



The Influence of Customer Perceived Value and Service Quality on Customer Loyalty through Complaint Handling (Case Study on PT Pimaimas Citra)

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Abstract: Motivated by the decline in consumer loyalty at PT Pimaimas Citra, this study aims to examine the partial influence of Customer Perceived Value, and Service Quality on Customer Loyalty, either directly or indirectly through the intervening Complaint Handling variable. The research approach is quantitative, with the research location at PT Pimaimas Citra, Jakarta. One-time research time, 2025. The primary data collection technique uses surveys, and the secondary data collection technique uses the desk study/desk research method. Inferential data analysis technique uses SEM-PLS. The results of the study show that Service Quality has a positive and significant effect on Complaint Handling, and has a negative and significant effect on Customer Loyalty. Complaint Handling has a positive and significant effect on Customer Loyalty. Complaint Handling plays a positive role in both the influence of Customer Perceived Value on Customer Loyalty; and the influence of Customer Loyalty on Customer Loyalty. Meanwhile, Customer Perceived Value has a positive but insignificant effect on Customer loyalty; and has a positive but not significant effect on Complaint Handle.

Keywords: Customer Loyalty; Customer-Perceived Value; Handling Complaint; Service Quality.

1. Introduction

This research will make PT Pimaimas Citra as a research location. The research will be carried out in the context of marketing management. In this regard, the researcher chose one of the marketing problems from the perspective of consumer loyalty. Consumer loyalty is defined as the level of commitment from consumers to the organization, reflected in the continuous purchase of goods or services to the organization's products/services, thus showing loyalty. When customer loyalty occurs, consumers and organizations become committed to each other, so that the client-firm relationship becomes stable in the long term^[1].

The problem faced at PT Pimaimas Pimaimas Citra is the decline in consumer loyalty. This is marked by a significant decline in sales in 2024, because some buyers do not become repeat buyers or subscriptions.

2. Preliminaries or Related Work or Literature Review

Based on previous studies, there are several variables (constructs) that affect Consumer Loyalty (CL), including Customer Perceived Value (CPV), Service Quality (SQ), and Handling Complaint (HC).

Customer Perceived Value (CPV) or Pelanggan Perception Value (the first independent variable). The CPV variable is defined as a customer's view of the benefits or attractiveness of a product or service to them, especially when compared to a competitor's product^[2]. Research proves that Customer Perceived Value (CPV) affects Customer Loyalty. Service Quality (SQ) (second independent variable)^[3]. Squirrelly^[4] Define service quality as meeting the

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wants and needs of customers beyond their aspirations. The SQ variable is assumed to affect Customer Loyalty (CL), as evidenced by^{[5][6]}. Handling Complaint (HC) (variable mediator/intervening). HC is defined as the technique of handling or managing customer complaints quickly, appropriately and satisfactorily^[7]. HC variables are assumed to affect Customer Loyalty (CL)^{[8][9][10][11]}.

There is a research gap in terms of the effect of Customer Perceived Value (X1) on Customer Loyalty (Y), namely between positive and significant effects^[3], have a positive but insignificant effect^{[12][13]}, and does not have a direct effect, but through a Customer Engagement mediator^[14]. There is a research gap in terms of the effect of Service Quality (X2) on Customer Loyalty (Y), namely between positive and significant effects^{[8][6]}, have a positive and insignificant effect^{[15][9]}, and have a negative effect^[16]. There is a research gap in terms of the effect of Service Quality (X2) on Handling Complaints (Z), namely between having a positive and significant effect (Budiarti, 2011) and having a positive but insignificant effect^[17].

The novelty of this research compared to previous studies is that this study presents the Complaint Handling variable as a mediator variable (intervening). Previous research has found that presents the Complaint Handling variable in relation to its effect on Customer Loyalty. The study examined the effect of Complaint Handling on Customer Loyalty. The difference is that the study positions Handling Complaint as an independent variable, while this study positions Handling Complaint as a variable mediator (intervening).

3. Proposed Method

The approach of this research is quantitative correlational^[18]. The location of the research is at PT Pimaimas Citra, a company engaged in the field of vaccines, headquartered in Jakarta. Based on the perspective of time, this study is a cross-section study that is only carried out once, in this case 2025, so this study only has one data, without seeing changes from time to time.

