



## Measurement of Customer Satisfaction Using Operational Reliability and Responsiveness to Customers of KPPS BMT Assyafi'iyah Berkah Nasional

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### ARTICLE INFO

Article history:  
Received 16-09-2021  
Received in 10-10-2021  
Accepted 25-11-2021

Keyword's :  
Operational reliability,  
responsiveness,  
customer satisfaction

### ABSTRACT

This study aims to analyze the effect of operational reliability the responsiveness on customer satisfaction. Coincidence sampling technique was used to obtain a sample of 85 respondents. The terms of the instrument test use validity and reliability tests. The requirements are normal liliefors, homogeneity, linearity, and regression significance must be met while the analysis of the model used is a structural equation, namely Structural Equation Modeling. The findings of this study are that there is a direct positive effect of operational reliability on responsiveness, there is a direct effect of operational reliability on customer satisfaction, and there is a direct effect of responsiveness on customer satisfaction.

Penelitian ini bertujuan untuk menganalisis pengaruh operational reliability terhadap responsiveness terhadap kepuasan pelanggan. Teknik pengambilan sampel secara kebetulan digunakan untuk memperoleh sampel sebanyak 85 responden. Syarat tes instrumen menggunakan uji validitas dan reliabilitas. Syaratnya adalah liliefor normal, homogenitas, linieritas, dan signifikansi regresi harus dipenuhi sedangkan analisis model yang digunakan adalah persamaan struktural yaitu Structural Equation Modeling. responsiveness, ada pengaruh langsung kehandalan operasional terhadap kepuasan pelanggan, dan ada pengaruh langsung responsiveness terhadap kepuasan pelanggan.

AKUISISI : Jurnal Akuntansi

Website : <http://www.fe.ummetro.ac.id/ejournal/index.php/JA>



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Peer review under responsibility of *Akuisisi : Accounting Journal*. [2477-2984](https://doi.org/10.24217).

<http://dx.doi.org/10.24217>

## **INTRODUCTION**

When all companies' conditions strengthen competitiveness, each financial institution must have its brand to make its advantages difficult to imitate by competitors. The power of services sold by management companies to customers is considered one of the critical competitive advantages for the survival of an organism. Growth and tight competitiveness have caused BMT to continue to improve itself to provide customer satisfaction successfully.

For providing consumers satisfaction, management must prioritize creating a good management image to attract other customers because customer satisfaction is the key to success and running the company's business. This will have an impact, namely increasing consumer interest and increasing demand for the service products provided.

To attract consumer interest, achieving customer satisfaction is closely related to the company's vitality amid the strong growth of various companies in the future. Therefore, creating customer satisfaction is very important to attract potential customers to maintain and increase existing customers. Thus creating customer satisfaction for every company is needed by formulating the right service strategy to achieve service user satisfaction. Many factors affect customer satisfaction, thus requiring companies to improve good service quality, namely operational reliability and responsiveness to the services provided.

### **Literature review and hypothesis development**

Operational reliability is part of the service and requires varied handling. Providing services to customers is expected to have sufficient ability and knowledge, especially in expertise, to produce a satisfactory service. The opinion expressed by Othman et al. (2019) is that reliability is defined as the ability of service providers to offer committed products and services consistently and honestly.

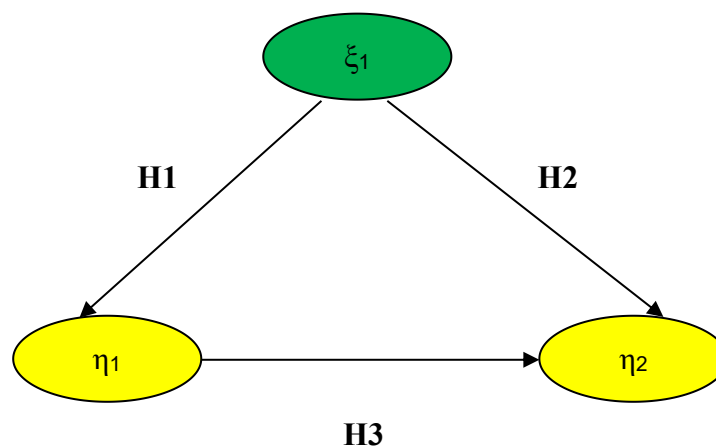
Reliability is the ability to respond to customers and according to promises and on time and satisfy and follow consumer expectations. Timely service provided with the same quality for all buyers without errors, attractive attitude and with high accuracy (Puspita & Santoso, 2018; Sofiati et al., 2018) says that operational reliability is the company's ability to provide the promised service with immediately, how much quality a company is able to provide accurate and satisfactory service. Responsiveness is a management policy to assist and provide fast and appropriate responses to customers by conveying transparent information. According to (Febrina, 2020) responsiveness is a willingness to help customers and provide timely services. Responsiveness is a behavior in which an officer serves a customer attentively and is aimed only at that customer (Suharto & Ligery, 2018).

