

The Influence of Product Quality and Service Quality on Customer Loyalty of Drinking Water Refill Depot in Bandung City

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Abstract

Along with changes in the behavior of Indonesian people in consuming drinking water, refill drinking water depots (DAMIU) have sprung up like mushrooms in the rainy season. In the midst of quite fierce competition between business actors, Drinking water refill depot (DAMIU). The Corona 19 pandemic has hit Indonesia, this condition has an impact on Refill Depot (DAMIU) business actors. Where consumers are now more careful in buying and consuming products. This is because consumers are afraid of contracting Covid 19 through the products they use/consume. Research is done with the aim to determine the effect of Product Quality and Service Quality on Customer Loyalty on Depot Water Refill in the city of Bandung. The method in this research is the descriptive-verification method. P Collecting data is done by distributing questionnaires to 100 customers Depot Air recharging. The data obtained were processed using SPSS 25.0. The results of this research show that partially variable product quality is more influential to Customer Loyalty, rather than variable Service Quality and Price. While the simultaneous results of product quality, service quality, and price together have more influence on customer loyalty compared to partial results. This states that while maintaining product quality and continuing to improve service quality and setting competitive prices, where prices are set according to product quality and service quality provided, it will result in customer loyalty for Drinking water refill depotdepot...

Keywords

Refill Water Depot, Product Quality, Service Quality, and Customer Loyalty

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Background

In a modern era with high technology that requires a shorter time and various reasons for health factors, the activity of boiling water and then consuming it has been abandoned by some people, especially modern society. Although the Regional Drinking Water Company (PDAM) provides water for the community in each region, the increasing need for drinking water sometimes cannot be met by well water sources or water that has been treated by PDAM. The fast-paced lifestyle and the increasing demand for drinking water in urban areas, so that customers are looking for new, more practical alternatives in meeting their drinking water needs.

Industrialization in the supply of drinking water is growing to be able to meet the water needs of the community. In addition, it is also supported by the presence of several mountain water sources in several areas. Bottled drinking water (AMDK) is another alternative as a source of drinking water, but bottled drinking water is only consumed by people with middle and upper economic levels due to the relatively expensive price. This makes water an expensive economic object so that people look for other ways to obtain water that is suitable for consumption, namely drinking water from refill drinking water depots at a cheaper price (Dewanti & Retnowati, 2020).

Refill drinking water depot (DAMIU) is an industrial business that processes raw water into drinking water and sells it directly to customers. This type of drinking water can be obtained from depots at a lower price than branded bottled drinking water products. Therefore, many people turn to this service. This is what causes refill drinking water depots to appear (Maulid, Ningsih, & Septiana, 2021).

On the one hand, the presence of DAMIU supports efforts to create a healthy society because it expands the reach of clean water consumption.

Household percentage by main water source used for drinking (2020)

