

The antecedent effect of the service quality dimension on customer satisfaction on word of mouth (Study on Perumdam Maruang Duhung)

Mayrichael Bryanviko, Meitiana, Vivy Kristinae, Ina Karuehni

University of Palangka Raya
E-mail: brayenviko@gmail.com

ARTICLE HISTORY	ABSTRACT
<p><i>Received : February 17th, 2025</i> <i>Revised : March 2nd, 2025</i> <i>Accepted : March 15th, 2025</i></p> <p><i>Keywords :</i></p> <p><i>customer satisfaction</i> <i>service quality dimension</i> <i>word of mouth</i></p>	<p><i>This study aims to analyze how much the antecedent of the service quality dimension on customer satisfaction affects word of mouth. This research was conducted on Perumdam customers domiciled in Kuala Kurun, with a sample of 80 respondents determined through predetermined criteria. Data collection was carried out by sharing questionnaires through Google forms. This study uses the analysis of the Partial Least Squares (PLS) model to evaluate the relationship between variables. The results show that the variables of assurance, reliability, and empathy have a significant effect on customer satisfaction. Meanwhile, the variables of tangibles and responsiveness did not have a significant effect on satisfaction. For the customer satisfaction variable, it has a significant influence on word of mouth. This study highlights the important role of the service quality dimension on customer satisfaction so that it has an impact on providing positive comments.</i></p>

INTRODUCTION

Marketing is a total system of business activities designed to plan, price, produce and distribute products, services and ideas that are able to satisfy the desires of the target market in order to achieve organizational goals. According to Sunyoto (2014), marketing is an activity carried out by humans that aims to satisfy the needs and desires of customers through the process of exchange and interested parties with the company. One of them is a company in the field of drinking water management.

Water is a very important need for human survival, without water there would be no life on earth. Quality water plays an important role in human life, both in the daily life of individuals, economy, agriculture, transportation and industry, but the main use is as drinking water. Due to the importance of the need for clean water, it is natural that the clean water sector gets the main priority for handling because it concerns the lives of many people (Juliani, 2017). The importance of clean water to be maintained and its management carried out by professionals. In this case, the company related as a water resource manager is the Maruang Duhung Regional Public Drinking Water Company (PERUMDAM) located in Kuala Kurun. Perumdam as a regional company is given the responsibility to develop and manage a clean water supply system and serve all customer groups at affordable prices (Purwanti et al., 2014).

Based on the results of observations, there are problems based on the perception of the community who are customers of Perumdam Maruang Duhung. These complaints include frequent water not flowing to consumers, water clarity is not optimal, usage suddenly spikes, and pipes that often leak. The complaint occurred due to dissatisfaction in the provision of services carried out by Perumdam Maruang Duhung. The lack of optimal service provided often makes customers disappointed and switches to using well water and tends to convey negative rumors to others is also very large.

Customer satisfaction today refers to the services delivered by Perumdam Maruang Duhung in the form of convenience, speed, relationships, ability and hospitality aimed at

through attitudes and traits in providing services for customer satisfaction. According to Yuniarti & Hendriani (2016) said that customers who obtain products or services that meet or exceed expectations, tend to give a positive response to the Company. To meet the wishes of customers so that they feel satisfied, what Perumdam Maruang Duhung can do to show excellence is through improving the quality of service. According to Tjiptono dan Chandra (2011) in Kurniasari & Kusumaningtyas Sugiyanto (2020) it is stated that there are 5 (five) dimensions of service quality, namely physical evidence, responsiveness, guarantee, reliability, and empathy. These dimensions have a great influence on customer satisfaction.

This research is based on research gap research conducted by Budiarno et al., (2022) showing that service quality has a negative and insignificant effect on customer satisfaction. Aldrin Akbar (2023) research shows that physical form, responsiveness and empathy are not significant to customer satisfaction.

Although until now there has been no agreement between researchers on the importance of service quality to customer satisfaction as the results of previous researchers who found that service quality does not have a positive influence on customer satisfaction, it is necessary to further research the role of service quality in achieving customer satisfaction. Therefore, it is important for a service company to evaluate the quality of service that will encourage customer satisfaction, which in the end will cause customers to be willing to convey positive WOM about the company.