The research population is all sales personnel at the head office (Jakarta) of PT Pimaimas Citra which totals 120 employees. The purposive sampling technique is because the researcher determines the population criteria, namely only employees who have the status of salespeople^[19].

The primary data collection technique uses a survey method with research instruments in the form of a questionnaire with an ordinal scale, in this case the Likert Scale 1-5 (1=Strongly Disagree, 5=Strongly Agree)^[20].

3.1. Formatting of Mathematical Components

The primary data collection technique uses a survey method with research instruments in the form of a questionnaire with an ordinal scale, in this case the Likert Scale 1-5 (1=Strongly Disagree, 5=Strongly Agree)^[20]. Test the instrument with Confirmatory Factor Analysis (CFA) (validity test), and Cronbach's Alpha (reliability test). Data analysis techniques use descriptive analysis, and verifiable analysis uses structural equation modeling -partial least square or SEM-PLS^[21].

The research model is as follows

$$\eta_1 = \gamma_0 + \gamma_1 * \xi_1 + \gamma_2 * \xi_2 + \varepsilon \quad (1)$$

η_1 (eta) = Complaint Handling as a dependent variable in sub-structure 1.

ξ_1 (ksi) = Customer Perceived Value (first independent construct)

ξ_2 (ksi) = Service Quality (second independent construct)

γ_0 (gamma) = Coefficient of constant

γ_1 (gamma) = Coefficient of the influence of Customer Perceived Value on Handling Complaints

γ_2 (gamma) = Coefficient of Service Quality on Complaint Handling

ε (Epsilon) = Measurement error indicator (standard error).

The structural similarities of the two are as follows

$$\eta_2 = \gamma_0 + \gamma_1 * \xi_1 + \gamma_2 * \xi_2 + \gamma_3 * \xi_3 + \varepsilon \quad (2)$$

Information:

η^2 (eta) = Customer Loyalty as a dependent variable in sub-structure 2.

ξ_1 (ksi) = Customer Perceived Value as the first independent variable

ξ_2 (ksi) = Service Quality as the second independent variable

ξ_3 (KSI) = Handling Complaint as the third independent variable

γ_0 (gamma) = Coefficient of constant

γ_1 (gamma) = Coefficient of the influence of Customer Perceived Value on Customer Loyalty

γ_2 (gamma) = Coefficient of Service Quality impact on Customer Loyalty

γ_3 (gamma) = Coefficient of Handling Complaint Impact on Customer Loyalty

ε (Epsilon) = Measurement error indicator (error standard)

4. Results and Discussion

Before the hypothesis test was carried out, an outer model test was carried out, and an inner model test was carried out

4.1. Figures and Tables

Before the hypothesis test is carried out, an outer model test is carried out first, and an inner model test. The following are the results of the outer-model test. First of all, the results of the Reliability Indicator test, as presented in the following table

Table 1. Indicator Reliability Test Results with Outer Loadings

Indicator	Outer Loadings
CL6	0,762
CL7	0,851
CL8	0,735
CPV1	0,844
CPV2	0,830
CPV3	0,715
CPV4	0,910
CPV5	0,885
CPV6	0,808
HC1	0,876
HC2	0,780
HC3	0,758
SQ10	0,913
SQ2	0,775
SQ9	0,916

Research Results 2025

Based on Table 1 of the results of the Indicator Realviness test, it shows that 15 indicators from the four variables have an outer loading value greater than 0.7 [22][23]. Therefore, all indicators are considered realable, that is, they can consistently reflect the Latin construct that is measured[21].

Table 2 shows that the results of the discriminant validity test using cross-loadings show that the cross-loadings value of all indicators against the parent construct itself is greater than the cross-loadings value of these indicators against other constructs.

