonstrates how consistent product reliability and service responsiveness function as positive signals that reduce information asymmetry and strengthen consumer trust. This contributes to the development of loyalty theory in emerging market retail environments.

From a practical perspective, the findings provide strategic implications for small and medium-scale grocery retailers in developing regions. By quantifying the relative contribution of product and service quality, store managers can prioritize resource allocation toward aspects that most strongly influence loyalty. For policymakers and local business development stakeholders, the study offers empirical evidence supporting capacity-building initiatives aimed at improving retail service standards and product management systems.

In conclusion, this study holds academic significance by addressing contextual and empirical gaps in recent literature and practical relevance by offering evidence-based recommendations for strengthening consumer loyalty in traditional retail businesses.

2. Literature Review

Literature review serves as the theoretical and empirical foundation of this study. It integrates key marketing and service management theories with recent empirical findings to explain the relationship between product quality, service quality, and consumer loyalty. This section not only synthesizes relevant theoretical perspectives but also identifies inconsistencies and contextual gaps that justify the present research.

2.1 Conceptual and Theoretical Foundations

Product Quality

Product quality is conceptualized as the ability of a product to perform its functions reliably and consistently in meeting customer expectations. According to Kotler and Keller (2016); Anggraeni & Soliha (2020), quality represents the totality of features and characteristics that bear on a product's ability to satisfy stated or implied needs. In retail contexts, product quality reflects performance, durability, conformity to specifications, and perceived quality.

From a theoretical standpoint, Signaling Theory (Spence, 1973) provides a strong foundation for understanding product quality in retail markets. Haque, M. G. (2020) Product quality functions as a signal that reduces information asymmetry between sellers and consumers. When consumers consistently receive products that meet expectations (freshness, expiration accuracy, packaging condition), they interpret these as positive signals of store credibility.

Recent empirical research confirms that product quality significantly influences trust formation and repurchase intention in retail settings (Apriani & Bahrun, 2023). High-quality products not only increase satisfaction but also strengthen long-term relational commitment, which ultimately leads to consumer loyalty.

Thus, product quality in this study is positioned as a strategic signal influencing consumer perceptions and long-term behavioral outcomes.

Service Quality

Service quality refers to the extent to which service performance meets or exceeds customer expectations. The SERVQUAL framework developed by Parasuraman, Zeithaml, and Berry (1988) remains conceptually relevant, emphasizing five dimensions: tangibility, reliability, responsiveness, assurance, and empathy.

DOI: 10.26618

In traditional retail settings, service quality plays a relational role beyond transactional exchanges. According to relationship marketing theory, consistent service interactions foster emotional attachment and customer trust, which are essential for loyalty formation.

Recent studies demonstrate that service quality significantly influences customer satisfaction, emotional engagement, and loyalty across retail and service industries (Khasanah & Oktiani, 2024; Sariyanti et al., 2023). Particularly in small-scale retail businesses, personalized service and responsiveness often outweigh price competition in shaping consumer retention.

Therefore, service quality in this study is conceptualized as a relational mechanism that strengthens trust and encourages repeated patronage.

Consumer Loyalty

Consumer loyalty is defined as a deeply held commitment to repurchase or re-patronize a preferred product or service consistently in the future (Griffin, 2002; Kotler & Keller, 2016). Loyalty encompasses behavioral aspects (repeat purchase) and attitudinal dimensions (recommendation, preference, commitment).

Contemporary loyalty theory emphasizes that loyalty emerges not merely from satisfaction but from accumulated positive experiences and trust reinforcement. In retail environments, loyalty becomes a strategic asset ensuring business sustainability, particularly in competitive markets.

Recent empirical evidence indicates that loyalty is strongly predicted by perceived quality and service excellence (Munafis, 2024; Sariyanti et al., 2023). In traditional grocery sectors, loyalty is often relational and community-based, making service interactions especially influential.

2.2 Review of Empirical Studies

Recent empirical studies consistently show a positive relationship between product quality, service quality, and consumer loyalty. Munafis (2024) found that product quality significantly affects purchase decisions and loyalty in retail businesses. Similarly, Sariyanti et al. (2023) demonstrated that both product quality and service quality positively influence consumer loyalty, with customer satisfaction acting as a mediating variable.

Angraeni and Rahma (2023) reported that in traditional wholesale stores, service quality often has a stronger immediate effect on customer retention than pricing strategies. Meanwhile, Khasanah and Oktiani (2024) emphasized the importance of responsiveness and empathy in increasing consumer attachment.