LITERATURE REVIEW

Service quality is the actions or deeds of a person or organization that aims to provide satisfaction to customers or employees. According to Situmeang et al., (2019) states that service is defined as the actions or deeds of a person or organization to provide satisfaction to customers or fellow employees. According to Ldrus (2019) service quality is the details of products or services that are planned according to what consumers want, so that consumers feel satisfied with the product or service that has been received or felt. Therefore, the quality of service is highly dependent on the ability of the service provider in a way that consistently meets consumer expectations. According to Mahira et al., (2021) there are five service quality indicators that are used to measure service quality and customer satisfaction, which is known as RATER: Responsiveness, Assurance, Tangibles, Empathy, and Reliability.

According to Zikri & Harahap, (2022) satisfaction is the result of a comparison between expectations and perceptions of performance. It is the customer's response to the service provided, where satisfaction is achieved when the customer feels that what they expect is proportional to what they receive or feel. According to Kotler et al., (2021) in Putri Maulidiah et al., (2023), customer satisfaction is a person's feeling of happiness or disappointment that arises after comparing the performance (result) of the product in mind against the expected performance. Consumer satisfaction may or may not result in a positive WOM about the service, while dissatisfied consumers have a strong tendency to tell others about their disappointment and even exaggerate their bad experiences. The results of a study by Chaparro-Peláez et al., (2015) on failed service improvements in the online sales industry, found that even though consumers complain about problems, when companies provide service improvements, they will be satisfied and still willing to deliver positive WOM.

According to Ningsih & Hurnis (2024) word of mouth can be defined as person-to-person communication between the source of the message and the recipient of the message where the recipient of the message receives a message in a non-commercial way about a product, service, or brand. Word of Mouth will be formed if consumer satisfaction is met. Customer satisfaction for the company will allow the creation of word of mouth that is profitable for the company in the long run so that more people buy and use products or services.

In the end, a positive word of mouth will be the most effective promotional tool for the company.

METHODS

In this study, the researcher uses this research design to be included in quantitative research with a descriptive research approach and associative analysis, because of the existence of variables to be examined and the purpose is to present an overview of the relationship between the variables studied. The research method used in this study is a quantitative research method with a descriptive approach. The instrument used on the likert scale has a gradation from very agree to very disagree. The population intake in this study is 80 Perumdam Maruang Duhung customers by purposive sampling, namely determining the research sample with certain considerations so that the data obtained is more representative by setting the criteria of domicile in Kurun and using Perumdam water for at least 1 year. The data analysis method used in this study is a data analysis technique that will be carried out to test this research using the Partial Least Square (PLS) method. In the PLS method, the analysis techniques used include three stages, namely outer model analysis, inner model analysis, and hypothesis testing.

Table 1. Conceptual Definition

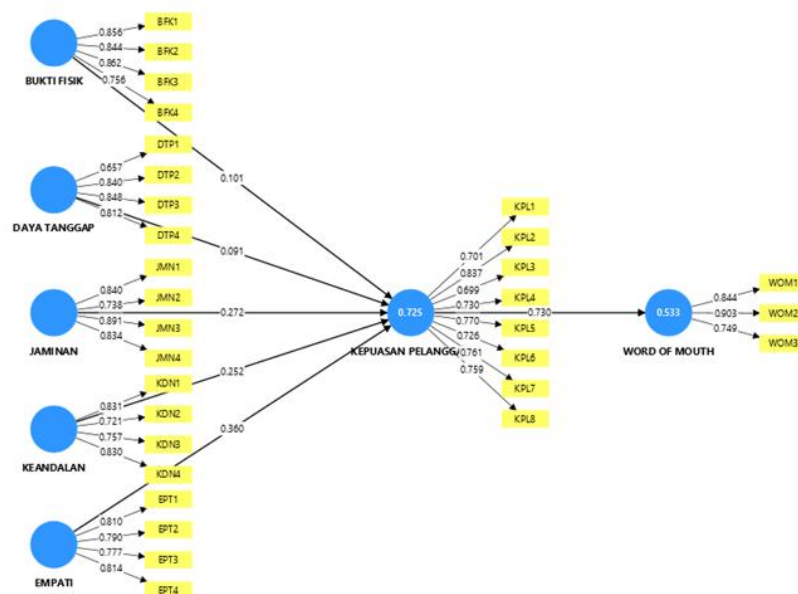
Variable	Definition	Indicators
Service Quality Dimension (X)	Service quality is the details of products or services that are planned according to what consumers want, so that consumers feel satisfied with the products or services that have been received or felt. (Dr. Salim Al Ldrus, M.M., M.Ag, 2019). Having a role as an antecedent is the factors that affect or cause customer satisfaction.	Responsiveness Assurance Tangibles Empathy Reliability
Customer Satisfaction (Y1)	Customer satisfaction is a person's feeling of happiness or disappointment that arises after comparing the performance (result) of a product in mind against the expected performance. Consumers will feel satisfied if the company's wishes have been fulfilled as expected. (According to Kotler et al., (2021) in Eka Putri Maulidiah et al, 2023)	Requirements System, Mechanism, Procedure Turnaround Time Product Specification Type of Service Implementation Competencies Implementing Behavior Handling Complaints, Suggestions, and Feedback Facilities and Infrastructure
Word of Mouth (Y2)	Word of Mouth can be defined as person-to-person communication between the source of the message and the recipient of the message where the recipient of the message receives a message in a non-commercial manner regarding a product, service, or brand. (Andria Ningsih & Delfi Hurnis, 2024).	Consumers' willingness to talk about positive things Recommend services and products 3Encouragement to friends or relations to make purchases

