

The Impact of The Service Quality of The Cleaning Staff of The Depot Logistics Employee Cooperative in The Servqual Model on Consumer Satisfaction at The East Nusa Tenggara Regional Office of Perum Bulog

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ABSTRACT

In the era of globalization and increasingly fierce market competition, companies are racing to increase customer loyalty by focusing on service quality. Customer satisfaction is key to success, measured by perceptions of expectations influenced by objective quality and subjective interactions. Good service quality creates positive perceptions, satisfaction, and loyalty. Service quality indicators include physical evidence, empathy, reliability, responsiveness, and assurance. The theory used is from Tjiptono and Chandra (2016), expected service and perceived service. According to Husein Umar, quoted from his book Business Feasibility Studies (2005), "Customer satisfaction is the level of feeling a customer has after comparing what they receive with their expectations." This research uses a quantitative method with a survey. Data were analyzed using multiple linear regression, t-tests, F-tests, and the coefficient of determination with the help of SPSS 30. The research results partially show that service quality in the form of physical evidence (t-count -0.045; Sig. 0.965), empathy (t-count 10.063; Sig. 0.550), and assurance (t-count 0.138; Sig. 0.891) have no significant effect because t-count < t-table (2.023) and Sig. > 0.05, while reliability (t-count 2.227; Sig. 0.032) and responsiveness (t-count 2.454; Sig. 0.019) have a significant effect. The F-test shows that all five variables have a significant combined effect (F-count 27.471; F-table 2.619; Sig. <0.001b) with an R² of 0.755, or 75%.

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INTRODUCTION

At this time, market competition in the international and domestic world is becoming increasingly fierce and intense. Companies are racing to make changes to their organizations to become the best. The current economic conditions are causing many organizations of various sizes to take steps toward change and improvement. For this reason, many companies compete with each other to gain customer loyalty by setting the company's goal to satisfy customers in terms of service. The company's decision to take systematic service improvement actions is the determining umbrella for following up on consumer complaints resulting from a failure, ultimately leading to consumer loyalty (Rohaeni, 2018).

It is important for companies to focus on customer satisfaction in order to survive in the increasingly competitive business environment. Satisfaction is the benchmark for assessing the quality of service in relation to customer satisfaction. Generally, it leads to a complex perception related to customer expectations, which are determined by both objective quality factors and subjective interactions. The quality of service

provided by a company can create a positive perception of the company among customers, resulting in customer satisfaction and loyalty. Kasmir (2017) explains that service quality is the actions and deeds of business owners or companies to provide customer satisfaction. Furthermore, Sangadji & Sopiah (2013) explain that service quality indicators are divided into 5 (five) categories: physical evidence (tangibles), caring (empathy), reliability, responsiveness, and assurance.

Quality is closely related to customer satisfaction. Quality encourages customers to form strong, long-term bonds with the company. These bonds allow the company to carefully meet and understand customer expectations and needs. Thus, the company can increase consumer satisfaction by minimizing less pleasant consumer experiences (Tjiptono, 2016). Quality is closely related to consumer satisfaction. Quality encourages customers to form strong bonds with the company. Therefore, the company must carefully understand and consider the expectations and needs of its consumers.

In this case, the role of service quality is very important for customer satisfaction, as observed in the company's evaluation of service quality based on physical evidence (tangibles), empathy, reliability, responsiveness, and assurance, which are still not optimal. This will affect customer satisfaction. As for the indicators used to measure consumer satisfaction, they are continued loyalty, purchasing the offered product, recommending the product, willingness to pay more, and providing feedback (Kotler and Keller, 2015). Tangible dimensions include physical evidence such as cleanliness of facilities for the cleaning service's work equipment. The responsiveness dimension relates to the ability of the cleaning staff at the employee cooperative's logistics depot to help provide services promptly to customers, the speed and accuracy of the cleaning service in providing service, and good communication with consumers. The reliability dimension refers to the cleaning service's ability to be relied upon in case of problems with both routine and unexpected cleanliness. The assurance dimension encompasses the knowledge, competence, and trustworthiness of the cleaning service, as well as freedom from danger, risk, or doubt. The empathy dimension indicates that cleaning services have good abilities in providing genuine service and showing attention and friendliness in serving.

The Depot Logistik Employee Cooperative is a cooperative whose members are employees and retirees of the Perum Bulog NTT Regional Office. The main goal of the Depot Logistik Employee Cooperative is to improve the welfare of its members through sustainable and membership-based economic activities. Currently, the Depot Logistik Employee Cooperative has 293 members consisting of retirees and active employees of the Perum Bulog NTT Regional Office. The Depot Logistik Employee Cooperative operates in the savings and loan sector, and the types of businesses of the Depot Logistik Employee Cooperative include the Palapa Store Unit, the Savings and Loan Unit, the Cleaning Service Unit, and the Car Rental Unit (RAT Book, 2024). The Depot Logistik Employee Cooperative has a vision to become a professional and high-quality cooperative in providing services and products that satisfy the needs and improve the welfare of its members, with a mission to improve service quality, member welfare, and business development.