However, several methodological and contextual limitations remain. First, many studies incorporate additional mediating variables such as satisfaction or price perception, making it difficult to isolate the direct influence of product and service quality. Second, empirical evidence from Eastern Indonesia, particularly Sorong City, remains limited. Third, few studies focus specifically on small-scale grocery wholesale stores, which operate under different competitive dynamics compared to supermarkets or online retail platforms.

These inconsistencies and contextual gaps justify further investigation in localized traditional retail settings.

2.3 Identification of the Research Gap

Based on theoretical and empirical synthesis, the research gap can be identified in three main aspects:

1. **Contextual Gap** – Limited empirical research examines consumer loyalty determinants in traditional grocery wholesale stores in Eastern Indonesia, particularly Sorong City.
2. **Model Simplicity Gap** – Previous studies often include mediating variables (e.g., satisfaction), while fewer studies test the direct and simultaneous effects of product quality and service quality.

DOI: 10.26618

3. **Theoretical Integration Gap** – The application of Signaling Theory in explaining loyalty formation within traditional retail contexts remains underexplored.

Therefore, this study contributes by directly testing the influence of product quality and service quality on consumer loyalty in a localized wholesale retail setting, grounded in signaling and relationship marketing perspectives.

2.4 Development of the Conceptual Framework

Adom, D., Hussain, E. K., & Joe, A. A. (2018) This study examines two independent variables:

- Product Quality (X1)
- Service Quality (X2)

and one dependent variable:

- Consumer Loyalty (Y)

Product quality functions as a performance-based signal influencing consumer trust. Service quality operates as a relational mechanism strengthening emotional attachment. Both variables are expected to influence consumer loyalty directly and simultaneously.

2.5 Hypotheses Development

Based on theoretical justification and empirical findings, the following hypotheses are formulated:

H1: Product quality has a positive and significant effect on consumer loyalty at Bone Star Wholesale Store in Sorong City.

This hypothesis is grounded in signaling theory and supported by empirical findings showing that reliable product performance strengthens repurchase intention and loyalty (Munafis, 2024).

H2: Service quality has a positive and significant effect on consumer loyalty at Bone Star Wholesale Store in Sorong City.

This hypothesis is supported by relationship marketing theory and empirical studies indicating that responsiveness and empathy enhance customer retention (Khasanah & Oktiani, 2024).

H3: Product quality and service quality simultaneously have a positive and significant effect on consumer loyalty.

This hypothesis reflects the integrated retail experience perspective, where consumers evaluate overall value rather than isolated attributes.

3. Research Methods

3.1 Research Design

This study employed a quantitative research design with a causal-associative approach. A quantitative approach was selected because this study aims to examine the magnitude and direction of the relationships between independent variables (product quality and service quality) and the dependent variable (consumer loyalty) using statistical analysis.

The causal-associative design is appropriate as it enables the researcher to test cause-and-effect relationships between variables. Specifically, this study investigates whether product quality and service quality significantly influence consumer loyalty at Bone Star Wholesale Store in Sorong City.

Multiple linear regression analysis was utilized as the primary analytical technique because it allows for simultaneous examination of the influence of more than one independent variable on a dependent variable. This design ensures methodological consistency and provides statistically robust results aligned with the formulated research hypotheses.

3.2 Research Context and Setting

This research was conducted at Bone Star Wholesale Store, located on Jl. Perikanan, Klaraligi, Sorong Manoi District, Sorong City, Southwest Papua, Indonesia. The store operates in the traditional retail (grocery/wholesale) sector, serving daily consumer needs.

The selection of this research setting was based on several considerations. First, traditional retail businesses in Eastern

DOI: 10.26618

Indonesia face increasing competition from modern minimarkets and retail chains. Second, empirical studies examining consumer loyalty in traditional grocery stores in Sorong City remain limited. Therefore, this setting provides a relevant context for examining how product and service quality contribute to customer loyalty in a developing regional retail market.

A clear description of the research setting enhances contextual validity and allows readers to assess the applicability of the findings to similar retail environments.

3.3 Population and Sample / Research Participants

Population

The population of this study consisted of all customers who have made purchases at Bone Star Wholesale Store. Since the store does not maintain a formal customer database and customers continuously visit without fixed registration, the population is categorized as an infinite population**.**

Sample

Rindiani Restu Nurrizqa, (2023) A total of 102 respondents participated in this study. The sample size falls within the recommended range for quantitative research (30–500 respondents), ensuring sufficient statistical power for regression analysis.

Sampling Technique

This study applied purposive sampling**,** a non-probability sampling technique in which respondents are selected based on specific criteria. The inclusion criteria were:

1. Customers who have made at least one purchase at Bone Star Store.
2. Minimum age of 20 years.
3. Willingness to complete the questionnaire voluntarily.

This technique ensures that respondents possess relevant experience with the store's products and services, thereby increasing the reliability and relevance of the collected data.