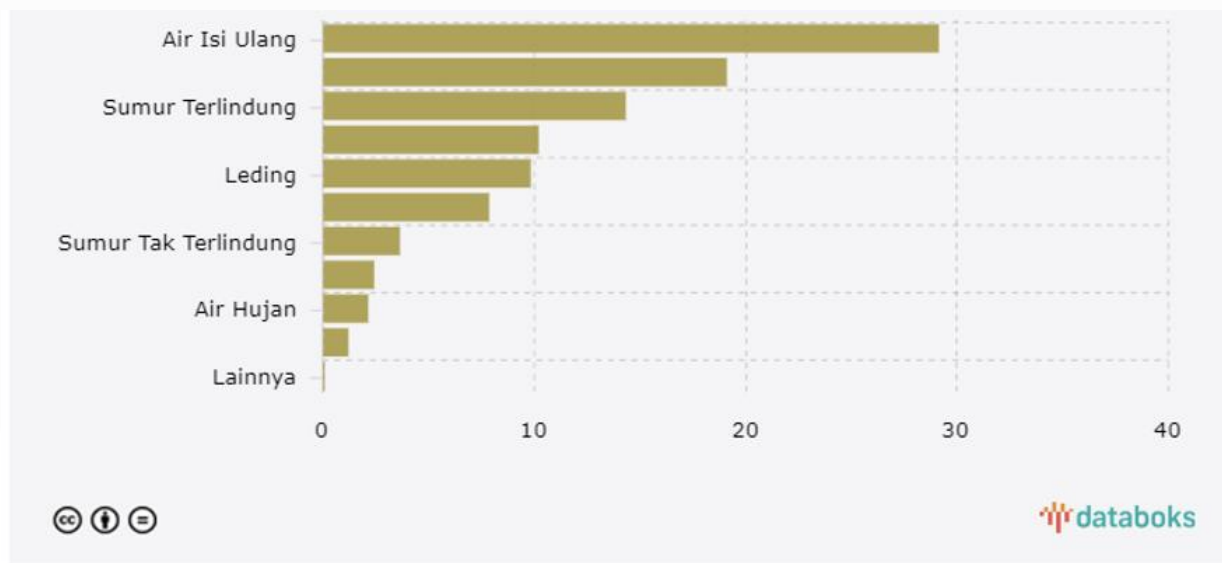


Figure 1. Presentation of Main Water Sources Used for Drinking

But on the other hand, DAMIU becomes prone to problems when dealing with business interests. Especially if the competition between refill drinking water depots is quite tight. In addition, the Covid-19 pandemic has greatly impacted the decline in the purchasing power of consumers, both individuals, and offices. The most felt impact was the level of consumer purchasing power, both individuals and offices, especially offices which experienced a significant decline with the condition of some employees working from home. As a result, the level of water consumption in

offices has decreased.

The Bandung City Government through the Bandung City Health Office continues to collect data on the business actors of refill drinking water depots. According to the Bandung City Health Office (Dinkes), there are around 600 depots recorded. Of the 600 drinking water entrepreneurs, only a few have monitored their quality.

Of the 300 business actors who have been fostered, only 30 percent have routinely checked their processed water. checking routinely needed to maintain the quality of water used for hygiene can be contaminated by the environment. Especially when the Covid 19 pandemic is still not subsiding.

The results of research by [Syafarudin \(2021\)](#) stated that product quality affects customer satisfaction and customer loyalty, and customer satisfaction affects customer loyalty. Likewise, research results [Afnani et al, 2018](#), stating that product quality ber an influence on customer satisfaction.[Dora, Nugraha, Adyfia, Dahlan, and Manasye \(2021\)](#), Product quality influences purchasing decisions.[Tansuhaj, Randall, and McCullough \(1988\)](#), one of the main factors that must be considered by the company is product quality.[Wulansari and Kurniawati \(2021\)](#) states that product quality is very important to be maintained so that an industry does not lose consumers, and the company's reputation is well maintained.

At this time the attention to consumer loyalty is getting bigger. This is so that the business that is run can still exist. Therefore, entrepreneurs are required not only to be able to provide quality products and services. . In addition to product and service quality, but the price is also one of the measuring tools in determining consumer loyalty. therefore, whether or not the quality of products and services depends on k Capacity of service providers in meeting customer expectations consistently and in accordance with the price paid by consumers. This study investigates the quality of products and services, as well as the price of Depot Refill already, which can make customers remain loyal.

Formulation of the problem.

The formulation of the problem for this research is as follows:

1. How is the influence of product quality on customer loyalty at ddrinking water refill depotdepot in Bandung City?
2. How is the effect of service quality on customer loyalty at the Refill Water Depot in Bandung?
3. How does the effect of service quality on customer loyalty at the Refill Water Depot in Bandung?
4. How is the effect of product quality, service quality, and price on customer loyalty at drinking water refill depotdepot in the city of Bandung?

Literature review

Product Quality.