According to Suharto (2016), Amalia et al.(2017) are willing to help customers and provide quickly and accurately with clear information delivery. Responsiveness can be used as a guideline

to assess the reliability of the company's operations. Operational reliability is the ability to deliver the promised reliable, accurate, and reliable (Lau et al., 2013).

Customer satisfaction is obtained and following the expectations of service recipients. The services received are expected to exceed the sacrifices given by the customers, meaning that when compared, the quality of services received by consumers can be greater than the sacrifices that have been paid. Satisfaction is a person's feelings of pleasure or disappointment, according to (Khalid et al., 2011; Al-Mhasnah et al., 2018; Hafeez & Bakhtiar (2012)). A definition is a form of feeling happy or disappointed by someone due to comparing the perceived performance of a product or service (or result) concerning expectations.

Gambar 1



### **Operational reliability and responsiveness.**

Operational reliability is a manifestation of the ability of service providers to offer committed products and services consistently and honestly (Othman et al., 2019). Responsiveness is a personal policy to improve the quality of service quickly and accurately to relations by conveying helpful information. According to Febrina (2020), responsiveness is a willingness to help customers and provide timely services.

H1: Operational reliability affects responsiveness.

### **Operational Reliability and Customer Satisfaction.**

Operational reliability is the ability to provide the promised reliable, accurate, and reliable (Lau et al., 2013; Wantara, 2015). Satisfaction is a person's feelings of pleasure or disappointment. According to Khalid et al., (2011), Basari & Shamsudin (2020) define satisfaction as a person's feeling of liking or disliking as a result of comparing the performance received for a product or service (or outcome) concerning expectations.

H2: operational reliability affects customer satisfaction

## Responsiveness and Customer Satisfaction

Responsiveness, according to Amalia et al. (2017); Prihandoyo (2019); Suharto (2019), is a desire to help customers and provide services quickly and precisely through the delivery of clear information. Satisfaction is a person's feelings of pleasure or disappointment. According to Khalid et al. (2011); Suharto et al. (2019) define satisfaction is a feeling of acceptance or rejection of a person's response due to a response to product performance for the sacrifices that have been made.

H3: responsiveness affects customer satisfaction

## RESEARCH METHOD

This research uses descriptive analysis and verification, which is carried out using primary data through respondents. The survey method was used to obtain respondent data and used a sample of 85 respondents through questions and filling out instruments or questionnaires. Hypothesis testing employs a causality test between exogenous and endogenous variables: operational reliability, responsiveness, and customer satisfaction.

## RESEARCH RESULTS

### Testing requirements analysis.

#### Normality test

The normality test of the data includes the acquisition of the distribution of data about the distribution, whether or not the data is normal or not.

**Table 1. Results of Data Normality Test**

Variable	Value $\alpha$	Value Sig.	Interpretation
( $\xi_1$ )	0,05	0,19	Normal
( $\eta_1$ )	0,05	0,34	Normal
( $\eta_2$ )	0,05	0,32	Normal

#### Homogeneity Test

The homogeneity test aims to calculate the variation of some of the data being tested in a population that has the same variance, or not, namely homogeneous or heterogeneous variants.

**Table 2. Homogeneity test results**

Variable	Value $\alpha$	Value Sig.	Interpretation
$\xi_1$ over $\eta_1$	0,05	0,04	Homogen
$\xi_1$ over $\eta_2$	0,05	0,00	Homogen
$\eta_1$ over $\eta_2$	0,05	0,04	Homogen

### Linearity test and Sig. regression

The linearity test and the regression sig aim to measure the effect between variables, with the requirement that each variable forms a significant linear and regression line or not.