3.4 Data Sources and Data Collection

Data Sources

This study utilized both **primary and secondary data**:

- **Primary data** were collected directly from respondents through structured questionnaires.
- **Secondary data** were obtained from academic journals, books, and relevant literature to support theoretical development and variable operationalization.

Data Collection Techniques

1. **Questionnaire**
   The main data collection instrument was a structured questionnaire using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).
2. **Interviews**
   Informal interviews with the store owner and several customers were conducted to gain preliminary insights into service practices and customer perceptions.
3. **Observation**
   Direct observation was carried out to understand store conditions, service processes, and customer interactions.
4. **Documentation**
   Supporting documents, store information, and relevant records were reviewed to enrich contextual understanding.

A transparent data collection procedure minimizes bias and enhances data accuracy.

3.5 Measurement of Variables and Research Instruments

The study involves three main variables:

1. Independent Variables

Product Quality (X1)

Measured using indicators adapted from established literature, including:

- Performance
- Conformance to specifications
- Reliability
- Perceived quality

DOI: 10.26618

Service Quality (X2)
Measured using SERVQUAL dimensions:

- Tangibles
- Reliability
- Responsiveness
- Assurance
- Empathy

2. Dependent Variable

Consumer Loyalty (Y)
Measured using indicators including:

- Customer satisfaction
- Repurchase intention
- Commitment/loyalty behavior
- Recommendation intention
- Store preference

All items were measured using a five-point Likert scale. Instrument validity was tested using Pearson Product-Moment correlation, while reliability was assessed using Cronbach's Alpha coefficient.

3.6 Data Analysis Techniques

Ghozali, I. (2018) Data were analyzed using **IBM SPSS (version 25)**. The analysis procedures included:

1. Descriptive statistics
2. Validity and reliability testing
3. Classical assumption tests:
   - Normality test (Kolmogorov-Smirnov)
   - Linearity test
   - Heteroscedasticity test (scatterplot)
   - Multicollinearity test (Tolerance and VIF)
4. Multiple linear regression analysis
5. Hypothesis testing:
   - Partial test (t-test)
   - Simultaneous test (F-test)
6. Coefficient of determination (Adjusted R^2)

These analytical techniques are appropriate for evaluating causal relationships and ensuring robust statistical interpretation.

3.7 Validity, Reliability, and Trustworthiness

Validity Testing

All questionnaire items were tested using Pearson correlation analysis. Items were considered valid if the calculated r-value exceeded the r-table value at a 5% significance level.

Reliability Testing

Reliability was measured using Cronbach's Alpha. A value greater than 0.60 indicates acceptable reliability. All variables (Product Quality, Service Quality, and Consumer Loyalty) demonstrated satisfactory reliability levels. These procedures confirm that the research instrument is both valid and reliable, strengthening the credibility of the findings.

3.8 Ethical Considerations

This research adhered to ethical research standards. Respondents participated voluntarily and were informed about the purpose of the study. Confidentiality and anonymity were strictly maintained, and collected data were used solely for academic purposes. No personal identifiers were disclosed in the reporting of results. Ethical compliance ensures academic integrity and protects participant rights.

3.9 Research Procedure

The research procedure was conducted systematically as follows:

1. Identification of research problems and literature review
2. Development of conceptual framework and hypotheses
3. Instrument design and validation
4. Data collection through questionnaires
5. Data coding and statistical analysis using SPSS
6. Interpretation of results
7. Preparation of research report

This structured procedure enhances transparency and enables replication by future researchers.

DOI: 10.26618

3.10 Methodological Limitations

Despite careful design, this study has several limitations:

1. The use of purposive sampling limits generalizability beyond the research setting.
2. The study focuses only on two independent variables, whereas other factors (e.g., price, promotion, location, emotional attachment) may also influence consumer loyalty.
3. Cross-sectional data collection restricts analysis to a single time period.

Future research is encouraged to include additional variables, apply probability sampling techniques, and consider longitudinal designs to strengthen empirical generalization.

4. Results and Discussion

4.1 Research Results

a. Validity Test

The purpose of validity testing is to ensure that the expected results of the study can be accurately measured by each questionnaire item. When a statement adequately describes an idea or variable, it is said to be valid. To perform this test, the correlation coefficient (calculated r) is compared with the table r value at a significance level of 5% (α = 0.05). The statement is true if the calculated r exceeds the table r. The degree of freedom formula, n - 2, where n is the number of respondents, produces a table r value based on the research sample size.