Table 2. Results of Discriminant Validity Test with Cross-Loadings

Indicators	Customer Loy- alty (Y)	Customer Perceived Value (X1)	Handling Com- palint (Z)	Service Quality (X2)
CL6	0,762	0,025	0,081	-0,037
CL7	0,851	0,168	0,166	-0,002
CL8	0,735	0,122	0,147	-0,021

CPV1	0,042	0,844	0,275	0,395
CPV2	0,112	0,830	0,324	0,446
CPV3	0,111	0,715	0,299	0,308
CPV4	0,119	0,910	0,430	0,455
CPV5	0,123	0,885	0,433	0,417
CPV6	0,245	0,808	0,306	0,302
HC1	0,204	0,333	0,876	0,562
HC2	0,086	0,354	0,780	0,462
HC3	0,033	0,184	0,258	0,103
SQ10	0,006	0,318	0,551	0,913
SQ2	-0,090	0,531	0,449	0,775
SQ9	0,014	0,398	0,587	0,916

Table 2 shows that the results of the discriminant validity test using cross-loadings show that the cross-loadings value of all indicators against the parent construct itself is greater than the cross-loadings value of these indicators against other constructs.

Table 3. Discriminant Validity Test Results with Fornell-Larcker.

Variable	Customer Loy- alty (Y)	Customer Perceived Value (X1)	Handling Com- plaint (Z)	Service Quality (X2)
Customer Loyalty (Y)	0,784			
Customer Per- ceived Value (X1)	0,154	0,834		
Handling Com- plaint (Z)	0,179	0,423	0,694	
Service Quality (X2)	-0,021	0,467	0,612	0,870

Table 4 shows the results of the discriminant validity test using Fornell-Larcker, it is proven that the square root value of AVE for each construct is proven to be greater against the self of the construct than the square value of the root of the AVE construct with other constructs. Based on these two tests, it can be summarized that the discriminant validity of this research data is met, namely that each Latin construct is really unique and different from other constructs; and the indicator of one construct does not measure another construct[24].

Table 4. Internal Consistency Test Results with Cronbach's Alpha and Composit Reliability

Variable	Cronbach's Alpha	Composite Reliability
Customer Loyalty (Y)	0,697	0,827
Customer Perceived Value (X1)	0,912	0,932
Handling Complaint (Z)	0,619	0,702
Service Quality (X2)	0,838	0,903

Table 4 shows that the test results show that both Cronbach's Alpha and the Composit Reliability indicator for the four variables are equal to 0.60. Therefore, it can be summarized that the indicators in a construct show consistency in measuring the same concept[21].

Based on the results of the outer model test, it can be concluded that all constructs and indicators are valid and reliable, so they are suitable for use for research measurements.

Next is the results of the inner model test, in this study the multicollinearity test, the determination coefficient test, the effect size (f^2) test, the predictive relevance test (Q^2), before finally the hypothesis test was selected.

Table 5. Multicollinearity Test Results

Variable	Customer Loyalty (Y)	Handling Complaint (Z)
Customer Loyalty (Y)		
Customer Perceived Value (X1)	1,330	1,278
Handling Complaint (Z)	1,662	
Service Quality (X2)	1,745	1,278

Table 5 shows the results of the multicollinearity test using the VIF indicator that there is no correlation between independent constructs in linear regression, because all values of the variance inflation factor (VIF) are below 10[21].

Table 6. Determination Coefficient Test Results (R²)

Variable	R Square
Customer Loyalty (Y)	0,479
Handling Complaint (Z)	0,398

Table 6 shows that the simultaneous influence of Customer Perceived Value, Service Quality, and Handling Complaints on Customer Loyalty is 0.479 or 47.9 percent, which means that 47.9% of variance in the dependent construct can be explained by the independent construct. Considering that the R² value is still < 50%, the predictive power of independent constructs is still relatively weak (Hair et al, 2020a). Then the R² value of the influence of Customer Perceived Value, and Service Quality simultaneously on Customer Loyalty is 0.398 or 39.8 percent, which means that 39.8% of the variance in the dependent construct can be explained by the independent construct. Considering that the R² value is still < 50%, the predictive power of independent constructs is still relatively weak[21].

