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The Effect of Customer Relationship Management (CRM) On Customer Satisfaction and Customer Loyalty At Pt. Xyz

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Abstract :
PT. XYZ is a company engaged in handling telecommunication infrastructure problems in Indonesia. The Company is worried that if consumers are dissatisfied, it will impact the loyalty of tenants who manage it so that they will not order services from the Company again because covid 19. CRM study aims to develop a model that can assess the influence of customer relationships management (CRM) to Customers Satisfaction and Customer Loyalty at PT. XYZ, which can finally be used as one of the Company''s decisions in determining future marketing strategies. The research was conducted by measuring the company''s customer relationships management (CRM) on customer satisfaction and customer loyalty through direct observation of the company''s consumers. The model development method used in this study is the quantitative method by distributing questionnaires whose results are processed using structured Partial Equational Model Least Square (SEM-PLS). The results of the descriptive test provide information about the respondent''s perception of the Customer variable Relationships Management is included in the excellent category with an average score of 4.08 or 81.6% of the ideal score. Then the respondent''s assessment of the Customer variable Satisfaction is also in the sound (high) category with an average score of 4.18 (83.7%). the respondent''s perception of the Customer variable, Loyalty is also in the sound (high) category with an average score of 3.48 (81.7%). The analysis results show that Customer Relationships Management positively and significantly affects customers Satisfaction Company with a path coefficient of 0.680 (R2 46.3%) customer Relationships Management has a positive and significant effect on customer Loyalty Company

Keyword*: Customer; Relationship; Management; Loyalty; Satisfaction.*

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I. Introduction

PT. XYZ is a company engaged in handling telecommunication infrastructure problems in Indonesia. Customer satisfaction and customer loyalty are the main concerns of this Company because these two things illustrate a company based on a service company with satisfying service; it will make consumers make repeat orders as a form of their loyalty to the Company. Based on the data from the trouble job ticket 2022 in Figure 1. Most jobs are in the Emergency category, which is a job that does require full support from the Company. Conditions with the COVID-19 outbreak made it difficult for work units in the Company to provide troubleshooting tickets provided by tenants due to limited access to red zone locations which made the field team not dare to go to the location as well as the rejection from residents around the tower who prohibited outsiders from entering their environment. Covid-19 impacts the preferences of tenants who judge that the Company cannot fullfill customer desires, so tenants judge that the Company does not provide satisfaction to tenants. The Company is worried that if consumers are dissatisfied, it will impact the loyalty of tenants who manage it so that they will not order services from the Company again.

Consumer loyalty is one of the best measures of success in any organization, which is not only measured by customer satisfaction[1].company's consumer loyalty can be influenced by customers Relationships Management (CRM) which is one of the business strategies for managing the relationship between the Company and its customers which aims to understand, anticipate and manage customer needs effectively and efficiently so that customers feel satisfied in the services provided[1]. There are six (6) CRM indicators whose variables include Shared Value, Bonding, Trust, Tangibility, Commitment, and Dealing with conflict[1]. CRM, in this case, is responsible for creating customer Satisfaction and Customer Loyalty[1]. As an effort to ensure the level of consumer loyalty to the Company and the efforts that need to be made in order to increase consumer loyalty [1].CRM study aims to develop a model that can assess the influence of customer relationships management

(CRM) to Customers Satisfaction and Customer Loyalty at PT. XYZ, which can finally be used as one of the Company's decisions in determining future marketing strategies.

