

EXPLORING THE DYNAMICS OF CUSTOMER LOYALTY: A CASE STUDY ON THE GREEN RAPID TEST BRAND INVESTIGATING THE ROLES OF SERVICE QUALITY, PRODUCT QUALITY, AND PROMOTION WITH CUSTOMER SATISFACTION AS AN INTERVENING VARIABLE

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ABSTRACT

This study aims to evaluate the impact of service quality, product quality, and promotion on customer loyalty, with customer satisfaction as a mediator, on consumers of green brand rapid test products in 10 hospitals in Bekasi City. Involving 74 respondents, this study uses a quantitative approach and associative strategy, with data collected through purpose sampling techniques and analyzed using the SmartPLS 3.0 application. The results showed that service quality and product quality had no significant effect on customer satisfaction, while promotion had a significant positive impact. Although promotion positively affects customer loyalty, service quality and product quality have no significant impact on customer loyalty. Furthermore, customer satisfaction does not significantly mediate the relationship between these factors and customer loyalty. These findings provide important insights for companies in developing more effective marketing strategies to increase customer loyalty for green brand rapid test products.

***Keywords :** Service Quality; Product Quality; Promotion; Customer Satisfaction; Customer Loyalty*

INTRODUCTION

In maintaining the quality of its services, PT Ardevon, among others, provides after-sales services that allow service users to communicate effectively so as to create solutions for all interested parties. PT Ardevon also provides a thorough understanding to all human resources about the importance of health for a person. Health-related mastery is provided, especially starting from selective product selection, stock availability, concern for the quality and cleanliness of medical devices, and information-oriented marketing.

Product quality is something that needs the main attention of the company or manufacturer. (Zacharias, 2022). Given that product quality is related to customer satisfaction issues. Where customer satisfaction is one of the objectives of marketing activities carried out by producers. Product quality is also important for customer satisfaction and loyalty (Taufik et al., 2022). So, product quality is anything that can be offered to the market to get attention, buy, use, or consume that can satisfy wants or needs.

PT Ardevon uses Green branded products in developing its services in the health sector. Green itself is a product of several foreign companies that have a very good reputation and long experience in the field of research and production of medical devices, especially for health laboratory diagnostic needs.

Consumer loyalty needs a promotion in order to attract consumers to buy products (Fitria Hermiati et al., 2022). Promotion is one of the marketing variables used by consumers as a reference in choosing the desired goods or services. The relationship between promotion and customer satisfaction is to introduce and communicate the benefits of a product or service and invite consumers to use the products offered.

Customer satisfaction is as follows "the extent to which the perceived performance of the product or service meets the expectations of the buyer". If the product performance is lower than the customer's expectations, the customer is not satisfied, if the product performance matches or exceeds customer expectations, the customer is satisfied (Naini et al., 2022).

In carrying out business activities or businesses in the field of pharmaceutical and medical device distribution, there must be a challenge. One of them is how the company gets as many customers as possible and these customers have loyalty to the company (Cai et al., 2022). Customer loyalty is a major factor expected by every company in maintaining business continuity.

Consumers who are loyal to a brand are those who always make repeated purchases of the same brand on an ongoing basis (Aulia & Briliiana, 2017).

The determinants of product purchasing decisions include analysts who work in hospital health laboratories, laboratory leaders / coordinators, pharmaceutical warehouse leaders / coordinators, leaders / coordinators of hospital finance departments, and leaders / coordinators of hospital medical support equipment purchasing departments. So that on the basis of the background that has been described previously, the researcher wants to conduct research on the effect of service quality, product quality, promotion on customer loyalty with customer satisfaction as an intervening variable. For customers of green brand rapid test products in the Bekasi City area.

The main objective is to explore the extent of the direct influence of service quality, product quality, and promotion on customer satisfaction related to Green Ardevon brand rapid test products. In addition, to understand the direct impact of these factors on customer loyalty. An equally important aspect is the exploration of the indirect effects of service quality, product quality, and promotion on customer loyalty, with customer satisfaction acting as an intervening variable. This exploration aims to provide an in-depth understanding of the interaction dynamics between service quality, product quality, promotion, customer satisfaction, and customer loyalty in Green Ardevon rapid test products.

RESEARCH METHOD

Sample and Procedure

Not all populations are considered capable of representing populations. This study uses a non-probability sampling technique with purposive sampling techniques, namely using criteria that have been selected by researchers based on the use of Green Ardevon brand rapid test in hospitals in Bekasi city, West Java. The research instrument uses questionnaires in the form of statements that are disseminated directly.