Table 7. Effect Size (f²) Test Results

Variable	Customer Loyalty (Y)	Handling Complaint (Z)
Customer Perceived Value (X1)	0,021	0,040
Handling Complaint (Z)	0,048	
Service Quality (X2)	0,043	0,365

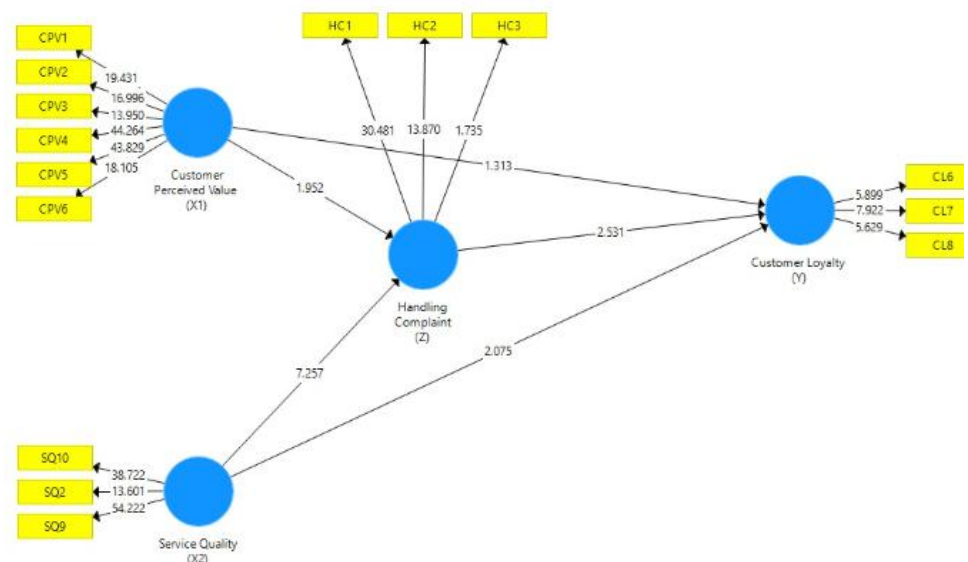
Table 7 shows the effect of Customer Perceived Value on Handling Complaints is 0.040 which shows a small to moderate influence. The effect of Service Quality on Handling Complaints is 0.365 which shows a great influence. The effect of Handling Complaints on Customer Loyalty was 0.048 which showed a small influence. The influence of Customer Perceived Value on Customer Loyalty is 0.021 which shows a small influence. The effect of Service Quality on Customer Loyalty is 0.043 which shows a small influence. Thus, the Service Quality variable has the strongest influence on the Complaint Handling variable, which means that Service Quality contributes greatly to the increase in the value of R² to Z.

Table 8. Predictive Relevance (Q^2) Test Results

Variable	SSO	SSE
Customer Perceived Value (X1)	360,000	350,972
Handling Complaint (Z)	720,000	720,000
Service Quality (X2)	360,000	299,311

Table 8 shows that the three predictors (Customer Perceived Value, Service Quality, and Handling Complaint) have a small predictive relevance (0.025) which means that the model is somewhat able to predict Customer Loyalty. Two predictors (Customer Perceived Value, Service Quality) had a medium predictive relevance (0.169), which means that the model is quite good at predicting Complaint Handling[21]. Overall, the structural model proved to be robust, accurate, and relevant.

The following are the results of the path coefficient as presented in Figure 1

**Figure 1.** Results of the Path Coefficient Value Test**Table 9.** Predictive Relevance (Q^2) Test Results

Influence Models	Path Co-efficient Values	T Statistics	P Values
Customer Perceived Value (X1) -> Customer Loyalty (Y)	0,162	1,275	0,203
Customer Perceived Value (X1) -> Handling Complaint (Z)	0,176	1,911	0,057
Handling Complaint (Z) -> Customer Loyalty (Y)	0,271	2,341	0,020
Service Quality (X2) -> Customer Loyalty (Y)	- 0,262	2,133	0,033

5. Comparison

Based on the results of the path coefficient test through Figure 1 and Table 9, the following are the results of the hypothesis test and its discussion, both regarding the direct impact hypothesis (H1 to H5) and the indirect hypothesis through intervening variables (mediators).

- a. The Effect of Customer Perceived Value (CPV) on Customer Loyalty (CL)

The results of the study showed that Customer Perceived Value (CPV) had a positive effect of 0.162 on Customer Loyalty (CL), but it was not significant. It means that hypothesis 1 is rejected. The results of this study are not in accordance with the theoretical expectation that CPV has a positive and significant effect on CL. The results of this study are not in accordance with previous research, in this case the study found that CPV has a positive and significant effect. These discrepancies can be caused by different industry contexts or respondent characteristics, for example differences in customer expectations or types of services. This mismatch can also be due to CPV not being strong enough to directly affect loyalty, but it affects other variables (such as Handling Complaints) which ultimately impacts CL.