Table 1 Validity Test Results of Research Variables

Variable	Item Statement	r-count	r-table	Description
Product Quality (X1)	X1.1	0,826	0,1946	VALID
	X1.2	0,782	0,1946	VALID
	X1.3	0,731	0,1946	VALID
	X1.4	0,580	0,1946	VALID
	X1.5	0,726	0,1946	VALID
	X1.6	0,781	0,1946	VALID
	X1.7	0,806	0,1946	VALID
	X1.8	0,793	0,1946	VALID
Service Quality (X2)	X2.1	0,765	0,1946	VALID
	X2.2	0,773	0,1946	VALID
	X2.3	0,699	0,1946	VALID
	X2.4	0,737	0,1946	VALID
	X2.5	0,673	0,1946	VALID
	X2.6	0,841	0,1946	VALID
	X2.7	0,776	0,1946	VALID

To determine how accurately the questionnaire represents the factors being studied, a validity test was conducted. This study used Pearson Product Moment correlation for validity analysis. The calculated r value must exceed the table r value for an item statement to be considered authentic. With 102 participants and a significance threshold of 5%, the table r value is 0.1946. The processed data shows that all items in variables X1, X2, and Y (product quality, service quality, and consumer loyalty) have r values greater than the table value. The validity and suitability of this study as a measuring tool is determined by evaluating each questionnaire item.

b. Reliability Tes

The research variables were examined by each questionnaire item through validity testing. To determine how the score of each item relates to the overall score, the researcher

DOI: 10.26618

used Pearson Product Moment Correlation. If the significance value (2-tailed Sig.) is less than 0.05 and the correlation is positive, then the item is considered valid. Conversely, if the correlation is negative or the significance value is greater than 0.05, then the item is not valid. This test is important to ensure that the research tool is accurate and appropriate.

Table 2 Reliability Test Results of Research Variables

Variable	R	Cronbach's Alpha	Description
Product Quality (X1)	0,883	0,60	Reliabel
Service Quality (X2)	0,784	0,60	Reliabel
Customer Loyalty (Y1)	0,788	0,60	Reliabel

The reliability test results in this study show that:

a) Cronbach's Alpha value for Product Quality (X1) is 0.883
b) Cronbach's Alpha value for Service Quality (X2) is 0.784
c) The Cronbach's Alpha value for Customer Loyalty (Y) is 0.788

c. Clasisical assumtion Test

1) Normality Test

To ensure data distribution, a normality test is required before performing a regression test. A significance value (Sig.)

Table 2 Normality Test

Variable	Item Statement	r-count	r-table	Description
Customer Loyalty (Y1)	X2.8	0,865	0,1946	VALID
	Y1	0,781	0,1946	VALID
	Y2	0,831	0,1946	VALID
	Y3	0,831	0,1946	VALID
	Y4	0,744	0,1946	VALID
	Y5	0,836	0,1946	VALID
	Y6	0,774	0,1946	VALID
	Y7	0,822	0,1946	VALID
	Y8	0,782	0,1946	VALID

Kolmogorov-Smirnov test greater than 0.05 indicates that the data is normally distributed. If the test results show Sig. > 0.05, the data is normal and can be analyzed. If Sig. < 0.05, the data is not normally distributed and does not meet the requirements for parametric regression analysis.

a. Test distribution is Normal.

		Unstandardized Residual
N		102
Normal Parametersa,b	Mean	0E-7
	Std. Deviation	2.53775787
Most Extreme Differences	Absolute	.105
	Positive	.084
	Negative	-.105
Kolmogorov-Smirnov Z		1.061
Asymp. Sig. (2-tailed)		.210

DOI: 10.26618

a. Calculated from data.

The unstandardized residual values of 102 respondents were tested for normality using the Kolmogorov-Smirnov test, as shown in the table. The test results exceeded 0.05 with an asymptomatic (2- tailed) value of 0.210. This indicates that the residual data follows a normal distribution because the statistical distribution of the data cannot be distinguished from a normal distribution. Regression analysis and other advanced statistical studies use regularly distributed data, so the data is acceptable.

2) Linearity Tes

If the Linearity score is less than 0.05, the independent and dependent variables are linear. Otherwise, the variables are not linear. This summarizes the linearity test. A significant linear relationship is indicated by a Sig. value. A deviation from Linearity greater than 0.05, while a value less than 0.05 indicates no relationship.