The dataset comprised 74 valid responses from hospital visitors, who constituted the target population. A questionnaire served as the research instrument, distributed directly to these visitors during the study period. Carried out across 10 hospitals in Bekasi City, all registered as customers of the Green Ardevon brand rapid test product, the data collection process involved several methodical steps. Initially, it entailed identifying the population and sample, with the 10 hospitals constituting the primary population and the 74 respondents forming the sample. Subsequently, primary and secondary data were collected through questionnaires and various sources such as journals, books, websites, and records from hospitals and PT Ardevon. Operational variables, including independent variables like service and product quality, promotion, mediated by customer satisfaction, and the dependent variable, customer loyalty, were delineated. The variable measurement scale ranged from 1 to 4. Path analysis, utilizing the Partial Least Square (PLS) program, was employed to test research hypotheses. Finally, statistical analysis using Smart PLS 3.0 focused on outer model analysis for instrument validity and reliability, and inner model analysis for testing relationships between latent variables.

Research Design

In the development of the PLS SEM model is the search or development of models that have strong theoretical justifications. The research design in this study uses analytical tools used in analyzing SEM modeling and hypothesis testing using Partial Least Square (PLS) with SmartPLS software version 3.0, which is the initial form of the research model used in this study.

Evaluation of Measurement Model (Outer Model)

Results of PLS external models: data analysis model outside models with SmartPls 3.0. The following is a description of the results of the outer model analysis of the outer model analysis based on convergent validity, discriminant validity, composite reliability and collinearity value. Convergent Validity, is one of the criteria in analytical testing using SmartPLS. Convergent validity at the indicator level is called indicator reliability indicator or loading for initial

examination of the matrix a loading factor of approximately 0.3 for a minimal level and for a loading factor of about 0.4 is considered better, and for a larger loading factor of 0.5 is generally considered significant. This study used a loading factor of 0.5.

Discriminating Validity, at this stage it is useful to find out whether the construct has adequate discrimination power. The assessment is submitted in two ways, namely looking at two ways, namely looking at cross loading and Fornell-Lacker criteria. The cross-loading value of the indicator variable against the latent variable must be greater than the other latent variable. Composite Reliability, is a stage used to test the reliability of indicators of a variable. An indicator can qualify as reliable if it has a composite value of composite reliability > 0.6. Reliability tests with the composite reliability method can also be strengthened using Cronbach's Alpha value. A variable must have a value of Cronbach's Alpha > 0.7, and can be said to be reliable. Collinearity, aims to determine whether there is a correlation between independent variables. To analyze the level of collinearity by evaluating the tolerance value, indications

RESULT AND DISCUSSION

Characteristics of Respondents:

a. By Type of Field of Work

Table 1 Types of Fields of Work

Types of Fields of Works	Number of Respondents	Percentage
Health Laboratory Analyst	34	46%
Health Laboratory Coordinator	10	14%
Pharmaceutical Warehouse Coordinator	10	14%
Medical Support Coordinator at the hospital	10	14%
Financial Coordinator at the hospital	10	14%
Total	74	100%

b. Based on Length of Work

Table 2 Long time working in the field

Length of Work	Number of Respondents (People)	Percentage
≤ 1 Year	3	4%
1-5 Years	36	49%
≥ 5 Years	35	47%
Total	74	100%

From the data above, it can be seen that the sample number of 74 respondents. Where the respondents are included in dalf product customers who are in the population of 10 hospitals permanent customers of Ardevon products in the Bekasi City area.

The results of the hypothesis using PLS SEM are shown:

1. Model Conceptualization: describes exogenous latent, endogenous, exogenous latent mediation, endogenous, mediation and indicators. This study has three exogenous variables, namely: Service Quality, Product Quality and Promotion. Endogenous variable latent variable is Customer Loyalty. And the Mediation Variable is Customer Satisfaction.

2. Converging Validity and Composite Reliability

Table 3 Reliability test results and validity analysis

Variable	Cronbach's Alpha	Composite reliability	Average Variance Extracted (AVE)
Quality of Service	0.851	0.894	0.628
Product Quality	0.886	0.912	0.635
Promotion	0.768	0.862	0.677
Customer Satisfaction	0.835	0.889	0.667
Customer Loyalty	0.862	0.907	0.709

Based on the table above, it can be seen that the overall value of the AVE variable > 0.5. Thus, these results show that the measurement model can be said to be valid. And it can also be seen that the value of each variable in Composite Reliability is above 0.6 and the value of Cronbach Alpha is above 0.7. Thus, the results show that each research variable meets the criteria so that it can be concluded that all variables are said to be reliable.