#### Linearity test and Regression $\eta_1$ over $\xi_1$

		ANOVA Table				
		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	3133,784	31	101,090	,766	,000
	Linear.	132,492	1	132,492	1,044	,000
	Dev. from Linear.	3001,292	30	100,043	,758	,791
Within Groups		6994,639	53	131,974		
Total		10128,42	84			

#### Linearity test and Regression $\eta_2$ over $\xi_1$

		ANOVA Table				
		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	8246,970	31	226,031	11,593	,000
	Linear.	7115,703	1	7115,703	310,077	,000
	Dev. from Linear.	1131,267	30	37,709	1,643	,056
Within Groups		1216,254	53	22,948		
Total		9463,224	84			

#### Linearitytest and Regression $\eta_2$ over $\eta_1$

		ANOVA Table				
		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	5674,174	37	153,356	1,902	,000
	Linear	36,977	1	36,977	,459	,000
	Dev. from Linear.	5637,197	36	158,589	1,942	,016
Within Groups		3789,050	47	80,618		
Total		9463,224	84			

### Construct Reliability and Variance Extracted Test ( $\xi_1$ )

The manifest variable test was conducted to determine the construct's ability to measure the exogenous latent variable ( $\xi_1$ ).

**Table 3. Construct Reliability and Variance Extracted ( $\xi_1$ )**

Construct	Standard Load.	$\sum$ Std. Load <sup>2</sup>	Error	CR: $\frac{(Std. loading)^2}{(\sum std. loading)^2 +}$	VE: $\frac{\sum Std. loading}{\sum std. loading^2 +}$
X1	0,71	0,5041	0,50	0,6574	0,4414
X2	0,55	0,3025	0,70		
X3	0,98	0,9604	0,03		
X4	-0,19	-0,0361	0,96		
Total	2,05	1,7309	2,19		

The Construct calculation result is 0.6574 smaller than 0.70 (CR<0.70), and the average variance extracted (VE) value is 0.4414 smaller than 0.50 (VE<0.50). This means that the four latent variables do not have consistency in measuring the variable ( $\xi_1$ ).

### Test of Construct Reliability and Variance Extracted ( $\eta_1$ ).

The manifest variable test was conducted to determine the construct's ability to measure the endogenous latent variable ( $\eta_1$ ).

**Table 4. Construct Reliability and Variance Extracted ( $\eta_1$ ).**

Indicator	Standard Load	$\sum$ Std. Load. <sup>2</sup>	Error	CR: $\frac{(\sum \text{Std. loading})}{(\sum \text{Std. loading})^2}$	VE: $\frac{\sum \text{Std. loading}}{\sum \text{Std. loading}^2 +}$
X5	0,47	0,2209	0,78		
X6	0,79	0,6241	0,38		
X7	0,75	0,5625	0,44	0,7768	0,4734
X8	0,70	0,49	0,51		
Total	2,71	1,8975	2,11		

The calculation results of the construct value of 0.7768 are greater than 0.70 (CR>0.70) and the average variance extracted (VE) = 0.4734 is smaller than 0.50 (VE<0.50). This means that the four latent variables have consistency in measuring the variable ( $\eta_1$ ).

### Construct Reliability and Variance Extracted Test ( $\eta_2$ )

The manifest variable test was conducted to determine the construct's ability to measure the endogenous latent variable ( $\eta_2$ ).

**Table 5. Construct Reliability and Variance Extracted ( $\eta_2$ ).**

Indicator	Standard Load.	$\sum$ Std. Load. <sup>2</sup>	Error	CR: $\frac{(\sum \text{Std. loading})}{(\sum \text{Std. loading})^2 +}$	VE: $\frac{\sum \text{Std. loading}}{\sum \text{Std. loading}^2 +}$
Y1	0,72	0,5184	0,50		
Y2	0,82	0,6724	0,70		
Y3	0,73	0,5329	0,03	0,8445	0,4865
Y4	0,76	0,5776	0,96		
Total	3,03	2,3013	1,69		

The summary results explain that the construct 0.8445 is more than 0.70 (CR>0.70), and the average variance extracted (VE) 0.4865 is smaller than 0.50 (VE<0.50). This means the four latent variables have consistency in measurement the variable ( $\eta_2$ ).