In this study, the analysis of the partial least squares (PLS) model was used. Several factors related to the research setting led to the decision to use partial least squares (PLS) in the investigation. First, PLS is a statistical analysis technique that is based on Structural Equation Modeling (SEM). It helps to investigate the intricate interactions between variables, especially in cases like this where mediation and moderation factors are present. PLS is particularly suitable for resource-constrained research because it can handle models with multiple latent variables and indicators while performing well with a very modest sample

count. Second, PLS is more adaptable when handling data that may not be normally distributed because it does not require normal distribution assumptions. In social and business research, where data often deviate from the normal distribution, this is especially important. The focus of this study is on the relationships between variables, which is an example of how PLS allows researchers to investigate direct effects by modeling causal relationships between variables. After that, a questionnaire with possible responses and a Likert scale is distributed. Validity test with loading factor and Average Variance Extracted (AVE) success metric > 0.5 . The effectiveness of the reliability test was measured by the composite reliability parameter > 0.6 (Ghozali, 2015). This concept was tested using the PLS SEM technique. The relationship between latent variables was tested using path coefficients, internal models, and R-Square values. Statistical bootstrap testing is the next step in the testing process. The results that answer each research question will be displayed after the data has been processed.

RESULTS

To determine the validity and reliability of the indicator, the outside model is measured first. The indication is omitted if the correlation value is less than 0.7 and the loading factor value is greater than 0.7. According to the test results, each indication is higher than 0.7. As shown in Figure 1 and Table 1, this shows that the construct has a strong convergent validity. To determine the validity and reliability of the indicator, the outside model is measured first. The indication is omitted if the correlation value is less than 0.7 and the loading factor value is greater than 0.7. According to the test results, each indication is higher than 0.7. As shown in Figure 1 and Table 2, this shows that the construct has a strong convergent validity.



Source: Processed by author

Figure 1. Factor Loading

Table 2. Variables, Indicators, Loading Factors

Variables	Indicators	Loading Factors
Tangibles	BFK1	0,856
	BFK2	0,844
	BFK3	0,862
	BFK4	0,756
Responsiveness	DTP1	0,657
	DTP2	0,840
	DTP3	0,848
	DTP4	0,812
Assurance	JMN1	0,840
	JMN2	0,738
	JMN3	0,891
	JMN4	0,834
Reliability	KDN1	0,831
	KDN2	0,721
	KDN3	0,757
	KDN4	0,830
Empathy	EPT1	0,810
	EPT2	0,790
	EPT3	0,777
	EPT4	0,814
Customer Satisfaction	KPL1	0,701
	KPL2	0,837
	KPL3	0,699
	KPL4	0,730
	KPL5	0,770
	KPL6	0,726
	KPL7	0,761
	KPL8	0,759
Word of Mouth	WOM1	0,844
	WOM2	0,903
	WOM3	0,749

Source : Processed data, 2025

The second stage is to check the reliability construct value of each variable. This dependability construct has criteria greater than 0.6. This construct is considered to have a good model construct if the calculated value of the reliability construct for each variable is more than 0.6. This is shown in Table 3.