Table 4 R-Squares Value

Variable	R Square
Customer Satisfaction	0.522
Customer Loyalty	0.825

Table 4. above shows that the R-Squares value of the customer satisfaction variable is 0.522. This value means that the variability of customer satisfaction constructs can be explained by independent variables of service quality, product quality, and promotion by 52.2%, while the remaining 47.8% is explained by other variables outside those currently studied. It can also be concluded that the value of 0.522 indicates the value of R-Squares in the moderate model category.

While the R-Squares value of customer loyalty variables is 0.825. This value means that the variability of customer loyalty constructs can be explained by independent variables of service quality, product quality, promotion and consumer satisfaction moderation variables of 82.2%, while the remaining 18.8% is explained by other variables outside the current study. It can also be concluded that the value of 0.522 indicates that the value of R-Squares in the model category is strong.

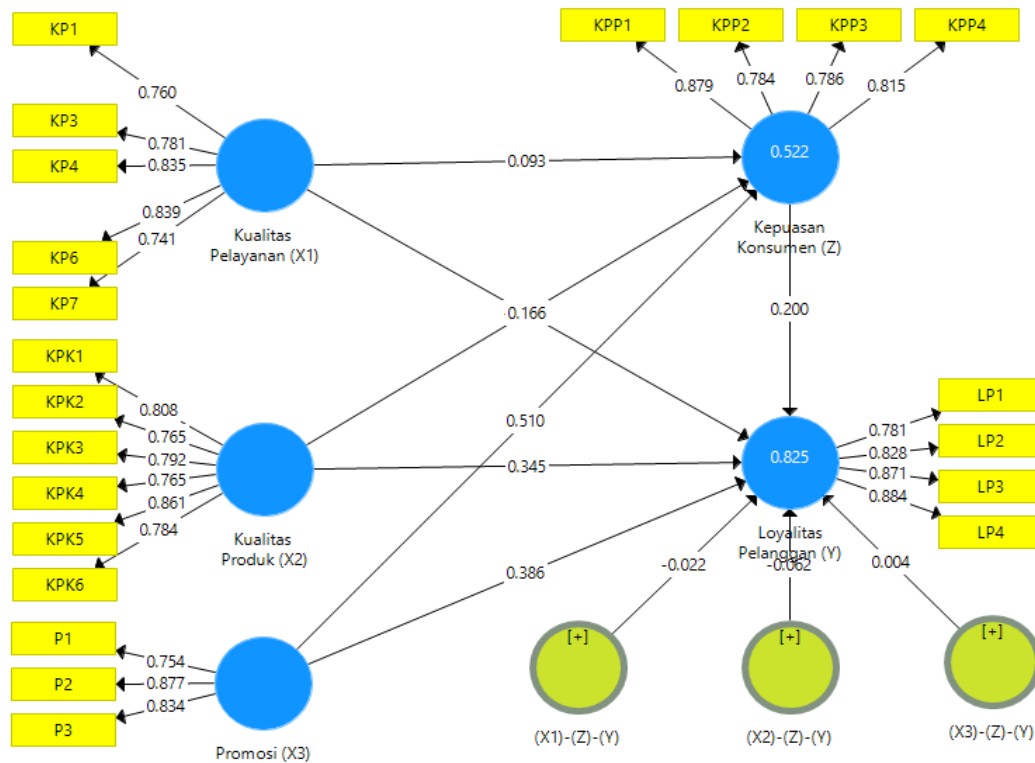


Figure 1 Bootstrapping results with smartPLS

The results and analysis of research using PLS-SEM are as follows:

1. The Effect of Service Quality on Customer Satisfaction

The first hypothesis shows that service quality has no significant effect on customer satisfaction ($\beta = 0.093$), with the calculated t value (0.411) smaller than the table t (1.96) and the p value ($0.681 > 0.05$).

The marginal contribution of service quality to customer satisfaction is practically insignificant, implying that the company needs to reevaluate its focus on service improvement. Customers judge the quality of service according to their expectations. Customer satisfaction is achieved when the company is able to fulfill its wishes and expectations (Bungatang & Reynel, 2021). Consideration of other factors such as price, convenience, or product innovation may have a greater impact on customer satisfaction.

In the strategy of increasing customer satisfaction, companies can concentrate more on diversification such as price optimization, product quality improvement, or better customer service. The use of client information to understand preferences and needs may also be important in designing more effective strategies.