### T-value Coefficient Calculation Results

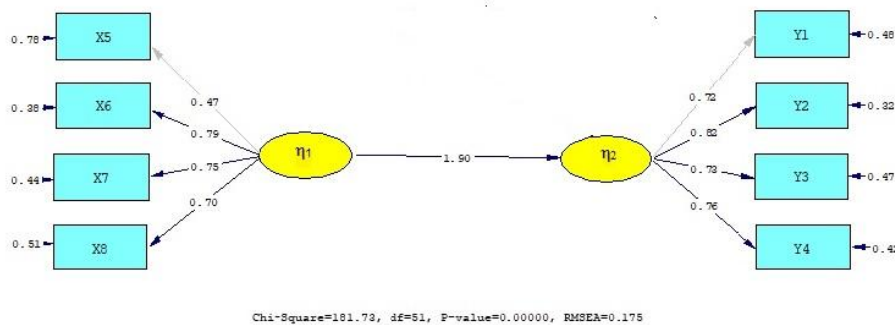
After testing the requirements analysis, the next step is to calculate and test each coefficient path as shown below:

**Table 6. Path Coefficient Results**

No	Variable	Path Coefficient ( $\xi$ and $\eta$ )		Result	Conclusion
		SLF*	t <sub>value</sub>		
1.	$\eta_1$ over $\xi_1$	0,88	4,43	H <sub>1</sub> accepted	Significant
2.	$\eta_2$ over $\xi_1$	0,93	2,02	H <sub>2</sub> accepted	Significant
3.	$\eta_2$ over $\eta_1$	1,90	3,01	H <sub>3</sub> accepted	Significant

**Sub-structure Path Coefficient 1**

The path coefficient analysis diagram found, namely sub-structure 1, is made in the equation  $\eta_1 = \gamma_{11}\xi_1 + \zeta_1$ . This test will solve the solution for the decision to test hypothesis 1.

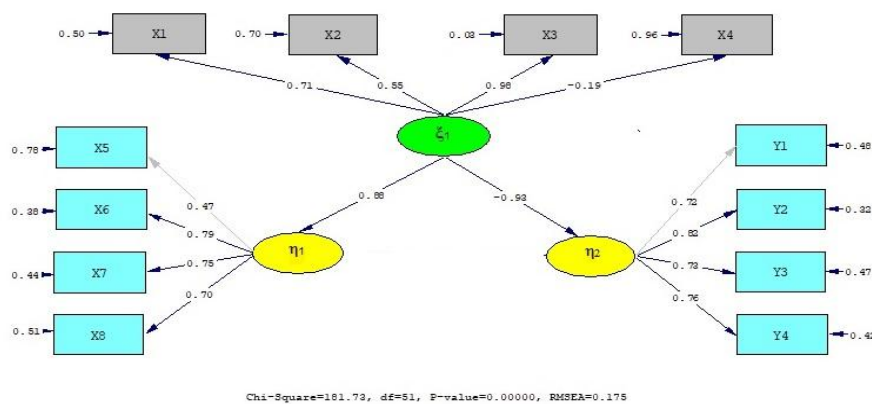


**Figure 1. Sub-structure Path Coefficient 1**

Based on the results of testing sub-structure 1, the path coefficient is obtained ( $\gamma_{\eta_1\xi_1}$ ), the value is 1.90, the value of  $t_{\text{statistics}} = 3.01 > t_{\text{-list}} (0.05: 135) = 1.65$ , so  $H_0$  is rejected, and the path coefficient  $\gamma_{\eta_1\xi_1}$  is significant.

**Sub-structure Path Coefficient 2**

The path diagram equation found, namely sub-structure 1, is expressed in the form of the equation  $\eta_2 = \gamma_{21}\xi_1 + \beta_{21}\eta_1 + \zeta_2$ . This test will provide a solution for the decision to test hypotheses 2 and 3.