Table 3. Reliability Construct

	Cronbach's alpha	Rho_A	Composite reliability	Average variance extracted (AVE)
Physical Evidence	0.850	0.857	0.899	0.690
Responsiveness	0.800	0.813	0.870	0.629
Empathy	0.810	0.814	0.875	0.636
Assurance	0.848	0.876	0.896	0.685
Reliability	0.794	0.808	0.866	0.619
Customer Satisfaction	0.888	0.888	0.911	0.561
Word of Mouth	0.784	0.834	0.872	0.696

Source : Processed data, 2025

Given that all constructs for each variable in table 3 above have values greater than 0.6, it can be said that the construct is good. To assess the anticipated relationship between hidden variables or structural models, the next step is to examine R-squared. The structural

model is shown in Figure 3, and the R-squared values are shown in Table 4. The R-square value of the Customer Satisfaction variable is 0.725 or 72.5% and the R-square value of the word of mouth variable is 0.533 or 53.3%. This shows that Tangibles, Responsiveness, Assurance, Reliability and Empathy all simultaneously affect Customer Satisfaction up to 72.5%, with the remaining 27.5% and also Customer Satisfaction affects Word of Mouth up to 53.3%, with the remaining 46.7% by variables not included in this model.

Tabel 4. Value R-Square

	R-square	R-square adjusted
Customer Satisfaction	0.725	0.707
Word of Mouth	0.533	0.527

Source : Processed data, 2025



Source : Processed by author

Figure 2. Structural Equation Model

Tabel 5. Hypothesis Test

Hypothesis	Relationships	Original Sample	T. Statistics	P-Value	Result
1	Tangibles -> Customer Satisfaction	0.101	1.080	0.280	Not Accepted
2	Responsiveness -> Customer Satisfaction	0.091	0.817	0.414	Not Accepted
3	Assurance -> Customer Satisfaction	0.272	3.358	0.001	Accepted
4	Reliability -> Customer Satisfaction	0.252	2.402	0.016	Accepted
5	Empathy -> Customer Satisfaction	0.360	3.617	0.000	Accepted
6	Customer Satisfaction -> Word of Mouth	0.730	12.279	0.000	Accepted

Source : Processed data, 2025

Discussion

Tangibles on Customer Satisfaction

Since the P-value of 0.280 is greater than the alpha value of 0.05, the first hypothesis (H1) that physical evidence has a positive and significant effect on customer satisfaction is not confirmed. The good or bad facilities provided by Perumdam Maruang Duhung do not have an impact on customer satisfaction or not. Similarly, the tools used are getting newer or more modern, the tools used will also not provide additional pleasure for consumers.

The findings of this study are in line with previous research by Rahayu & Ester (2023). However, this study contradicts the findings of another study by Makrifah & Trishananto (2021). The absence of the influence of physical facilities is still acceptable because for consumers, the final result is more important. Perumdam Maruang Duhung should continue to provide adequate physical facilities. However, physical facilities should not be a priority in providing satisfaction to their customers.

Responsiveness on Customer Satisfaction

Since the P value of 0.414 is greater than the alpha value of 0.05, the second hypothesis (H2) that responsiveness has a positive and significant effect on customer satisfaction is not confirmed. In this study, responsiveness could not be proven to have a significant effect on customer satisfaction, but the responsiveness provided was quite well felt. This is because customers feel that the response from employees is less responsive to customers who need help. It needs to be improved and improved to meet customer expectations. The results of this study are in line with the research of Novitawati et al., (2019) which found that responsiveness does not have a significant effect on customer satisfaction.

Assurance on Customer Satisfaction

Since the P value of 0.001 is smaller than the alpha value of 0.05, the third hypothesis (H3) that guarantees have a positive and significant effect on customer satisfaction is confirmed. Employees are always honest and dexterous in providing services and every transaction. This makes customers satisfied, so they are interested in giving a high assessment of the guarantee variables. The results of this study are in line with the research of Anggabrata & Rahanata (2015) dan Novitawati et al., (2019) which found that assurance have a significant effect on customer satisfaction.