The Unit Cleaning Service (cleaning staff) is responsible for cleaning and maintaining the work environment and office facilities. The Depot Logistik Employee Cooperative, as one of the cleaning service providers, has been trusted to provide cleaning personnel at the NTT Regional Office of Perum Bulog. However, many consumers are still not satisfied with the quality of service provided by the cleaning staff of the Depot Logistik Employee Cooperative. This dissatisfaction can arise from various factors, such as less-than-optimal cleaning results, leading to dusty or neglected work areas, delays in responding to consumer requests, or cleaning staff being perceived as unfriendly or not thorough in their duties. Additionally, the hygiene standards implemented may not yet meet consumer expectations, such as a lack of attention to detail, the use of inadequate equipment, or inconsistent cleaning frequency. These things can affect consumers' perception of the quality of service they should receive.

LITERATURE REVIEW

Service Quality

Lewis & Booms (in Tjiptono and Chandra, 2014) define service quality as the extent to which the level of service provided meets customer expectations. Based on this definition, service quality can be achieved by fulfilling customer needs and desires and delivering them accurately to match customer

expectations. Service quality is any action or performance offered by one party to another that essentially has no physical form and does not involve any ownership (Kotler and Keller, 2012).

Service quality is also the discrepancy between expectations and the actual service performance received (Asti & Ayuningtyas, 2020). Within service quality, two criteria can be distinguished that serve as the basis for consumer evaluation: good service quality and poor service quality. This makes the quality of service flexible and subject to change. This change in service quality improvement can increase competitiveness in the economy.

There are two main factors that influence service quality according to Parasuraman in (Tjiptono and Chandra, 2016): expected service and perceived service. The dimensions and attributes of the SERVQUAL model consist of:

1. Tangible: relating to the attractiveness of the company's physical facilities, equipment, and materials used, as well as the appearance of employees.
2. Empathy: This means that the company understands its customers' problems and acts in their best interests, provides personal attention to customers, and has convenient operating hours.
3. Responsiveness: This refers to the willingness and ability of employees to assist customers and respond to their requests, as well as inform them when services will be provided and then deliver those services quickly.
4. Reliability: This relates to the company's ability to provide accurate service from the first time without making any mistakes and to deliver its services according to the agreed-upon time.
5. Assurance: This refers to the behavior of employees that can foster trust and create a sense of security for their customers.

Customer Satisfaction

Consumer satisfaction is an important concept in consumer research (Peter & Olson, 2018). Where consumer thinking as the determining factor will influence whether they repurchase a product they have already bought or choose to switch elsewhere. Therefore, it can be concluded that customer satisfaction is the most important factor in the success of a business. This is because customer satisfaction will impact the survival of the business and can increase its competitive advantage. Satisfaction is broader when evaluation is determined by perceptions of service quality, product quality, price, situational factors, and personal factors (Indrasari, 2019).

According to Kasinem (2020), customer satisfaction is an assessment of the features or characteristics of a product or service, or the product itself, which provides a level of consumer pleasure related to the fulfillment of consumer consumption needs. According to Asti & Ayuningtyas (2020), customer satisfaction is a comprehensive consumer assessment of the benefits of a product based on what they receive and what they give in response or feedback regarding need fulfillment. According to Rahardjo & Yulianto (2021), customer satisfaction will arise if a customer's needs and desires can be met to the maximum extent. If the product or service offered is of very good quality, customers will experience satisfaction. Conversely, if the product or service offered is of poor quality and cannot meet customer desires, dissatisfaction with the product or service provided will arise.

Measuring customer satisfaction is very important because it can provide useful information for the company. According to Irawan (2004), there are five factors that drive consumer or customer satisfaction, including:

1. Loyalty. Satisfied customers are likely to become loyal. Customers who are satisfied with the products they consume will tend to repurchase from the same manufacturer.
2. Purchasing Products. The desire to buy other products or food is due to the desire to repeat good experiences and avoid bad ones.
3. Recommending Products. Satisfaction is a driving factor for positive word-of-mouth communication. This can take the form of recommendations to other potential customers and saying good things about the product and the company that provides it.
4. Willingness to Pay More. Customers tend to use price as a benchmark for satisfaction. When prices are higher, customers tend to think the quality is higher as well.

5. Providing Input. Although satisfaction has been achieved, customers always want more. Therefore, customers will provide feedback or suggestions so that their desires can be met.

Relationship Between Concepts and Hypotheses

Service quality has a very close relationship with customer satisfaction, meaning that quality encourages customers to form strong bonds with the company. In the long run, such bonds allow the company to carefully understand customer expectations and their needs. Thus, the company can increase customer satisfaction, which in turn can create customer loyalty to the company that provides satisfactory quality (Yuliarmi and Riyasa, 2007).