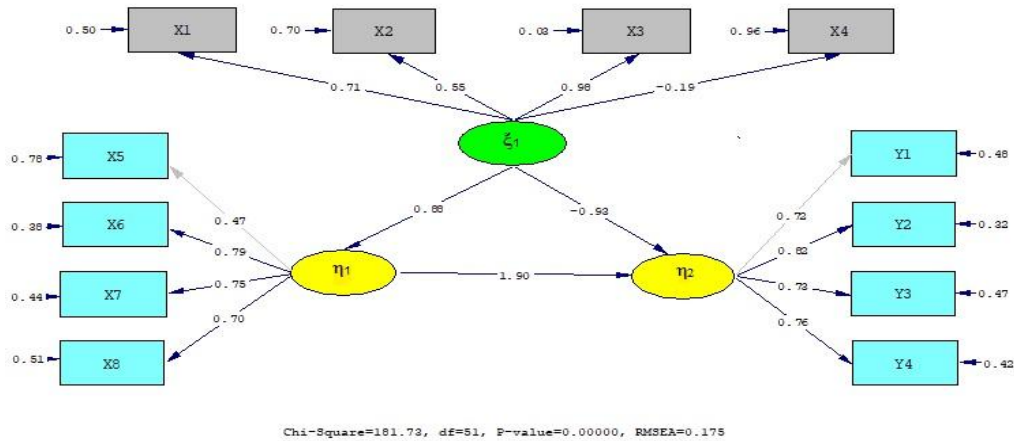


**Figure 2. Path Coefficient of Sub Structure 2**

In the test results of sub structure 2, the path coefficient ( $\gamma_{\eta_2\xi_1}$ ) is 0.93 and the  $t_{\text{statistic}}$  value =  $2.02 > t_{\text{-list}} (0.05: 135) = 1.65$ , so,  $H_0$  is rejected, the path coefficient  $\gamma_{\eta_2\xi_1}$  is significant. The path

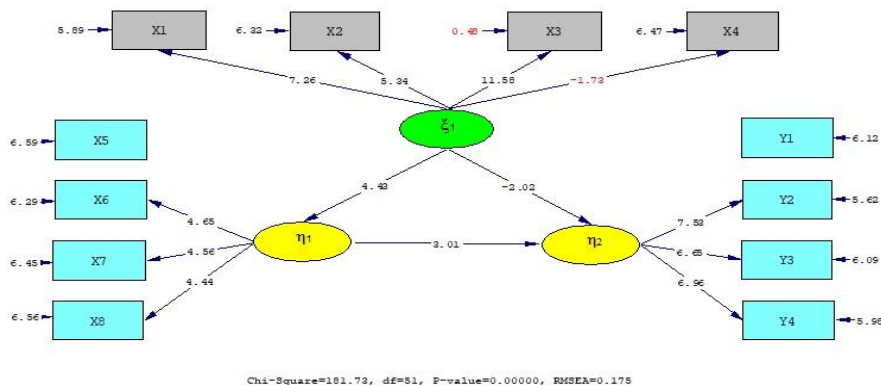
coefficient ( $\beta_{21}\eta_1$ ) is 0.88 and the value of  $t_{statistics} = 4.43 > t_{list}(0.05: 135) = 1.65$ , so  $H_0$  is rejected and the path coefficient  $\beta_{21}\eta_1$  is significant.

Based on the calculation results of the calculation of the path coefficient and the value of  $t_{statistics}$  for hypothesis testing purposes, it is explained that the standardized loading factor value of all path coefficients is greater than 0.05, and  $t_{statistics}$  is more significant than 1.65. So,  $H_0$  is rejected, and three lines are significant. Simultaneously the standardized solution scheme for each variable in the linear program structural relationship is described as follows:



**Figure 3. Standardized Solution Path Diagram**

In diagram 3, the standardized solution trajectory scheme, in addition to the direct effect, there is an indirect effect and a total effect of exogenous and endogenous variables. The output of a linear structural relationship regarding the total standardized effect explains that: (1) the magnitude of the effect  $\xi_1$  to  $\eta_1$ , and  $\eta_2$  to  $\eta_1$  is the same as the magnitude of the direct effect of each variable because there are no other mediating variables. (2) the indirect effect of  $\xi_1$  to  $\eta_2$  through  $\eta_1$  is  $0.88 \times 1.90 = 1.67$ , while the total effect is  $1.67 + 0.93 = 2.6$ .