Table 3. Linearity Test Results

Item	Sum of Squares	df	Mean Square	F	Sig.
Consumer Loyalty * Service Quality (Combined)	1316.343	18	73.130	8.952	.000
Between Groups – Linearity	1147.169	1	1147.169	140.433	.000
Deviation from Linearity	169.174	17	9.951	1.218	.269
Within Groups	678.010	83	8.169		
Total	1994.353	101			

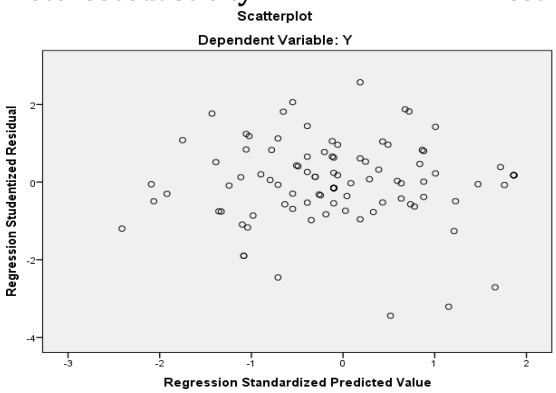
Source: Processed primary data (2025), analyzed using IBM SPSS 25.

Based on the results of the linearity test between:

a) The linearity test shows that the Linearity column has a significance value of less than 0.05 and the Deviation from Linearity column has a significance value of greater than 0.05. A straight line connects product quality and customer loyalty.
b) The linearity test results show that the significance values for Linearity and Deviation from Linearity in the relationship between Service Quality (X2) and Customer Loyalty (Y) are less than 0.05. This finding indicates that service quality directly influences customer loyalty.

All variables in this regression model meet the linearity requirements, so it can be said that they can continue to be used in multiple linear regression analysis.

3) Heteroscedasticity Test



The points do not appear to cluster in any particular pattern, whether tapered, scattered, or curved, based on the scatterplot image. The absence of heteroscedasticity in the regression model is supported by these normally distributed data points. This proves that the conventional heteroscedasticity condition is satisfied, as the residual variance remains constant (homoscedastic) across all projected values. This regression model is considered suitable for further investigation as it adheres to the fundamental principles of

DOI: 10.26618

classical linear regression regarding variance homogeneity.

4) Multicollinearity Test

To avoid unwanted correlations between the independent variables in the regression model, a multicollinearity test is performed. A tolerance value of less than 0.10 indicates multicollinearity, while a value greater than 0.10 indicates the absence of multicollinearity. The VIF value detects this.

Table 4. Multicollinearity Test Results

Coefficients[a]

Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	3.746	2.058		1.821	.072		
Product Quality (X1)	.525	.096	.495	5.472	.000	.403	2.481
Service Quality (X2)	.370	.089	.376	4.161	.000	.403	2.481

a. Dependent Variable: Consumer Loyalty

Source: Processed primary data (2025), analyzed using IBM SPSS 25.

The multicollinearity test determines whether the independent variables in the regression model are highly correlated. This section discusses the results of the Tolerance and Variance Inflation Factor (VIF) tests. If the VIF is less than 10 and the Tolerance is greater than 0.10, the independent variables tested do not show multicollinearity. The Tolerance is 0.403 and the VIF is 2.481. The regression model does not show multicollinearity among the independent variables, as both the Tolerance and VIF values are above 0.10.

Multiple Linear Regression Analysis

Linear regression analysis can determine how much an independent factor affects a dependent variable. Multiple linear regression is used when there are several independent variables that affect the dependent variable. The general form of the multiple linear regression equation is as follows:

$$\mathbf{Y = a + b_1X_1 + b_2X_2 + e,}$$

where Y is the dependent variable, a is the constant value, b_1 and b_2 are the regression coefficients of the independent variables X_1 and X_2, respectively, and e represents the error factor that cannot be explained by the model. For example, if the dependent variable is customer loyalty, the independent variables could be product quality and service.

Table 5. Results of the Multiple Linear Regression Test

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	3.746	2.058		1.821	.072
Product Quality (X1)	.525	.096	.495	5.472	.000
Service Quality (X2)	.370	.089	.376	4.161	.000

Dependent Variable: Consumer Loyalty

Source: Processed primary data (2025), analyzed using IBM SPSS 25.

a. Dependent Variable: Loyalitas Konsumen

Based on the results of multiple linear regression analysis, the following equation was obtained:

Y = 3.746 + 0.525X_1 + 0.370X_2

From the results of this equation, it can be explained that:

1. It can be predicted that Customer Loyalty (Y) will have a value of 3.746 regardless of Product Quality (X1) and Service Quality

DOI: 10.26618

(X2) when these two variables are zero or have no effect, because the constant value of 3.746 implies this.

2. Assuming the Service Quality (X2) variable remains constant, the regression coefficient for the Product Quality (X1) variable is 0.525, meaning that for every one-unit increase in that variable, the Customer Loyalty (Y) variable will increase by 0.525.
3. Given that the Product Quality (X1) variable remains unchanged, the regression coefficient of 0.370 for the Service Quality (X2) variable indicates that there is a predicted increase of 0.370 in Consumer Loyalty (Y) for every one-unit increase in the service aspect.