1. Physical Evidence.

Physical evidence is everything that consumers can see directly when receiving service, including facilities, equipment, environmental cleanliness, and employee appearance. According to Parasuraman (2018), the physical evidence aspect is often the first impression that determines consumers' perception of service quality. The appearance of clean, tidy, and well-maintained facilities will create a sense of comfort, leading consumers to perceive the service as professional. This aligns with Tjiptono's (2019) opinion that the quality of service in the physical evidence dimension serves as a tangible representation of the company's commitment to customer satisfaction. In the context of this research, physical evidence can influence consumer satisfaction because good facilities provide confidence that the company is serious about serving. Conversely, if the work environment is poorly maintained, equipment is inadequate, or employee appearance is untidy, consumers are likely to perceive the service as less than optimal. Therefore, although physical evidence is not always the main factor, this dimension remains important as a supporter of creating consumer satisfaction.

2. Caring.

Caring means personal attention given to consumers, including a friendly attitude, good communication, and understanding of consumers' special needs. According to Parasuraman (2018), consumers will feel satisfied if they are treated not just as customers but as valued individuals. Caring makes the relationship between consumers and companies closer. By listening to needs and providing sincere service, customer satisfaction will increase. Conversely, rigid service without personal attention often creates an unfriendly impression, leading to lower satisfaction.

3. Reliability.

Reliability reflects a company's ability to consistently deliver services as promised. Parasuraman (2018) emphasizes that reliability is the core of service quality, as consumers expect services to be dependable, timely, and accurate. Service that consistently meets standards will build consumer trust and satisfaction. When consumers feel that the service provided meets their expectations, such as punctuality, accuracy of results, and minimal errors, satisfaction will increase. Conversely, inconsistent service can decrease consumer satisfaction.

4. Responsiveness.

Responsiveness is the willingness of employees to assist consumers and provide service quickly. Responsiveness emphasizes the importance of time and attitude in serving consumers. Consumers tend to feel satisfied when their requests, questions, and complaints are addressed quickly and effectively. Slow service often leads to dissatisfaction, even if the final outcome is good. This shows that consumers value a quick response as a form of care. Thus, responsiveness has a significant influence on satisfaction, as through this dimension consumers can perceive the company's attention and priorities.

5. Guaranty.

The guaranty relates to the competence, courtesy, and ability of the officers to provide a sense of security to consumers. Parasuraman (2018) explains that assurance is very important in services because consumers cannot directly assess quality before experiencing it. Therefore, trust in employee competence and company professionalism is the foundation for consumer satisfaction. When sanitation workers are able to provide service with confidence, demonstrate adequate

knowledge, and behave politely, consumers feel safer and more trusting. This condition will increase satisfaction because consumers feel served by a competent party. Conversely, the inability of cleaning staff or an unfriendly attitude can decrease trust and satisfaction.

Service quality is a work process aimed at continuously improving and maintaining quality improvements from the production process to the services provided by the company (Panjaitan and Yuliaty, 2016). Service quality can motivate customers to commit to specific products and services, which in turn improves company performance. To maintain service quality, customer satisfaction is a crucial factor in retaining customers and meeting market needs. Some research findings have found a strong relationship between service quality and customer satisfaction, such as the study conducted by Finistyawan and Bessie (2020) on the Influence of Service Quality on Customer Satisfaction of Travel Agencies in Malaka Regency (Study on Betun Mandiri Expres Travel), which showed that the service quality variable partially significantly affects customer satisfaction with BME car travel. Similarly, the study conducted by Toda (2019) on Service Quality for Inpatient BPJS Participants at Prof. W.Z. Johannes Kupang Regional General Hospital showed that overall, the service quality provided by Prof. W.Z. Johannes Regional General Hospital regarding services for BPJS users was quite good, considering the large number of patients undergoing inpatient care at Prof. W.Z. Johannes Regional General Hospital.

Service quality has a close relationship with customer satisfaction. If the service received (perceived service) meets the expected quality, then the perceived service quality is good and satisfying. If the service received exceeds customer expectations, then the perceived service quality is excellent and high. Good service quality will have a significant impact on creating customer satisfaction, which can lead to customers feeling satisfied and confident in the quality of service provided by a company. The availability of quality service provided by the company will add value for customers. Service must be provided continuously to customers because it adds value on an ongoing basis, leading to customer satisfaction through the creation of value that differentiates the company from its competitors. The dimensions and attributes of the SERVQUAL model consist of (Tjiptono and Chandra, 2016): tangible, empathy, responsiveness, reliability, and assurance.

Based on the relationship between these concepts, the hypothesis in this study is formulated as follows:

- H0: It is suspected that service quality consisting of physical evidence (X1), empathy (X2), reliability (X3), responsiveness (X4), and assurance (X5) does not affect consumer satisfaction (Y).
- H1: Physical evidence (X1) affects consumer satisfaction at the Perum Bulog NTT Regional Office (Y).
- H2: Empathy (X2) affects consumer satisfaction at the Perum Bulog NTT Regional Office (Y).
- H3: Reliability (X3) affects consumer satisfaction at the Perum Bulog NTT Regional Office (Y).
- H4: Responsiveness (X4) affects consumer satisfaction at the Perum Bulog NTT Regional Office (Y).
- H5: Assurance (X5) affects consumer satisfaction at the Perum Bulog NTT Regional Office (Y).
- H6: Service quality consisting of Physical Evidence (X1), Empathy (X2), Reliability (X3), Responsiveness (X4), and Assurance (X5) jointly affects Consumer Satisfaction (Y).