Reliability on Customer Satisfaction

Since the P value of 0.016 is smaller than the alpha value of 0.05, the fourth hypothesis (H4) that reliability has a positive and significant effect on customer satisfaction is confirmed. This is because suitable and reliable employees make customers safe and comfortable. Perumdam Maruang Duhung should pay attention to and improve the reliability variables because they show a significant influence on customer satisfaction, especially service and security procedures such as the implementation of 3S (Smile, Greeting, and Greeting), friendliness in serving, and understanding in responding to customer complaints. The results of this study are in line with Wicaksono (2017) research which found that reliability has a positive and significant effect on customer satisfaction.

Empathy on Customer Satisfaction

Since the P value of 0.000 is smaller than the alpha value of 0.05, the fifth hypothesis (H5) that empathy has a positive and significant effect on customer satisfaction is confirmed to be true. This is because Perumdam Maruang Duhung employees serve customers in a friendly and polite manner so that customers feel appreciated and cared for. The results of the study are in line with several previous studies by Rahayu & Ester (2023) that customers believe that they will get ease of service from employees, and employees will really pay attention to consumer needs. Perumdam Maruang Duhung should be encouraged by providing a good sense of attention, the ability of employees to give sincere and personal attention to consumers. Where the employees provide ease in making relationships, good communication in the hope of knowing everything that Perumdam Maruang Duhung customers want and need.

Customer Satisfaction on Word of Mouth

Since the P value of 0.000 is smaller than the alpha value of 0.05, the sixth hypothesis (H6)

that customer satisfaction has a positive and significant effect on Word of Mouth is confirmed to be true. This shows that there is a positive impression raised by Perumdam Maruang Duhung in an effort to provide satisfaction to its customers, so that the positive impression makes customers to recommend or talk about positive things to others. The results of this study are in line with the research of Hsu (2018); Haditya Murpraptomo et al., (2019); Sanjaya & Yasa (2018).

CONCLUSION

In conclusion and the results of the study, it was obtained that the variables of assurance, reliability, and empathy had a significant effect on customer satisfaction. Meanwhile, the variables of tangibles and responsiveness did not have a significant effect on satisfaction. Of all the variables of the service quality dimension, namely tangibles, responsiveness, reliability, assurance, and empathy, the one that has the most dominant and significant influence on customer satisfaction of Perumdam Maruang Duhung is the empathy variable. For the customer satisfaction variable, it has a significant influence on word of mouth.

Some of the suggestions that can be submitted are related to the conclusion, namely that it is expected that Perumdam Maruang Duhung will maintain and improve the variables of reliability, assurance, and empathy because considering their significant influence on customer satisfaction. Then it is expected that Perumdam Maruang Duhung will improve and optimize the variables of tangibles and responsiveness by improving the form in the office and providing training to employees to be more professional in serving customers. It is hoped that Perumdam Maruang Duhung will be able to use this research as a reference material to improve and make improvements, especially those related to tangibles and responsiveness variables to increase customer satisfaction which will later create positive comments.

Future research should address these limitations by including more diverse demographic groups and using longitudinal study designs to capture changes over time. Further studies should explore external factors, such as customer loyalty, to evaluate their impact on the relationships examined in this study. This effort can strengthen the theoretical and practical basis of the findings.

REFERENCE

- Aldrin Akbar. (2023). The impact of service quality dimensions on customer satisfaction in public utilities. *Journal of Business and Management*, 15(2), 45–60.
- Anggabrata, B., & Rahanata, G. (2015). Service quality and customer satisfaction in public sector enterprises. *Journal of Public Service Management*, 8(3), 112–125.
- Budiarno, S., Wijaya, T., & Santoso, R. (2022). Negative effects of service quality on customer satisfaction: A case study of water utilities. *International Journal of Service Management*, 10(1), 78–92.
- Chaparro-Peláez, J., Acquila-Natale, E., & Hernández-García, Á. (2015). Service recovery and word of mouth in online sales. *Journal of Consumer Behavior*, 14(4), 200–215.
- Dewi, R. (2023). The role of service quality in customer satisfaction: A case study of water utilities. *JEMBA: Journal of Economics, Management, Business, and Accounting*, 5(1), 12–25.
- Fadli, M. F., & Giovanni, J. (2021). Pengaruh Kualitas Layanan, Nilai Pelanggan, Customer Relationship Management (CRM) Terhadap Kepuasan Pelanggan Dan Loyalitas Pelanggan (Studi Pada PT. BPR Prima Multi Makmur). *Jurnal Ekonomi Integra*, 11(2), 152-163.
- Ghozali, I. (2015). *Partial least squares: Concepts, techniques, and applications*. Diponegoro University Press.