2. The Effect of Product Quality on Customer Satisfaction

The second hypothesis test showed that product quality had no significant effect on customer satisfaction ($\beta = 0.166$), because the calculated t value (0.648) was lower than the statistical t (1.96) and p-value ($0.517 > 0.05$).

These results suggest that product quality may not be a key variable that substantially affects customer satisfaction levels. Customers will have a hard time leaving products that are already related to brands they are familiar with. Product quality affects customer satisfaction and provides good benefits (Syafarudin, 2021).

Therefore, in order to improve customer satisfaction, other aspects such as improved customer service, competitive pricing or further product innovation also need to be considered by the company to meet customer expectations and needs more effectively.

3. The Effect of Promotion on Customer Satisfaction

The results of the third hypothesis test showed that promotion had a significant effect on customer satisfaction ($\beta = 0.510$), with the calculated t value (2.381) higher than the table t (1.96) and the p value ($0.018 > 0.05$). With this strong influence, promotion becomes a key factor in shaping positive customer perceptions of products or services.

Promotion as a flow of information or persuasion designed to encourage individuals or organizations to perform actions that create an exchange in marketing. Promotion is part of the marketing mix that focuses on efforts to inform, convince, and remind consumers about the Company's brand and products (Suharyono & Mifta Elfahmi, 2021).

Therefore, companies are advised to improve the effectiveness of their promotional strategies such as the use of smarter promotion methods, tailoring promotional messages to customer needs or proper utilization of media platforms.

4. The Effect of Service Quality on Customer Loyalty

The results of the fourth hypothesis test showed that service quality did not have a significant effect on customer loyalty ($\beta = 0.016$) with a calculated t value (0.098) lower than the statistical t (1.96) and p-value ($0.922 > 0.05$). A customer's loyalty is not only affected by the quality of service they receive, and a change in quality has little effect on their loyalty to a particular company. Some of the advantages of customer loyalty, include the fact that having loyal customers reduces the cost of services, their availability to pay more for products or services, and free word-of-mouth marketing (Haghkhal & Asgari, 2000).

Therefore, companies need to adjust their strategic focus by considering other, more significant factors including competitive pricing, product innovation, or overall customer experience. In addition, there may be a need for programs that are more focused on discounts, rewards, or other incentives that are more attractive to customers.

5. The Effect of Product Quality on Customer Loyalty

The results of the fifth hypothesis test showed that product quality did not significantly affect customer loyalty ($\beta = 0.345$), with the calculated t value (1.709) higher than the statistical t (1.96) and p-value ($0.088 > 0.05$).

Although there is a positive relationship, it is weak because changes in product quality only contribute moderately to changes in customer loyalty. Less quality products can have a negative impact on a brand. Disgruntled consumers may move on to a competing brand and may even advise others not to use the brand, to the detriment of their reputation (Rane et al., 2023). Therefore, companies need to pay more attention to other factors that have a greater impact on customer loyalty such as competitive prices, effective promotions, or a satisfying customer experience.

Concentrating on customer experience innovation may be a worthwhile approach were providing a unique and satisfying experience for customers can be seen as important in building loyalty even though product quality is not a major factor.

6. The Effect of Promotions on Customer Loyalty

The findings of the sixth hypothesis test reaffirm that promotions have a large impact on customer loyalty ($\beta = 0.386$). With a t-value greater than the t-statistic ($2.830 > 1.96$), marketers consider promotion as a tactical tool within the framework of marketing concepts for building preferences and gaining loyalty.

Investing in promotions can be an effective strategy to increase customer loyalty. Companies can implement dynamic pricing strategies and promotions tailored to customer behavior data to stimulate purchases, increase average order value, and optimize overall revenue (Mirsyah et al., 2023).

Therefore, companies can design more efficient promotional campaigns by considering these findings. Strengthening promotional programs such as special offers, discounts, or loyalty programs can encourage customer participation and foster long-term loyalty.

7. The Effect of Service Quality on Customer Loyalty through Customer Satisfaction

The results of the seventh hypothesis test see that customer satisfaction is not significant to mediate the effect of service quality on customer loyalty which is shown by the value of the beta coefficient of service quality on customer loyalty through customer satisfaction mediation of 0.022. Expressed t-value calculated $> t$ -statistic ($0.080 < 1.96$) with p-value ($0.936 > 0.05$).

Customer satisfaction hardly contributes significantly in explaining the relationship between service quality and customer loyalty. The mediating effect of customer satisfaction on service quality and customer loyalty cannot be considered a reliable result. Customer satisfaction can trigger loyalty because people tend to stick with service providers that provide a good experience. Customer satisfaction is considered an essential element to achieve customer loyalty (Ngo Vu & Nguyen Huan, 2016).