5) Hipothesis Testing

Sugiyono (2019) hypothesis as a provisional assumption formulated to provide a tentative answer to a previously stated research problem

1. Partial Significance Tes (T-Test)

To evaluate the relative importance of each independent variable in explaining the dependent variable, a t-test is used. The following is an explanation of the steps in performing a t-test:

1) Based on the comparison between the calculated t-value and the table t- value
   a) The hypothesis is accepted if the calculated t-value is greater than the table t-value, indicating that X significantly affects Y.
   b) If the calculated t-value is less than the table t-value, the hypothesis is rejected because the independent variable does not affect the dependent variable.
2) Based on the Significance Value (Sig.)
   a) The hypothesis that variable X significantly influences variable Y is accepted if Sig. is less than 0.05.
   b) If the Sig. value is greater than 0.05, the null hypothesis is rejected because the independent and dependent variables do not interact significantly.

To determine the t-table value, the following formula is required:

Determination of t-table Value

The t-table value is determined using the following formula:

$$t_{table} = \left(\frac{\alpha}{2}; n-k-1\right)$$

Where:

- α = 0.05 (significance level)
- n = 33 (number of observations)
- k = 2 (number of independent variables)

$$t_{table} = \left(\frac{0.05}{2}; 33-2-1\right)$$
$$t_{table} = (0.025; 30)$$

Table 6. Results of Partial (t-Test) Analysis

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	3.746	2.058		1.821	.072
Product Quality (X1)	.525	.096	.495	5.472	.000
Service Quality (X2)	.370	.089	.376	4.161	.000

Dependent Variable: Consumer Loyalty
Source: Processed primary data (2025), analyzed using IBM SPSS 25.

1. Partial Significance Test (t-Test)

Based on the results of the partial t-test, the following findings were obtained:

a) Product Quality (X1): Sig. = 0.000 < 0.05, indicating that Product Quality has a statistically significant effect on Consumer Loyalty (Y).
b) Service Quality (X2): Sig. = 0.000 < 0.05, indicating that Service Quality has a statistically significant effect on Consumer Loyalty (Y).

DOI: 10.26618

Since the significance values for both independent variables are lower than 0.05, H_1 and H_2 are accepted. This means that Product Quality and Service Quality partially (individually) influence Consumer Loyalty.

2. Simultaneous Significance Test (F-Test)

The F-test is conducted to determine whether all independent variables simultaneously influence the dependent variable in the regression model. According to Nurfuadah. (2022), the F-test evaluates the overall significance of the regression model.

Decision Criteria:

1. The hypothesis is accepted if Sig. < 0.05, meaning the independent variables simultaneously have a significant effect on the dependent variable.
2. The hypothesis is rejected if Sig. > 0.05, meaning the independent variables do not simultaneously affect the dependent variable.

Table 7 Simultaneous Test (F-Test) Results

Dependent Variable: Consumer Loyalty

Predictors: (Constant), Product Quality, Service Quality

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1343.891	2	671.946	102.270	.000
Residual	650.462	99	6.570		
Total	1994.353	101			

The results show that the significance value is 0.000, which is lower than the 0.05 threshold. Therefore, Product Quality (X1) and Service Quality (X2) simultaneously have a significant effect on Consumer Loyalty (Y).
Thus, H_3 is accepted, indicating that the regression model is statistically significant as a whole.

3. Coefficient of Determination (R^2)

The coefficient of determination (R^2) measures the extent to which independent variables explain the variation in the dependent variable. As explained by Damodar N. Gujarati (2004), R^2 reflects the goodness-of-fit of the regression model. A higher R^2 value indicates a better explanatory power of the model. Conversely, a lower R^2 value suggests limited explanatory ability.

Model Summary Results

The data processing results indicate that the Adjusted R^2 value is 0.667. This means that 66.7% of the variation in Consumer Loyalty can be explained by Product Quality (X1) and Service Quality (X2). The remaining 33.3% is explained by other variables not included in the model. Therefore, the regression model demonstrates strong explanatory power and can be considered reliable in explaining the relationship between Product Quality, Service Quality, and Consumer Loyalty.

4.2 Research Discussion

a. The Effect of Product Quality on Customer Loyalty

Multiple linear regression analysis shows that Product Quality (X1) has a positive and statistically significant effect on Customer Loyalty (Y). The significance value of 0.000 is less than 0.05, so the hypothesis is accepted. With all other factors held constant, the regression coefficient of 0.525 indicates that consumer loyalty will increase by 0.525 units for every one-unit increase in product quality.