RESEARCH METHOD

This research is explanatory research using a quantitative approach. The population in this study consists of consumers who use cleaning services, specifically the 79 employees of the Perum Bulog NTT Regional Office. To determine the sample size taken from the population, the researcher used Slovin's formula with a 90% confidence level and an e-value of 10%, as follows:

$$n = \frac{N}{1 + N (e)^2}$$

Explanation:

n : The number of samples needed

N : Population Zise

e² : The desired margin of error is 10% (0.10).

$$n = \frac{79}{1 + 79(0,1)^2} \quad n = \frac{79}{1 + 79(0,01)} \quad n = \frac{79}{1 + 0,79} \quad n = \frac{79}{1,79} \quad n = 44,13$$

Thus, the sample size for this research is 44.

The data collection technique for this research used questionnaires. Data analysis in this study used a statistical analysis method, namely multiple linear regression analysis.

RESULTS AND DISCUSSIONS

RESULTS

Multiple Linear Regression Analysis

Analysis is used to determine whether physical evidence, care, reliability, responsiveness, and assurance have an influence on consumer satisfaction at Perum Bulog NTT Regional Office. The model of the relationship between satisfaction and these variables can be formulated as follows (Ghozali, 2009). The results of the multiple regression analysis can be seen in the following table:

Table 1. Multiple Linear Regression Analysis Result

Model	Coefficients ^a				
	Unstandardized Coefficients	Standardized Coefficients	Std.	t	Sig.
1 (Constant)	4.265	1.423		2.998	.005
Physical Evidence	-.013	.286	-.005	-.045	.965
Care	.245	.406	.121	.603	.550
Reliability	.712	.320	.432	2.227	.032
Responsiveness	.736	.300	.371	2.454	.019
Assurance	.036	.262	.015	.138	.891

a. Dependent Variable: Customer Satisfaction

Source: Primary Data By SPSS, 2025

From the table above, the following regression equation is obtained:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

$$Y = 4,265 - 0,013X_1 + 0,245X_2 + 0,712X_3 + 0,736X_4 + 0,036X_5 + e$$

This regression equation shows the relationship between the independent and dependent variables partially. From this equation, it can be concluded that if physical evidence, care, reliability, responsiveness, and assurance are 0, then consumer satisfaction at the Perum Bulog NTT Regional Office is 4.265.

The value of the physical evidence regression coefficient is (-0.013), meaning that if the physical evidence variable (X1) increases by 1, assuming the variables of care, reliability, responsiveness, assurance, and the constant are 0, then consumer satisfaction at the Perum Bulog NTT Regional Office decreases by 0.013. The negative regression coefficient for the physical evidence variable indicates that an increase in the physical aspects of service does not have a positive impact on consumer satisfaction; in fact, it tends to decrease satisfaction. This could be because consumers may not consider the physical aspects a top priority when evaluating cleaning services, or because the changes in physical appearance haven't met consumer expectations or comfort levels. For example, the cleaning equipment and cleaning materials used.

The value of the regression coefficient for caring is 0.245, meaning that if the caring variable (X2) increases by 1, assuming the physical evidence, reliability, responsiveness, assurance, and constant variables are 0, then consumer satisfaction at the Perum Bulog NTT Regional Office increases by 0.245. Caring has a positive influence on consumer satisfaction. This means that the higher the cleaning staff's attention to the comfort of service users, such as being friendly and caring about the surrounding conditions, the higher the level of satisfaction felt by consumers.

The value of the reliability regression coefficient is 0.712, meaning that if the reliability variable (X3) increases by 1, assuming physical evidence, empathy, responsiveness, assurance, and the constant are 0, then consumer satisfaction at the Perum Bulog NTT Regional Office increases by 0.712. Reliability demonstrates the consistency and responsibility of officers in carrying out cleaning duties on time and with results that meet expectations. The significant positive influence on this variable indicates that trust in the reliability of the officers is highly determinant of consumer perceptions of service quality.

The value of the responsiveness regression coefficient is 0.736, meaning that if the responsiveness variable (X4) increases by 1, assuming the physical evidence, care, reliability, assurance, and constant variables are 0, then consumer satisfaction at the Perum Bulog NTT Regional Office increases by 0.736. Responsiveness also has a positive impact on consumer satisfaction. Staff who respond quickly to requests, complaints, or emergencies such as spills, unpleasant odors, or suddenly dirty areas can improve the comfort and satisfaction of service users.

The value of the regression coefficient for collateral is 0.036, meaning that if the collateral variable (X5) increases by 1, assuming the physical evidence, caring, reliability, responsiveness, and constant variables are 0, then consumer satisfaction at the Perum Bulog NTT Regional Office increases by 0.036. The collateral variable has a positive but not dominant influence. This shows that consumer confidence in the professionalism and integrity of cleaning staff continues to contribute to a sense of safety when enjoying services within the Perum Bulog NTT Regional Office environment.