Product quality is the overall combination of product and service characteristics from aspects of marketing, engineering, manufacturing, and maintenance in accordance with consumer expectations for these products and services ([Boateng, Yang, & Li, 2021](#); [Ivanna, Manullang, & Hadiningrum, 2021](#)).

According to [Kotler and Keller \(2011\)](#) quality is the totality of features and characteristics of a product or service that is capable of satisfying consumer needs.

[Dora et al. \(2021\)](#) stated that product quality is a product that is safe for consumption/use by consumers.

Service Quality

Quality of service is the result of customer assessment on how far the difference between expectations and reality perceived from a service that they receive from the service provider (the company), whether the assessment is partially or wholly. (Rajković, Đurić, Zarić, & Glaben, 2021). Ivanna et al. (2021) "service quality is the level of excellence (excellence) that is expected and control over these advantages to meet customer desires". Service quality is how far the difference between reality and customer expectations for the subscriptions they receive or obtain (Van Heerde, Moorman, Moreau, & Palmatier, 2021). From the above understanding, according to the researcher, the notion of service quality is an assessment given by consumers after using/receiving the product or service provided.

The indicators used to measure service quality according to Ivanna et al. (2021) consist of "responsiveness, assurance, and certainty (assurance), physical evidence (tangible), attention (empathy), reliability (reliability)".

Price

According to Bartels (1944) "Price is the amount of money exchanged for a product or service". Meanwhile, according to Damayanti, Khamidi, and Karwanto (2021), price is the value of an item that can be expressed in money. Price is the amount of rupiah that can be paid by the market (Wulandari, Finthariasari, & Yulinda, 2021). From the above understanding according to the researcher, the price is the nominal that must be paid by consumers to be able to use the product or service. According to Pattnaik and Pattnaik (2020), there are four indicators that characterize prices, namely: price affordability, price suitability with product quality, price competitiveness, price suitability with benefits.

Customer loyalty

Ivanna et al. (2021) "said that customer loyalty is a customer's commitment to a brand, store, or supplier, based on a very positive attitude and is reflected in consistent repeat purchases". Furthermore, Pasuraman quoted by Exchange defines "customer loyalty in the context of service marketing as a response that is closely related to a pledge or promise by upholding the commitment that underlies the continuity of the relationship, and is usually reflected in continuous purchases from service providers who on the basis of dedication and pragmatic constraints". Customer loyalty is a deeply held commitment to repurchase or repurchase a preferred product or service in the future despite situational influences and marketing efforts having the potential to cause behavioral switching (Kotler & Keller, 2011).

From some of the definitions above, according to researchers, loyalty is a consumer's decision to continue to buy and use products or services that are suitable and liked even though there are other promotional efforts that can result in switching. The indicators used to measure customer loyalty, among others: make repeat purchases regularly, buying between product lines and services, refer to others, and show loyal / immunity against the pull of its competitors (Syafarudin, 2021).

Framework and Hypotheses of this research.

The following is the framework and hypotheses for this research.