This finding suggests that the higher the product quality provided by Bone Star Grocery Store in Sorong City, the greater the tendency for consumers to demonstrate loyalty, whether through repeat purchases or recommendations to others. Positive product quality in terms of durability, packaging, and alignment with consumer expectations can create and shape positive perceptions that foster consumer attachment to the store. This

DOI: 10.26618

finding supports the theory that product quality drives customer loyalty. Meeting consumer expectations and providing a satisfying shopping experience builds trust and loyalty.

b. The Effect of Service Quality on Customer Loyalty

The regression study shows that Service Quality (X2) has a positive and significant effect on Customer Loyalty (Y). This is indicated by a lower significance level, namely 0.000, compared to 0.05. If all other variables remain constant, customer loyalty will increase by 0.370 units for every one-unit increase in service quality, according to the regression coefficient.

These results indicate that consumers view service as an important factor in determining loyalty. Fast, friendly, responsive to complaints, and able to provide solutions are the forms of service quality expected by consumers. When customers are satisfied with the service they receive, they are likely to return to the business.

In line with previous opinions, this study found that providing excellent service can increase customer happiness and loyalty. Customers form a deeper emotional bond with the store and its products when they receive friendly treatment.

c. The Influence of Product Quality and Service Quality on Customer Loyalty

Product Quality (X1) and Service Quality (X2) significantly influence Customer Loyalty (Y) when tested together using an F- test. This is evidenced by a significance level of 0.000, below 0.05. Bone Star Grocery Store in Sorong City observed that these two independent factors significantly influence customer loyalty.

This finding indicates that the synergy between product quality and service quality plays a crucial role in creating and maintaining customer loyalty. Consumers do not evaluate and compare based on a single element alone but consider the overall shopping experience they encounter. Having good products but lacking adequate service, or vice versa, will not be able to build strong loyalty optimally.

These two independent factors also account for 66.7% of the variance in customer loyalty, as indicated by the adjusted R- squared value of 0.667. Other variables, such as store location, promotions, and internal consumer characteristics like personal or emotional preferences, account for the remaining 33.3% and are not included in this model.

Therefore, it can be concluded that a strategy of improving product quality combined with excellent service has proven effective in strengthening customer loyalty, particularly in the context of grocery retail businesses that rely on long-term relationships with consumers.

5. Closing

This study examined the influence of product quality and service quality on consumer loyalty at Bone Star Wholesale Store in Sorong City. The conclusion synthesizes the main findings and highlights their academic and practical significance without introducing new statistical analysis. Overall, the research objectives have been achieved, demonstrating that quality dimensions play a crucial role in shaping long-term customer loyalty in the traditional retail sector.

5.1 Summary of Key Findings

The findings confirm that both product quality and service quality have a positive and significant effect on consumer loyalty. Product quality was identified as the more dominant factor, indicating that consumers place strong emphasis on the reliability, conformity, and perceived value of goods when deciding to remain loyal to a store. Service quality also plays a substantial role in influencing loyalty. Friendly interactions, responsiveness, and assurance contribute to positive shopping experiences, which encourage repeat purchases and customer recommendations. Simultaneously, product quality and service quality significantly explain variations in

DOI: 10.26618

consumer loyalty, with the model demonstrating strong explanatory power. These findings indicate that loyalty in the grocery retail sector is formed through the combined influence of tangible product performance and interpersonal service experiences.

5.2 Theoretical Contributions

This study contributes to the literature on marketing and consumer behavior by empirically validating the relationship between quality dimensions and loyalty within the context of traditional retail businesses in Eastern Indonesia. While previous studies have widely examined loyalty in modern retail or urban settings, this research extends the discussion to a local grocery store environment that has received limited academic attention. Furthermore, by integrating perspectives from quality theory and signal theory, this study refines the understanding that product and service quality function as strategic signals that reduce consumer uncertainty and build trust. The findings reinforce the theoretical argument that consistent positive signals strengthen emotional attachment and long-term commitment, thereby enriching existing loyalty models.

5.3 Practical and Policy Implications

From a managerial perspective, the findings emphasize the importance of maintaining consistent product standards, particularly in terms of product reliability, cleanliness, and expiration control. Retail managers should ensure that inventory management systems support product freshness and quality consistency. In terms of service, store owners are encouraged to strengthen employee training programs that focus on responsiveness, courtesy, and problem-solving skills. Creating a positive interpersonal atmosphere can significantly enhance customer attachment and retention. For policymakers and local business development stakeholders, supporting small and medium-sized retail enterprises through quality improvement programs, digital transaction systems, and customer service training initiatives may strengthen competitiveness and sustainability in traditional retail markets..