This finding indicates that not all dimensions of service quality have the same impact on consumer satisfaction. Physical evidence, caring, and assurance, which have been considered important, do not directly increase consumer satisfaction. Therefore, an evaluation of the approach to physical facilities, attention, and good skills is needed to better meet consumer needs. It can be concluded that in the context of cleaning services at the Perum Bulog NTT Regional Office, the functional and responsive aspects of the staff are far more determining of consumer satisfaction than the physical appearance of the work environment. Therefore, service quality improvements should focus more on strengthening competence, work consistency, and the speed of responding to needs, rather than simply rearranging physical facilities.

Results of T-Test (Partial Test)

The t-test is a test used to determine the partial influence of the independent variable on the dependent variable by comparing the calculated t-value (thitung) with the t-table value (ttabel) (Priyanto, 2011). If the significance probability is significantly less than (α) = 0.05, then H_a is accepted and H_0 is rejected. Conversely, if the probability is greater than 0.05, then H_a is rejected and H_0 is accepted. To test the significance of the influence of the service quality variable of the Cooperative's cleaning staff at the Logistics Depot on consumer satisfaction at the Perum Bulog NTT Regional Office, hypothesis testing was used partially and dominantly, which can be seen from simple linear analysis. The testing criteria used are as follows:

- If the calculated t-value is greater than the table t-value, it indicates that the factor within the service quality variable has a significant partial effect on consumer satisfaction.
- If the calculated t-value is less than the table t-value, it indicates that the factor within the service quality variable does not have a significant partial effect on consumer satisfaction.
- The t-table value is measured from the degrees of freedom (df) and the significance level, resulting in a t-table value of $(df = n-k / \alpha = 0.05/2) = (df = 44-5 / \alpha = 0.025) = (df = 39 / 0.025) = 2.023$.

Table 2. Results of T-Test (Partial Test)

Model	Coefficients ^a				
	Unstandardized Coefficients	Standardized Coefficients	Std.	t	Sig.
1 (Constant)	4.265	1.423		2.998	.005
Physical Evidence	-.013	.286	-.005	-.045	.965
Care	.245	.406	.121	.603	.550
Reliability	.712	.320	.432	2.227	.032
Responsiveness	.736	.300	.371	2.454	.019
Assurance	.036	.262	.015	.138	.891

a. Dependent Variable: Customer Satisfaction

Source: Primary Data By SPSS, 2025

Based on the table above, several things can be understood. First, the influence of the physical evidence variable on consumer satisfaction at the Perum Buleleng NTT Regional Office. Based on the calculations in table 4.15, the physical evidence variable has a t-statistic value of (-0.045) and a significance value of 0.965. Since the t-statistic value is less than the t-table value and the significance value is greater than 0.05, it can be concluded that the hypothesis (H₁) stating that physical evidence (X₁) influences consumer satisfaction at the Perum Buleleng NTT Regional Office (Y) is rejected. This means that physical evidence does not affect consumer satisfaction.

Second, the influence of the caring variable on consumer satisfaction at the Perum Buleleng NTT Regional Office. Based on the calculation results in table 4.15, the caring variable has a t-statistic value of 0.603 and a significance value of 0.550. It is known that the t-statistic value is less than the t-table value and the significance value is greater than 0.05, so it can be concluded that hypothesis (H₂), which states that caring (X₂) influences consumer satisfaction at Perum Buleleng NTT Regional Office (Y), is rejected. This means that caring does not affect consumer satisfaction.

Third, the influence of the reliability variable on consumer satisfaction at the Perum Buleleng NTT Regional Office. Based on the calculations in table 4.15, the reliability variable has a t-statistic value of 2.227 and a significance value of 0.032. It is known that the t-statistic value is > t-table and the significance value is < 0.05, so it can be concluded that hypothesis (H₃), which states that reliability (X₃) influences consumer satisfaction at Perum Buleleng NTT Regional Office (Y), is accepted. This means that reliability influences consumer satisfaction.

Fourth, the influence of the responsiveness variable on consumer satisfaction at the Perum Buleleng NTT Regional Office. Based on the calculation results in Table 4.15, the physical evidence variable has a t-statistic value of 2.454 and a significance value of 0.019. It is known that the t-statistic value is greater than the t-table value and the significance value is less than 0.05. Therefore, it can be concluded that hypothesis (H₄), which states that responsiveness (X₄) affects consumer satisfaction at the Perum Buleleng NTT Regional Office (Y), is accepted. This means that responsiveness affects customer satisfaction.

Fifth, the influence of the Guaranty variable on consumer satisfaction at the Perum Buleleng NTT Regional Office. Based on the calculation results in Table 4.15, the physical evidence variable has a t-statistic value of 0.138 and a significance value of 0.891. It is known that the t-statistic value is less than the t-table value and the significance value is greater than 0.05. Therefore, it can be concluded that hypothesis (H₅), which states that assurance (X₅) affects consumer satisfaction at the Perum Buleleng NTT Regional Office (Y), is rejected. This means that the warranty has no effect on consumer satisfaction.