**Figure 4. T-value path diagram**

## Test the overall fit of the model

Based on the results of the structural model test, the results of goodness of fit can be seen in the following list:

**Table 7. Summary of the model suitability test (Goodness of Fit)**

Index	Result	Recommendation	Conclusion
Probability $X^2$	0,00	>0,05	Close to fit
$X^2/df$	3,94	<5	Very good
RMSEA	0,17	<0,80	Close to fit
AGFI	0,59	<0,90	Close to fit
GFI	0,73	<0,90	Close to fit
CFI	0,87	<0,90	Close to fit
NFI	0,84	<0,90	Close to fit
NNFI	0,84	<0,90	Close to fit
IFI	0,88	<0,90	Close to fit
RFI	0,79	<0,90	Close to fit
ECVI	2,81	<5	Very fit

Overall suitability test of the scheme using  $\chi^2$  (chi-square), satorra-bentler scaled chi-square value is 201.32 and p-value <0.00000. The result of  $\chi^2$  test means that the scheme obtained in total does not fit (good fit). However, the ratio of the value of  $\chi^2$  to degrees of freedom ( $\chi^2 / df$ ) =  $201.32/51 = 3.94$ , which means it is less than the cut-off model fit, namely 5 or  $3.94 < 5$ . So it was decided that controlling the scaled complex has a pretty good fit.

The next test Root Mean Square Error of Approximation is less than 0.80 or RMSEA = 0.17 < 0.80. Adjusted Goodness of Fit Index = 0.59 < 0.90. Test Goodness of Fit Index = 0.73 < 0.90.

Comparative Fit Index and Incremental Fit Index values were less than 0.90 (CFI = 0.87, IFI = 0.88). The value of the Normed Fit Index, Non Normed Fit Index and Relative Fit Index is less than 0.90 (NFI = 0.84 < 0.90 NNFI = 0.84 < 0.90 and RFI = 0.79 < 0.90). The Expected Cross-Validation Index has a value of less than 5 (ECVI = 2.81 < 5) which means, the model has a good fit (Good Fit).

### Positive direct effect of variable $\xi_1$ on variable $\eta_1$

Hypothesis 1 has a positive direct effect  $\xi_1$  (operational reliability) and  $\eta_1$  (responsiveness). The findings of this study lead to a positive direct effect of variable  $\xi_1$  on variable  $\eta_2$  with a value of  $t_{\text{statistics}} > t_{\text{-list}}$ , which is  $4.43 > 1.65$ , so it can be decided that hypothesis 2 is accepted.

### Positive Direct Effect of Variable $\xi_1$ on Variable $\eta_2$

Hypothesis 2 has a positive direct effect on  $\xi_1$  (operational reliability) and  $\eta_2$  (customer satisfaction). The findings of this study lead to a positive direct effect of variable  $\xi_1$  on variable  $\eta_2$  with a value of  $t_{\text{statistics}} > t_{\text{-list}}$ , which is  $2.02 > 1.65$ , it can be decided that hypothesis 2 is accepted.

### Positive Direct Effect of Variable $\eta_1$ on Variable $\eta_2$

Hypothesis 3 has a positive direct effect  $\eta_1$  (responsiveness) and  $\eta_2$  (customer satisfaction). The findings of this study lead to a direct positive effect of variable  $\eta_1$  on variable  $\eta_2$  with a value of  $t_{\text{statistics}} > t_{\text{-list}}$ , which is  $3.01 > 1.65$ , so it can be decided that hypothesis 3 is accepted.

## CONCLUSIONS

Based on the results and discussion, the following conclusions can be drawn:

1. Operational reliability has a direct positive effect on responsiveness. If operational reliability is improved, including the ability to provide services accurately, trustworthy capabilities (professionalism), provide courteous and sympathetic service, provide services correctly and correctly without making mistakes, the responsiveness will also be better. Good knowledge and skills can make it easier for employees to do work effectively and efficiently so that the services provided are best.
2. Operational reliability has a direct positive effect on customer satisfaction. Suppose operational reliability is improved, which consists of the ability to provide services according to promises accurately. In that case, trustworthy capabilities (professionalism), provide services without making mistakes, increase then customer satisfaction will also get better. It can be interpreted that changes in variations in operational reliability will also change customer satisfaction.
3. Responsiveness has a direct positive effect on customer satisfaction. If responsiveness is improved, it includes responsiveness in responding to customer complaints, the desire or willingness of employees to help and take advantage of the speed of service properly. Helpful information and considering suggestions, and being willing to listen to customer complaints can impact customer satisfaction.

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