Customer satisfaction may not be an effective mediator in bringing influence from service quality to customer loyalty. Likely, other aspects such as price, ease of access, or personal interaction can have a greater and more direct impact on customer loyalty. Therefore, business strategies oriented towards increasing customer loyalty should consider these factors more and not only depend on increasing customer satisfaction.

8. The Effect of Product Quality on Customer Loyalty through Customer Satisfaction

The eighth hypothesis test showed that customer satisfaction did not significantly mediate the relationship between product quality and customer loyalty, as evidenced by a beta coefficient of 0.062 indicating the relationship between product quality and customer loyalty through mediation of customer satisfaction. With the lower t count (0.319) than the statistical t (1.96), and the p-value ($0.750 > 0.05$), changes in customer satisfaction did not fully explain the relationship.

The difference between the group exposed to mediation and the group not exposed to mediation was not significant. Therefore, customer satisfaction is not a major factor or a strong mediator that links product quality with customer loyalty. Other factors such as price, service or emotional elements may be more dominant in shaping consumer loyalty. Product quality can be expressed as a comparison between the products expected by customers and the products they receive due to company goals, such as creating and retaining customers (Timo et al., 2019).

Therefore, improving product quality may be a more effective approach to increasing consumer loyalty than concentrating on increasing satisfaction levels alone. These findings can guide companies in allocating resources more efficiently and aligning business strategies to achieve customer loyalty goals.

9. The Effect of Promotion on Customer Loyalty through Customer Satisfaction

The ninth hypothesis test shows that customer satisfaction is not significant as a mediator in the relationship between product quality and customer loyalty, which is indicated by the beta coefficient of promotion to customer loyalty through customer satisfaction mediation of 0.004. With t-test values (0.021) lower than t-statistically (1.96) and p-values ($0.983 > 0.05$), this relationship was not very significant.

A company's ability to satisfy customers is not significantly related to their performance in creating customer loyalty. Promotional activities must be honest, based on true information, transparent, and wholehearted to increase customer satisfaction (Lena Ellitan, 2023).

Therefore, other factors that have not been revealed in this study may also affect customer loyalty. Nonetheless, this does not diminish the importance of satisfied customers for the company. On the contrary, satisfied customers still remain an important aspect of promoting a product or service and encouraging customers to come back and buy it again.

10. The Effect of Customer Satisfaction on Customer Loyalty

The results of the tenth hypothesis test show that customer satisfaction has no significant effect on customer loyalty as indicated by a beta coefficient of 0.200 between customer satisfaction and loyalty. In addition, the calculated t value (1.289) is lower than the

statistical t (1.96) and p -value ($0.198 > 0.05$), thus indicating the existence of possible factors other than satisfaction such as service, product quality and other value-added components that complicate the relationship between customer satisfaction and loyalty.

Satisfaction has a direct influence on loyalty. Consumer satisfaction causes consumer retention and influences purchase intent. Therefore, an increase in the level of satisfaction will result in an increase in the volume of purchases and recommendations of products or services to other potential consumers which will certainly have a long-term impact on the sustainable profitability expected by the Company (Haeruddin & Haeruddin, 2020).

It is possible that customer satisfaction is not directly related to loyalty because additional factors such as price, quality of goods or emotional factors also play an important role in shaping customer loyalty behavior. Therefore, understanding the interactions among these variables is key to developing effective strategies to strengthen relationships with customers and maintain high levels of loyalty.

CONCLUSION

Based on the results of the analysis, it can be concluded that the quality of services and products does not have a significant impact on the level of customer satisfaction. Conversely, promotions are considered to have a significant influence on the level of customer satisfaction. In addition, it was found that the quality of services and products did not have a significant effect on the level of customer loyalty, while promotions had a significant impact on the level of customer loyalty. The analysis also concluded that customer satisfaction cannot mediate the effect of service quality, product quality, and promotions on customer loyalty levels. Therefore, to achieve a higher level of customer loyalty, it is necessary to focus on more effective promotional strategies and improvements in product and service quality.

Companies need to increase responsiveness to customer complaints to improve service quality. Focusing on product durability, including expiration, can increase user confidence in product quality. Providing attractive discount offers in accordance with customer expectations can be applied to enhance promotions. In addition, to achieve better customer satisfaction, companies need to continuously improve the quality of product performance to meet customer expectations.

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