F-Test (Simultaneous Test)

The F-test is used to determine the significance level of the independent variables' combined (simultaneous) influence on the dependent variable (Ghozali, 2011). It is used to test the combined influence of all independent variables on the dependent variable. The F-test analysis is performed by comparing the

calculated F value (Fhitung) with the critical F value (Ftabel). Before comparing the F values, the confidence level (K-1) and degrees of freedom (n-(k-1)) must be determined to find the critical value. The alpha value used in this study is 0.05. The F-table value is determined by the degrees of freedom in this study, which is $k-1 / n-k-1 = 5-1 / 44-5-1 = 4/38 = 2.619$. The decision-making criteria used are as follows:

- If $f\text{-calculated} > f\text{-table}$, then H_0 is rejected and H_a is accepted, meaning there is a significant influence between the service quality variable and customer satisfaction.
- If $f\text{-calculated} < f\text{-table}$, then H_0 is accepted and H_a is rejected, meaning there is no significant influence between the service quality variable and customer satisfaction.

Table 3. Results of F-Test (Simultaneous Test)

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5	72.163	27.471	<.001 ^b
	Residual	38	2.627		
	Total	43			

a. Dependent Variable: Customer Satisfaction
b. Predictors: (Constant), Assurance, Physical Evidence, Reliability, Responsiveness, Empathy

Source: Primary Data By SPSS, 2025

Based on the table above, the test results show that the calculated f-value is 27.471 with a significance level of < 0.001 , meaning the calculated f-value is greater than the f-table value and the significance level is < 0.05 . This indicates that the variables of physical evidence, empathy, reliability, responsiveness, and assurance (in this case, service quality) have a simultaneous effect on consumer satisfaction. Based on these results, the researcher concludes that H_6 , which states that service quality consisting of physical evidence (X1), empathy (X2), reliability (X3), responsiveness (X4), and assurance (X5) has a simultaneous effect on consumer satisfaction (Y), is accepted.

Coefficient of Determination (R^2)

The Coefficient of Determination (R^2) essentially measures how well the model can explain the dependent variable. A small R^2 value means the independent variables' ability to explain the dependent variable is limited. Conversely, an R^2 value close to one indicates the independent variables provide almost all the information needed by the dependent variable (Ghozali, 2011). The criteria for analyzing the coefficient of determination are: If K_d approaches zero (0), the influence of the independent variable on the dependent variable is weak. If K_d approaches one (1), the influence of the independent variable on the dependent variable is strong.

Table 4. Coefficient of Determination (R^2) Result

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.885 ^a	.783	.755	1.62076
a. Predictors: (Constant), Assurance, Physical Evidence, Reliability, Responsiveness, Empathy				
b. Dependent Variable: Customer Satisfaction				

Source: Primary Data By SPSS, 2025

Based on the table, it is known that the value of the coefficient of determination found in the adjusted R-squared value is 0.755, or 75.5%. This value indicates that the influence of physical evidence, care, reliability, responsiveness, and assurance on the consumer satisfaction variable is 75.5%. The remaining 0.245 (1 - 0.755), or 24.5%, is influenced by other variables studied in this research.

DISCUSION

The Influence of Caring on Consumer Satisfaction at the Perum Bulog NTT Regional Office

Partial care does not affect consumer satisfaction at the Perum Bulog NTT Regional Office, which is evidenced by cleaning staff giving full attention to consumers and showing patience and friendliness in serving, which does not affect consumer satisfaction at the Perum Bulog NTT Regional Office. The results of this study are in line with research conducted by Afifah et al. (2019), which states that the care variable does not have a significant effect on consumer satisfaction.

The Influence of Reliability on Consumer Satisfaction at Perum Bulog NTT Regional Office

Partial reliability significantly affects consumer satisfaction at the Perum Bulog NTT Regional Office because consumers prefer the elements within this dimension, where cleaning staff can be relied upon to handle both routine and unexpected cleaning tasks, and if there are problems, the cleaning staff can be relied upon to handle them effectively. This is in line with research conducted by Donar et al. (2019), which shows that the reliability variable partially has a significant effect on consumer satisfaction.

The Influence of Responsiveness on Consumer Satisfaction at Perum Bulog NTT Regional Office

Responsiveness partially significantly affects consumer satisfaction at the Perum Bulog NTT Regional Office, where cleaning staff provide services quickly and without delay, and cleaning staff respond promptly to requests or complaints related to cleanliness. This research finding is consistent with studies conducted by Donar et al. (2019) and Afifah et al. (2019), which found that responsiveness influences consumer satisfaction.

The Influence of Physical Evidence on Consumer Satisfaction at Perum Bulog NTT Regional Office

Based on the partial test results, the physical evidence variable did not have a significant effect on consumer satisfaction. Due to consumer satisfaction with cleaning equipment, physical evidence does not significantly impact consumer satisfaction at the Perum Bulog NTT Regional Office. This means that consumer evaluations of the physical evidence service quality at the Perum Bulog NTT Regional Office vary depending on the consumer's perception based on their individual circumstances. This research is not consistent with previous studies or the new findings of this research.