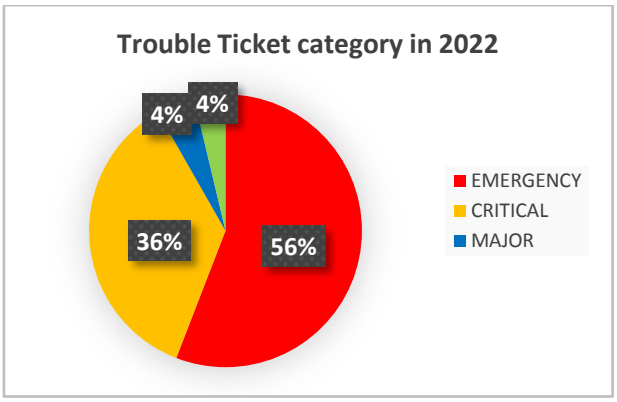

Figure 1.
Trouble category 2022 tickets

II. Material and Methods

The research was conducted by measuring the company's customer relationships management (CRM) on customer satisfaction and customer loyalty through direct observation of the company's consumers. The research framework or theoretical model in this study is presented in Figure 2. The model development method used in this study is the quantitative method by distributing questionnaires whose results are processed using structured Partial Equational Model Least Square (SEM-PLS).There are seven main steps in implementing the SEM-PLS model[2], which include:

1. Development of theoretical models
2. Development of path diagrams
3. Conversion of path diagram into structural equations and measurements models
4. selecting the type of inputs matrix and the proposed model estimation
5. Assessing the identification of structural models
6. Assessing the Goodness - of - Fit criteria
7. Interpretation and modifications of the mode

The number of respondents amounted to 76 respondents. The research strategy applies case studies to the organizational analysis unit of PT. XYZ and its consumers. The research was carried out in 2022. According to hair et al. [3]SEM-PLS isMethod to estimate a structural model containing a series of interrelated dependence relationships (equations) where the dependent construct in one relationship may be a predictor construct in another relationship.Also includes a measurement model where multiple indicators are used to define each construct/variable (known as a latentconstruct) used in the structural model. SEM-PLS is proven to be able to measure the performance of a company's CRM well[1], [2], [4]–[11]. Several studies with the theme of measuring consumer loyalty have been carried out. However, no one has done it in the telecommunication companies field, so this research was carried out in the field of telecommunication service companies. Several studies on measuring consumer loyalty from several previous researchers can be seen in Table 1.

The author makes the following hypothesis regarding the Customer variable Relationships Management, Customers Satisfaction, and Customer Loyalty that occurs in research objects at PT. XYZ on unit sites West Java management by setting the one-tailed hypothesis as follows:

Hypothesis 1:
H0: Customers Relationships Management does not have a significant positive effect on customer loyalty.
H1: Customers Relationships Management has a significant favorable influence on customer loyalty.

Hypothesis 2:
H0: Customer satisfaction does not have a significant positive effect on customer loyalty.
H1: Customer satisfaction has a significant positive effect on customer loyalty.

Hypothesis 3:
H0: Customers Relationships Management does not have a significant positive effect on customer satisfaction.
H1: Customers Relationships Management has a significant favorable influence on customer satisfaction.

Hypothesis 4:

H0: Customers Relationships Management does not significantly affect customer loyalty, with customer satisfaction as an intervening variable.

H1: Customer Relationships Management significantly influences customer loyalty, with customer satisfaction as an intervening variable.

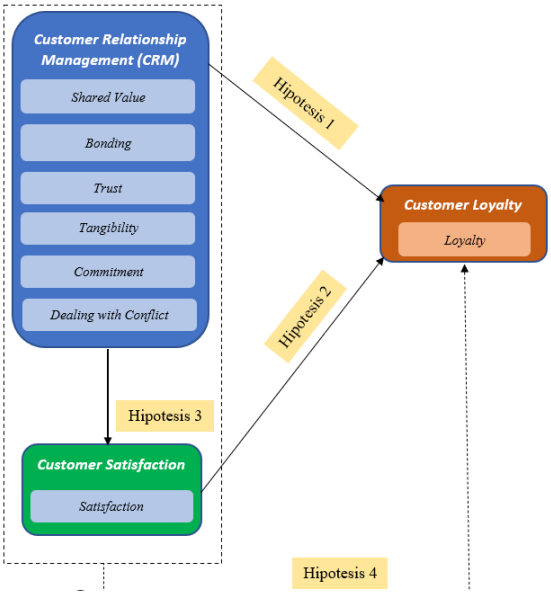

Figure 2. Theoretical Model

The variables, sub-variables, and questionnaires used in this study are presented in Table 1.