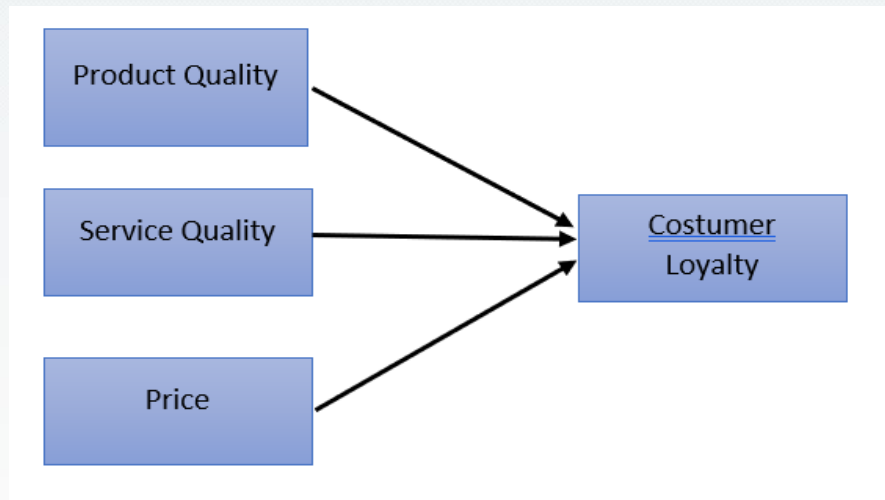


Figure 1. Research Framework

Research Hypothesis

1. Quality of product effect on customer loyalty Drinking water refill depotin Bandung.
2. Quality of service impact on customer loyalty Drinking water refill depotin Bandung.
3. Price has an effect on customer loyalty at Drinking water refill depotdepot in Bandung.
4. Quality Products, Service Quality, and price to customer loyalty Drinking water refill depotin Bandung.

Research methods.

The type of research used in this study is causal descriptive quantitative because data collection, data interpretation, and conclusion drawing from this research are in the form of numbers along with explanations and descriptions of these numbers with research procedures that produce descriptive data in the form of written or spoken words from people and observed behavior.

The population of this research is the consumers who buy water at the Refill Water Depot in Bandung City. The number of samples in this study was 100 people. Data was collected by distributing questionnaires to the research sample. The results of the data collected will be analyzed using SPSS 25.0

Results and Discussion.

Research Results

Validity and Reliability Test.

The results of the Validity and Reliability Test for this study stated that all the data that the researchers got were valid and reliable because the $r\text{-count} > r\text{-table}$ with a significance level below 0.05 and a Cronbach alpha value more than 0.700.

Multiple Regression Analysis

Table 1. Summary of Results of Multiple Linear Regression Analysis Effect Products Quality, Service Quality Towards Customer Loyalty

Independent variable	Regression coefficient (b)	t _{Sig}	Decision on hypothesis
Product quality (X ₁)	0.633	0.001	Be accepted
Service Quality (X ₂)	0.561	0.000	Be accepted
Price (X ₃)	0.484	0.000	Be accepted
Constant (a)	= 2,579 (Sign= 0.343)		
R	= 0.859		
R Square (R ²)	= 0.737		
SEE	= 0.715		

Based on the results of testing the regression model, the regression model which states the effect of Satisfaction on Customer Loyalty can be stated as follows:

$$Y = 0.631X_1 + 0.462X_2 + 0.534X_3$$

It can be explained that The regression coefficient (b) beta(X₁) is 0.633, which is positive, meaning that the better the product quality variable, the higher the Customer Loyalty. The regression coefficient (b) beta (X₂) Service Quality is 0.561, marked positive, which means that the better the level of service quality provided, the higher the customer loyalty. The regression coefficient (b) beta(X₃) Price is 0.484, which is positive, meaning that the better the price variable, the higher the customer loyalty.

Coefficient of Determination Test (R Square)

Table 2. Test Results for the Coefficient of Determination Test (R Square)
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,869 ^a	,748	,717	,5599

Predictors: (Constant), Price, Service Quality, Product Quality

The results of the study found that the relationship between product quality, service quality, and price with customer loyalty at Surya supermarket is strong with an adjusted R square value of (r = 0.717).

Partial Test With t-Test**Table 3. Results of Hypothesis Testing for Partial Tests with t-test Coefficients ^a**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,689	1,179		2,216	,034
1 product Quality	,633	,133	,642	5,452	,001
Quality Service	,558	,126	,561	4,929	,000
Price	,539	,119	,486	4,543	,000

a. Dependent Variable: Customer Loyalty

Based on the test results using the t value at the level of = 0.05, it was found that the calculated t value for the product quality variable (X 1) was 5.452 with a significance level of 0.001 (t sig = 0.001) smaller than the value of = 0.05. Thus, the product quality variable (X 1) has a significant effect on Customer Loyalty at Drinking water refill depotdepot (Y). For the price variable (X 2) of 4.929 with a significance level of 0.000 (t sig = 0.000), it is smaller than the value of = 0.05. Thus, the price variable (X 2) significantly affects the Customer Loyalty on Air Depot Refill (Y). Price variable (X 3) is 4,543 with a significance level of 0.000 (t sig = 0.000) which is smaller than the value of = 0.05.