The Influence of Guaranties on Consumer Satisfaction at Perum Bulog NTT Regional Office

The guaranty variable does not significantly affect consumer satisfaction at the Perum Bulog NTT Regional Office, which is evidenced by the fact that cleaning staff have sufficient knowledge of effective cleaning procedures and techniques and possess adequate skills to perform cleaning tasks well. This research is not consistent with previous studies or the new findings of this study.

The Impact of The Service Quality of The Cleaning Staff of The Depot Logistics Employee Cooperative in The Servqual Model on Consumer Satisfaction at The East Nusa Tenggara Regional Office of Perum Bulog

Based on the results of the simultaneous test, it is proven that service quality variables in the form of physical evidence, care, reliability, responsiveness, and assurance significantly influence consumer satisfaction at the Perum Bulog NTT Regional Office. Based on the results of the research analysis regarding the influence of cleaning staff service quality on consumer satisfaction at the Perum Bulog NTT Regional Office, it was found that not all service quality dimensions significantly influence consumer satisfaction. This finding provides a new perspective because it is not entirely in line with previous studies, which generally found a positive and significant influence of each service quality dimension on consumer satisfaction.

One of the important findings in this study is that physical evidence and guarantees do not significantly affect consumer satisfaction. This differs from previous research, such as that conducted by Donar et al. (2019), Afifah et al. (2019), and Hendrik (2019), which found that physical evidence and guarantees have a strong influence on increasing consumer satisfaction. This difference in results can be attributed to several factors, including: Service Characteristics In the context of cleaning services, the physical evidence factor (such as the cleaning equipment used) is not a primary concern for consumers. Consumers place more emphasis on aspects of reliability, responsiveness, and the tangible results of the cleaning provided.

The condition of Bulog employee consumers as users of cleaning services is accustomed to a relatively stable work environment, so they do not pay much attention to the aspects of physical evidence and guarantees. They prioritize clean, fast, and consistent work results over formalities such as physical evidence and guarantees. Differences in Research Context Previous studies were generally conducted in other service sectors such as banking, hospitals, or transportation, where the dimension of assurance is indeed crucial. However, in cleaning services, this dimension may not play a dominant role.

This finding indicates novelty in the research, as it provides empirical evidence that not all dimensions of SERVQUAL are always relevant for all types of services. In the context of the cooperative's cleaning service business unit, the assurance dimension proved to be less determinant of consumer satisfaction compared to other dimensions such as physical evidence, empathy, reliability, and responsiveness. Thus, the results of this study expand understanding regarding the application of the SERVQUAL model in various service sectors. The finding that physical evidence and assurance do not have a significant impact can serve as a basis for further research to delve deeper into the relevance of service quality dimensions based on the characteristics of the services studied.

CONCLUSION

Based on research conducted at the Depot Logistik Employee Cooperative regarding the influence of service quality on consumer satisfaction at the Perum Bulog NTT Regional Office. It can be concluded that based on the results of partial testing, the service quality variables of physical evidence, empathy, and assurance do not significantly affect consumer satisfaction at the Perum Bulog NTT Regional Office, while reliability and responsiveness significantly affect consumer satisfaction at the Perum Bulog NTT Regional Office. Meanwhile, based on the results of simultaneous testing, it proves that the service quality variables of physical evidence, empathy, reliability, responsiveness, and assurance significantly affect consumer satisfaction at the Perum Bulog NTT Regional Office.

Reliability: The Depot Logistik Employee Cooperative is expected to maintain and continue to improve the quality of service in terms of reliability, with cleaning staff continuing to serve diligently, always striving to avoid errors, and handling issues effectively. Cleaning staff can be relied upon to handle both routine and unexpected tasks, ensuring that consumers remain satisfied with the attitude and response of cleaning staff toward them. **Responsiveness:** The Depot Logistik Employee Cooperative is expected to maintain and continue to improve the quality of service in terms of responsiveness, with cleaning staff providing service quickly without delay and responding promptly to requests or complaints related to cleanliness, ensuring that consumers remain satisfied with the quality of service provided by cleaning staff.

Physical Evidence: Although not significantly impactful, the physical evidence aspect remains important as a reflection of the cleaning staff's professionalism. Cooperatives need to ensure adequate cleaning equipment, neat staff appearance, and the suitability of support facilities. With improvements in this aspect, consumers will continue to feel comfortable and have a positive perception of the service provided. **Caring:** Research results show that caring does not significantly affect consumer satisfaction. However, the cooperative should still encourage cleaning staff to be friendly, caring, and communicative in performing their duties. This will build good relationships with service users, improve work comfort, and create a more harmonious environmental atmosphere. **Collateral:** The collateral aspect also proved to have no significant impact, but that doesn't mean it can be ignored. Cooperatives must continue to ensure that cleaning staff have the necessary work competencies, are polite, and can provide a sense of security to service users. Thus, although it is not currently a major factor in consumer satisfaction, the presence of a warranty can be an added value in increasing consumer trust and loyalty in the future.