Table 1.Several Studies on Measuring Consumer Loyalty

No	Variable	Sub Variable	Definition	Statement Items	Item No
1	*customers Relationships Management (CRM)*	*shared Value*	The degree to which partners share beliefs about what behaviors, goals, and policies are important, unimportant, appropriate or inappropriate, and right or wrong.[1]	I feel that the *Operation* and *Maintenance* services provided by the Company are in accordance with the rental value paid	1
				I am involved by the Company in making decisions related to service quality	2
		bonding	Bonds in controlling social and business behavior in society can dispel doubts, form close relationships, and build trust. [1]	I feel the Company strengthens relationships with customers	3
				I feel part of the Company	4
				I feel the Company always keeps its promises	5
		Trusts	Trust is the company's willingness to rely on its business partners. It depends on a number of interpersonal and inter-organizational factors, such as competence, integrity, honesty and perceived benevolence of the company.[12]	I believe in the promises made by the Company	6
				I was involved in data confidential information held by the Company	7
				I trust the information provided by the Company	8
		Tangibility	Tangibility plays a very important role in relationship marketing and even sometimes emotions are used to keep promises. Every relationship needs a physical aspect to build it stronger. Physical facilities, equipment, and appearance of personnel play an important role in doing relational marketing.[1]	I see Company employees being polite and having good manners	9
				I see the tower owned by the Company is neat and clean	10
				I know the Company has a complete tool in handling *troubleshot operation* and *Maintenance*	11
		commitment	commitment is a strong, stable and ongoing tendency to maintain and maintain a valuable relationship. [1]	I believe the Company can commit to providing a highquality service	12
				I believe the Company can fullfill their commitment to customers	13

No	Variable	Sub Variable	Definition	Statement Items	Item No
				I believe the Company is committed to maintaining quality levels according to SLA standards	14
		dealing with conflict	The stronger the relationship, the easier the conflict can be resolved. [1]	I feel the Company takes customer complaints seriously	15
				I am aware of a stated written procedure for dealing with complaints	16
				I get offers of solutions to complaints at the right time	17
2	*customers False Satisfaction (2019:16)*	*Satisfaction*	Consumer satisfaction is a person's feelings of pleasure or disappointment based on a comparison between the reality obtained and the expectations that consumers have. [13]	I am satisfied with the services provided by the Company	18
				I feel the services provided by the Company meet expectations	19
				I am satisfied with the communication the Company has made with me	20
				I am satisfied with the speed of turnaround time carried out by the Company	21
				I am satisfied with the quality of work provided by the Company	22
				Overall, I am satisfied with the Company's services	23
3	*customers false loyalty (2019:16)*	*Loyalty*	A deeply held commitment to repurchase or protect a preferred product or service in the future despite situational influences and marketing efforts that have the potential to cause a shift in behavior. [12]	I will do a *repeat order* with the company	24
				I share positive things about the company	25
				I feel proud when I use the Company's products	26
				I will recommend other companies to use the company's products	27

III. Results

3.1. Analysis of Respondent Characteristics

The characteristics of the respondents in this study were identified based on gender, age, last education, position, and years of service[14]. The number of respondents who became the data source in this study was 76 respondents who were the company's customers. The following are the characteristics of the 76 respondents who became the sample. Results recapitulation from characteristic respondents in research this could see in Table 2.

Table 2. Characteristics Respondents

Characteristics	Amount	Percentage		Characteristics	Amount	Percentage
Gender				**Position**		
Men	69	90.8%		Supervisor	48	63.2%
women	7	9.2%		manager	28	36.8%
Age (Years)				**period time from start working**		
21-30 Years	6	7.9%		<= 1 year	0	0.0%
31-40 years	46	60.5%		1-2 Years	9	11.8%
41-50 years	21	27.6%		2-5 Years	29	38.2%
> 50 years	3	3.9%		>5 Years	38	50.0%
Educational Level						
HIGH SCHOOL	0	0.0%				
Vocational Graduate	7	9.2%				
Undergraduate	63	82.9%				
Postgraduate	6	7.9%				

3.2. Descriptive Analysis

Descriptive Statistical Analysis is performed to analyze data by describing or describing the data that has been collected as it is without intending to make general conclusions or generalizations. The data used for further descriptive statistical analysis is data regarding the respondents' answers to the questionnaire that has been submitted. The description of the respondent's response data can enrich the discussion; the description of the respondent's score data shows how the condition of each variable indicator is being studied.