5.4 Limitations of the Study

This study is limited to a single grocery store in Sorong City, which may restrict the generalizability of the findings to other regions or retail formats. Consumer behavior may differ in modern retail environments or larger urban markets. Additionally, the model only includes two independent variables. Although product and service quality explain a substantial portion of consumer loyalty, other relevant factors such as price perception, brand image, promotion strategies, and customer satisfaction were not incorporated into the analysis. Therefore, the findings should be interpreted within the contextual and variable scope of this research.

5.5 Directions for Future Research

Future research is recommended to incorporate additional variables such as customer satisfaction, perceived value, brand image, or price fairness to develop a more comprehensive loyalty framework. Examining mediating or moderating effects using advanced analytical techniques such as Structural Equation Modeling (SEM) may provide deeper theoretical insights. Moreover, comparative studies across different retail formats—such as traditional stores, minimarkets, and supermarkets—would enhance external validity and enrich understanding of loyalty dynamics in diverse market structures. Expanding the geographical scope beyond Sorong City would also strengthen the generalizability of findings and contribute to broader retail development research in Indonesia.

6. Bibliography

Adom, D., Hussain, E. K., & Joe, A. A. (2018). Theoretical and conceptual framework: Mandatory ingredients in research.

DOI: 10.26618

International Journal of Scientific Research, 7(1), 93–98.

Anggraeni, A. R., & Soliha, E. (2020). Kualitas produk, citra merek dan persepsi harga terhadap keputusan pembelian (Studi pada konsumen Kopi Lain Hati Lamper Kota Semarang). *Al Tijarah, 6*(3), 96. https://doi.org/10.21111/tijarah.v6i3.5612

Angraeni, O. F., & Rahma, F. (2023). Pengaruh kualitas pelayanan, kualitas produk dan harga terhadap keputusan pembelian di Desa Sukosewu Gandusari. *Journal of Social Science Research, 3*(3), 3140–3154.

Apriani, S., & Bahrun, K. (2023). Pengaruh citra merek dan kualitas produk terhadap keputusan pembelian kosmetik merek Maybelline. *Jurnal Manajemen Modal Insani dan Bisnis (JMMIB), 4*(1), 46–54.*

Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.

Han, H., Yu, J., & Kim, W. (2021). Environmental corporate social responsibility and customer loyalty: The moderating role of emotional attachment. *Journal of Business Research, 124*, 449–460.

Haque, M. G. (2020). Pengaruh kualitas produk dan harga terhadap keputusan pembelian pada PT Berlian Multitama di Jakarta. *Jurnal Manajemen, 21*(134), 31–38.

Kasiri, L. A., Cheng, K. T. G., Sambasivan, M., & Sidin, S. M. (2022). Integration of standardization and customization in service quality measurement. *International Journal of Quality & Reliability Management, 39*(2), 353–375.

Khasanah, N., & Oktiani, N. (2024). Pengaruh kualitas pelayanan dan nilai konsumen terhadap kepuasan layanan. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, dan Akuntansi, 1*(3), 223–233. https://doi.org/10.62421/jibema.v1i3.20

Maimunah, S. (2020). Pengaruh kualitas pelayanan, persepsi harga, cita rasa terhadap kepuasan konsumen dan loyalitas konsumen. *IQTISHADequity Jurnal Manajemen, 1*(2), 57–68. https://doi.org/10.51804/iej.v1i2.542

Munafis, S. (2024a). Product quality and its impact on purchasing decisions and loyalty. *Scientific Journal of Reflection: Economic, Accounting, Management and Business, 7*(3), 625–633.

Nurfuadah, A. (2022). *Pengaruh sustainability report disclosure terhadap financial performance* (Undergraduate thesis). Universitas Pendidikan Indonesia.

Nurrizqa, R. R. (2023). Pengaruh kompetensi komite audit dan financial stability terhadap financial statement fraud: Studi pada perusahaan sektor real estate dan properti yang terdaftar di Bursa Efek Indonesia tahun 2018–2021. *Jurnal Ilmiah UPI*, 51–52.

Sariyanti, S., L. P., & Praja, Y. (2023). Pengaruh kualitas produk dan pelayanan terhadap loyalitas konsumen pada Toko Kintan di Cermee dengan kepuasan konsumen sebagai variabel intervening. *Jurnal Manajemen, 2*(1), 74–87.*

Shankar, V., Grewal, D., & Sunder, S. (2022). Customer satisfaction and loyalty in retailing: A meta-analytic perspective. *Journal of Retailing, 98*(1), 1–19.

Sugiyono. (2019). *Metode penelitian pendidikan: Kuantitatif, kualitatif, kombinasi, R&D dan penelitian tindakan* (3rd ed.). Alfabeta.