References

Arikunto, S. (2010). Prosedur Penelitian. Jakarta: Rineka Cipta.

Asti Eka, Ayuningtyas Eka. (2020). Pengaruh kualitas pelayanan, kualitas produk dan harga terhadap kepuasan konsumen. EKOMABIS: Jurnal Ekonomi Manajemen Bisnis 1 (01), 1-14.

Finistyawan, Y. K. and Bessie, J. L. (2020). 'Pengaruh Kualitas Layanan Terhadap Kepuasan Pelanggan

Travel di Kabupaten Malaka (Studi Pada Travel Betun Mandiri Expres)', 12(2), pp. 149–165.

Ghozali, I. (2011). Aplikasi Analisis Multivariante dengan Program SPSS. Semarang: Badan Penerbit Universitas Diponegoro.

Ikram, A. A. B. and Nyoko, A. E. L. (2019). 'Pengaruh Kualitas Pelayanan Terhadap Kepuasan Menginap (Studi Pada Resepsionis Hotel on The Rock Kupang)', Journal of Management, 9(2), pp. 167–174.

Indrasari, Meithiana. (2019). Pemasaran Dan Kepuasan Pelanggan. Surabaya: Unitomo Press.

Irawan, H. (2004). Prinsip Kepuasan Pelanggan. Jakarta: Penerbit Elex Media Komputindo.

Kasinem, K. (2020). Pengaruh Kepercayaan Dan Kualitas Pelayanan Terhadap Kepuasan Konsumen Pada Hotel Bukit Serelo Lahat. Jurnal Media Wahana Ekonomika, 17(4), 329-339.

Kasmir. (2017). Customer Service Excellent: Teori dan Praktik. PT Raja Grafindo Persada: Jakarta.

Kotler, P. and Keller, K. L. (2015). Manajemen Pemasaran. Jakarta: Penerbit Erlangga.

Lovelock, C., Wirtz, J. and Mussry, J. (2011). Pemasaran Jasa. edisi 7. Jakarta: Penerbit Erlangga.

Malhotra, N. K. (2009). Riset Pemasaran. Jakarta: PT. Indeks.

Panjaitan, J. E. and Yuliati, A. L. (2016). 'Pengaruh Kualitas Pelayanan Terhadap Kepuasan Pelanggan Pada JNE Cabang Bandung (The Influence of Service Quality on Customer Satisfaction at JNE Branch in Bandung).', Journal of Management.

Peter, J. Paul dan Jerry C. Olson. (2018). Perilaku Konsumen dan Marketing Strategy. Jakarta: Salemba Empat.

Priyanto, D. (2011). Buku Saku Analisis Statistik Data SPSS. Yogyakarta: Mediakom.

Rahardjo, D. T., & Yulianto, A. E. (2021). Pengaruh Citra Merek, Harga dan Kualitas Pelayanan terhadap Kepuasan Pelanggan Mie Setan Di Surabaya. Jurnal Ilmu dan Riset Manajemen, 10, 1–18.

Rohaeni, Heni, and Nisa Marwa. "Kualitas pelayanan terhadap kepuasan pelanggan." Jurnal Ecodemica: Jurnal Ekonomi Manajemen dan Bisnis 2.2 (2018).

Sangadji, Etta Mamang Sopiah. (2013). Perilaku Konsumen. Yogyakarta: Andi.

Santoso, S. (2004). Mengatasi Berbagai Masalah Statistik dengan SPSS Versi 11.5. Jakarta: Elex Media Komputindo.

Sugiyono. (2012). Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta.

Tjiptono, F. (2014). Pemasaran Jasa. Yogyakarta: Penerbit C.V Andi Offset.

Tjiptono, F. and Greforius, C. (2016). Pemasaran Jasa (Prinsip, Penerapan, dan Penelitian). Yogyakarta: Penerbit C.V Andi Offset.

Toda, H. (2019). 'Kualitas Pelayanan Bagi Pasien Rawat Inap Peserta Bpjs Di Rsud. Prof W. Z.Johannes Kupang', Journal of Management, 9(2), pp. 195–214.

Umar, Husein. (2005). "Studi kelayakan bisnis." Jakarta (ID): PT. Gramedia Pustaka Utama.

Yudita, M. A., & Sugiyono, S. (2021). Pengaruh Kualitas Produk, Harga, dan Kualitas Layanan Terhadap Kepuasan Pelanggan. Jurnal Ilmu dan Riset Manajemen (JIRM), 10(10).

Yuliarmi, N. N. and Riyasa, P. (2007). 'Analisis Faktor-Faktor yang Mempengaruhi Kepuasan Pelanggan Terhadap Pelayanan PDAM Denpasar', Jurnal Buletin Studi Ekonomi, 12(1).

Yurindera, N. (2021). Pengaruh Kualitas Produk, Pelayanan Barista dan Promosi di Media Sosial Terhadap Kepuasan Konsuemen Kedai Himpunan Kopi Jakarta. Manajemen Bisnis, 24(1), 44–55.