- Giovanni, J., Subianto, P., & Pungan, Y. (2024). Review of financials, sales, and marketing strategy for micro, small, and medium enterprises in Palangka Raya City. *Journal Magister Ilmu Ekonomi Universtas Palangka Raya: GROWTH*, 10(2), 78-88.
- Haditya Murprapto, Suryanto, T., & Kusuma, H. (2019). Customer satisfaction and word of mouth in public services. *Journal of Marketing Research*, 22(3), 155–170.
- Hsu, C. (2018). The role of empathy in customer satisfaction and loyalty. *Journal of Service Science*, 11(2), 89–104.
- Juliani, R. (2017). Clean water management and its impact on community welfare. *Environmental Management Journal*, 5(1), 34–48.
- Kotler, P., Keller, K. L., & Chernev, A. (2021). *Marketing management* (16th ed.). Pearson Education.
- Kurniasari, D., & Kusumaningtyas Sugiyanto, R. (2020). Service quality dimensions and customer satisfaction in public utilities. *Journal of Business and Economics*, 12(4), 67–82.
- Ldrus, S. (2019). Service quality and consumer expectations. *Journal of Consumer Studies*, 7(2), 55–70.
- Mahira, R., Fitriani, A., & Nugroho, B. (2021). Measuring service quality using RATER indicators. *Journal of Service Excellence*, 9(1), 23–38.
- Makrifah, S., & Trishananto, M. (2021). The influence of tangibles on customer satisfaction in public services. *Journal of Public Sector Management*, 14(2), 90–105.
- Novitawati, N., Sari, M., & Putra, D. (2019). Responsiveness and its impact on customer satisfaction. *Journal of Service Quality*, 8(3), 112–128.
- Ningsih, A., & Hurnis, D. (2024). Word of mouth communication in service industries. *Journal of Communication Studies*, 16(1), 45–60.
- Prasetyo, A. (2022). Analyzing the impact of empathy on customer satisfaction in public services. *JEMBA: Journal of Economics, Management, Business, and Accounting*, 4(2), 30–45.
- Purwanti, S., Handayani, R., & Wijayanti, T. (2014). Clean water supply and affordability in rural areas. *Journal of Environmental Economics*, 6(2), 78–92.
- Putri Maulidiah, E., Rahmawati, D., & Setiawan, A. (2023). Customer satisfaction and its determinants in public utilities. *Journal of Consumer Satisfaction*, 10(1), 34–49.
- Rahayu, S., & Ester, L. (2023). Empathy and customer satisfaction in service delivery. *Journal of Service Psychology*, 11(2), 67–82.
- Sanjaya, I., & Yasa, N. (2018). Customer satisfaction and word of mouth in public utilities. *Journal of Business Communication*, 15(3), 100–115.
- Sari, M. (2021). Word of mouth as a result of customer satisfaction in service industries. *JEMBA: Journal of Economics, Management, Business, and Accounting*, 3(3), 50–65.
- Situmeang, F., Hartono, B., & Pratiwi, R. (2019). Service actions and customer satisfaction. *Journal of Service Management*, 7(4), 56–71.
- Sunyoto, D. (2014). Marketing and customer needs fulfillment. *Journal of Marketing Science*, 12(1), 23–38.
- Tjiptono, F., & Chandra, G. (2011). *Service, quality, and satisfaction*. Andi Offset.
- Wicaksono, A. (2017). Reliability and its impact on customer satisfaction. *Journal of Service Reliability*, 9(2), 45–60.
- Yuniarti, S., & Hendriani, S. (2016). Customer responses to service quality. *Journal of Consumer Psychology*, 14(3), 78–92.
- Zikri, A., & Harahap, D. (2022). Customer satisfaction and service performance. *Journal of Business Performance*, 10(4), 112–128.