Thus, the price variable (X 3) has a significant effect on customer loyalty at drinking water refill depotdepot (Y). Based on the analysis above, it is found that customer loyalty as measured by the variables of product quality, price and satisfaction has a significant effect on customer loyalty at drinking water refill depotdepot, so the null hypothesis (Ho) is rejected and Ha is accepted.

Simultaneous Test With F-Test (Anova b)**Table 4. Results of Hypothesis Testing for Simultaneous Tests with F-Test ANOVA ^a**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	32,675	3	10,592	34,768	,000 ^b
1 Residual	11,426	36	,315		
Total	44,101	39			

a. Dependent Variable: Customer Loyalty

b. Predictors: (Constant), Price, Service Quality, Product Quality

Simultaneous significance test (F statistic test) resulted in a calculated F value of 34,768. with a value of sig 0 < 0.05, the regression model can be used to predict Loyalty to Refill Water Depot

Discussion

1. The Influence of Product Quality, Service Quality and Price on Customer Loyalty

Data processing together shows product quality, service quality, and price if implemented properly will greatly affect customer loyalty on Water Depot Refill. The results of this study are expected to provide input to Refill Water Depot entrepreneurs, because there has been no research that has examined the variables mentioned above together.

2. Effect of Product Quality, Service Quality, and Price on Customer Loyalty

Partial data processing shows that product quality has a greater effect than service quality and price. The results of this study are the same as the results of research conducted by [Dora et al. \(2021\)](#) and [Firth \(2021\)](#); [\(Pattnaik & Pattnaik, 2020\)](#) and Haryoko, 2020 and Firmansyah, 2020.

Conclusion

From the discussion of the results of the research data, it is found that, the results of the partial hypothesis test state that the quality of production has more influence on consumer loyalty for drinking water refill depot, followed by service quality and price. This means that consumers of Refill Water Depot pay more attention to product quality than service quality and price. This condition is due to the Covid 19 pandemic which has not subsided where consumers are more concerned with health. Meanwhile, the results of the simultaneous hypothesis test show that together Product Quality, Service Quality and Price have more influence on Customer Loyalty than the partial results. This explains that good product quality coupled with excellent service quality and competitive prices will result in consumer loyalty at Drinking water refill depot. Therefore, Refill Water Depot must maintain the quality of its products, and continue to improve the quality of service to its consumers while maintaining competitive prices in accordance with the quality of products and the quality of services provided.