- b. The Effect of Customer Perceived Value (CPV) on Handling Complaints (HC)

The results of the study showed that Customer Perceived Value (CPV) had a positive effect of 0.162 on Customer Loyalty (CL), but marginally (almost) significant. It means that hypothesis 1 is rejected. There have not been many previous studies that have directly tested this relationship. Logically, the higher the customer's perception of value towards the service, the more tolerant they may be of complaint or assess the complaint handling process more positively.

- c. The Effect of Handling Complaint (HC) on Customer Loyalty (CL)

The results of the study show that Handling Complaint (HC) has a positive and significant effect on Customer Loyalty. Meaning that hypothesis 3 is accepted. The results of this study are consistent with previous findings. Previous research has shown that effective complaint handling increases customer loyalty. Handling customer complaints quickly, precisely, and satisfactorily is a proven strategy for maintaining loyalty.

- d. The Influence of Service Quality (SQ) on Customer Loyalty (CL).

The results of the study show that Service Quality (SQ) has a negative and significant effect on Customer Loyalty (CL). It means that hypothesis 4 is rejected, because the result is different in the direction of influence from the direction of the hypothesis. The results of this study are contrary to the results of previous research, which found that SQ has a positive and significant effect on CL. That the results of this study are contrary to previous research, it could be that customers have high expectations for service quality, but because they are disappointed that complaints are not handled according to expectations, so dissonance arises that reduces loyalty. Another possibility is that the HC variable plays an important role. SQ does not necessarily increase loyalty without being supported by good complaint management.

- e. The Influence of Service Quality (SQ) on Handling Complaints (HC)

The results of the study show that Service Quality (SQ) has a positive and significant effect on Handling Complaints (HC). It means that hypothesis 5 is accepted. The results of this study reinforce the assumption that high service quality creates better systems and personnel in handling complaints. Although there have not been many explicit studies on this relationship, these findings make sense and could bridge the relationship between SQ and CL through HC.

- f. Complaint Handling plays a role in determining the influence of Customer Perceived Value on Customer Loyalty

This hypothetical path model is: Customer Perceived Value --> Handling Complaint --> Customer Loyalty. The direct influence of Customer Perceived Value on Customer Loyalty is 0.162. Indirect effect 0.047696. The total influence was 0.209696. Testing the role of intervening variables through variance accounted for (VAF)[21] The indirect influence divided by the total influence, multiplied by 100% is 22.745%. The VAF value is 22.745%, which means it is greater than 20%, but still lower than 80%, so the mediation level is moderate or partial mediation. It means that Complaint Handling plays a role in mediating the influence of Customer Perceived Value on Customer Loyalty, so that hypothesis 6 is proven.

- g. Complaint Handling plays a role in determining the influence of Service Quality on Customer Loyalty.

The model of this hypothetical path is: Service Quality --> Handling Complaint -> Customer Loyalty. The direct effect of Service Quality on Customer Loyalty is -0.262. The indirect effect was 0.1436. The total influence is -0.11837. Testing the role of intervening variables through variance accounted for (VAF) indirect influence divided by the total influence, multiplied by 100% is 121.314%. The VAF value is 121,314,745%, which means it is greater than 80% so that the mediation level is full mediation. This means that Complaint Handling plays a role in determining the influence of Customer Service on Customer Loyalty, so that hypothesis 7 is proven.

6. Conclusions

Based on the results of the study, it can be concluded that Service Quality has a positive and significant effect on Complaint Handling, and has a negative and significant effect on Customer Loyalty. Complaint Handling has a positive and significant effect on Customer Loyalty. Complaint Handling plays a positive role in mediating, both the influence of Customer Perceived on Customer Loyalty; and the influence of Service Quality on Customer Loyalty. Meanwhile, Customer Perceived Value has a positive but insignificant effect on Customer loyalty; and has a positive but not significant effect on Complaint Handle.

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