Reference

- Bartels, R. D. (1944). Marketing principles. *Journal of marketing*, 9(2), 151-157. doi:<https://doi.org/10.1177%2F002224294400900211>
- Boateng, I. D., Yang, X.-M., & Li, Y.-Y. (2021). Optimization of infrared-drying parameters for Ginkgo biloba L. seed and evaluation of product quality and bioactivity. *Industrial Crops and Products*, 160, 113108. doi:<https://doi.org/10.1016/j.indcrop.2020.113108>
- Damayanti, S. P., Khamidi, A., & Karwanto, K. (2021). Private Junior High School Marketing Management to Face the New Students Admission (PPDB) Policies of State Junior High School in Surabaya. *International Journal for Educational and Vocational Studies*, 3(1), 64-70. doi:<https://doi.org/10.29103/ijevs.v3i1.3389>
- Dewanti, L., & Retnowati, W. (2020). Comparison Between Station Management and Water Source on the Quality of Refill Drinking Water in Surabaya. *Health Notions*, 4(10), 338-341. doi:<https://doi.org/10.33846/hn41005>
- Dora, Y. M., Nugraha, I. S., Adytia, K. S., Dahlan, A. Z., & Manasye, F. (2021). The Effect of Product Quality, Service Quality, Trust in Product Decision Making Process at Yomart Sarimannah. *Psychology and Education Journal*, 58(3), 414-421. doi:<https://doi.org/10.17762/pae.v58i3.2741>
- Exchange, E. R. shows that the equilibrium real exchange rate in Mauritius has indeed been affected by the terms of trade, as well as by other fundamental determinants, such as the current account, output, the interest rate, and the fiscal balance. Furthermore, the study reveals. doi:<https://doi.org/10.5089/9781451827835.002>
- Firth, J. (2021). Boosting learning by changing the order and timing of classroom tasks: implications for professional practice. *Journal of Education for Teaching*, 47(1), 32-46. doi:<https://doi.org/10.1080/02607476.2020.1829965>
- Ivanna, J., Manullang, M. M. P., & Hadiningrum, S. (2021). Village Governance in Realizing Excellent Service in Jumantuang Village, Siempat Nempu District, Dairi Regency. *Mediterranean Journal of Social Sciences*, 12(2), 15-15. doi:<https://doi.org/10.36941/mjss-2021-0008>
- Kotler, P., & Keller, K. L. (2011). A Framework for Marketing Management. Retrieved from <https://www.scholars.northwestern.edu/en/publications/a-framework-for-marketing-management>

- Maulid, M., Ningsih, Y. W., & Septiana, A. R. (2021). Supervision of the Quality of Refilled Drinking Water by the Health Office in Wolo District, Kolaka Regency. *Jurnal Office*, 7(1), 71-78. doi:<https://doi.org/10.26858/jo.v7i1.21100>
- Pattnaik, S., & Pattnaik, S. (2020). Exploring employee performance dimensionality in Indian public sector units. *International Journal of Productivity and Performance Management*, 657-674. doi:<https://doi.org/10.1108/IJPPM-08-2019-0374>
- Rajković, B., Đurić, I., Zarić, V., & Glauben, T. (2021). Gaining trust in the digital age: The potential of social media for increasing the competitiveness of small and medium enterprises. *Sustainability*, 13(4), 1884. doi:<https://doi.org/10.3390/su13041884>
- Syafarudin, A. (2021). The Effect of Product Quality on Customer Satisfaction Implications on Customer Loyalty in the Era Covid-19. *Ilomata International Journal of Tax and Accounting*, 2(1), 71-83. doi:<https://doi.org/10.52728/ijtc.v2i1.204>
- Tansuhaj, P., Randall, D., & McCullough, J. (1988). A services marketing management model: integrating internal and external marketing functions. *Journal of Services Marketing*, 31-38. doi:<https://doi.org/10.1108/eb024714>
- Van Heerde, H. J., Moorman, C., Moreau, C. P., & Palmatier, R. W. (2021). Reality check: Infusing ecological value into academic marketing research (pp. 1-13): SAGE Publications Sage CA: Los Angeles, CA.
- Wulandari, K., Finthariasari, M., & Yulinda, A. T. (2021). Impact Of Service Marketing On Student Decisions. *JBMP (Jurnal Bisnis, Manajemen dan Perbankan)*, 7(2), 48-68. doi:<https://doi.org/10.21070/jbmp.v7i2.1521>
- Wulansari, D., & Kurniawati, Y. (2021). The Effect of Working From Home Policy, Implementation of Kanban, and Online Meeting on Employee Performance At Pt. Xyz. *IJEED International Journal Of Entrepreneurship And Business Development* eISSN 2597-4785 pISSN 2597-4750, 4(4), 516-531. doi:<https://doi.org/10.29138/ijeed.v4i4.1421>