Categorizing the average score of respondents' responses in each unit of analysis based on the maximum score range and the minimum score divided by the desired number of categories is done to facilitate the interpretation of the response results for each variable. Respondents' responses to each question item were categorized into five categories consisting very good, good, fair, not good, and very bad with the following calculations

- Maximum Index Value = Highest scale = 5 x 76 = 380
  Highest percentage = 380 / 380 x 100% = 100%
- Minimum Index Value = Lowest scale = 1 x 76 = 152
  Lowest percentage = 76 / 380 x 100% = 20%
- Interval Range = [maximum value - minimum value] : 5
  = (100% – 20%) : 5 = 16%

Customer Relationships Management is measured by six dimensions consisting of 17 statement indicators. Recapitulation of the results of respondents' responses to each dimension of the Customer sub-variable Relationships Management is presented in Table 3. Based on the processing results presented in Table 3, it can be seen that the total score for Customer Relationships Management (CRM) is 6201. Ideally, the expected score for respondents' answers to 20 questions is 7600. The calculations in Table 3 shows the value obtained is 6201 or 81.6% of the ideal score of 7600 and an average score of 4 08 of the ideal value of 5; thus the Customer Relationships Management (CRM) is in the excellent category.

Table 3. Recapitulation Answer Questionnaire Customers Relationship Management _

No	Sub Variable	Total Score	Average Score	% Score	Category
1	*shared Value*	1243	4.09	81.8%	Well
2	*bonding*	929	4.07	81.5%	Well
3	*Trusts*	910	3.99	79.8%	Well
4	*Tangibility*	1251	4.12	82.3%	Well
5	*Commitment*	942	4.13	82.6%	Well
6	*dealing with conflict*	926	4.06	81.2%	Well
CRM		6201	4.08	81.6%	Well

The recapitulation of the results of questions about customer Satisfaction and Customer Loyalty is presented in Table 4 and Table 5. When viewed from the average dimensions, the highest respondents' ratings are in the Commitment and Tangibility dimensions, with respective scores of 4.13 or 82.6% and 4.12 or 82.3%. At the same time, the lowest rating is found in the Trust dimension of 3.99 or 79.8%.

Table 4. Recapitulation Customer Satisfaction Answers

No	Statement	1	2	3	4	5	Amount	Total Score	Ideal Score
1	I am satisfied with the services provided by the Company	0	0	2	51	23	76	325	380
		0.0	0.0	2,6	67,1	30,3	100.0	85.5	
2	I feel the services provided by the Company meet expectations	0	0	4	51	21	76	321	380
		0.0	0.0	5,3	67,1	27,6	100.0	84.5	
3	I am satisfied with the communication the Company has made with me	0	0	2	50	24	76	326	380
		0.0	0.0	2,6	65,8	31,6	100.0	85.8	
4	I am satisfied with the speed of turnaround time carried out by the Company	0	0	4	60	12	76	312	380
		0.0	0.0	5,3	78.9	15,8	100.0	82,1	
5	I am satisfied with the quality of work provided by the Company	0	0	4	63	9	76	309	380
		0.0	0.0	5,3	82.9	11,8	100.0	81.3	
6	Overall, I am satisfied with the Company's services	0	0	4	57	15	76	315	380
		0.0	0.0	5,3	75.0	19,7	100.0	82.9	
Total Score Total								1908	
Score Percentage								83.7%	

Table 5. Recapitulation Answer customers Loyalty

No	Statement	1	2	3	4	5	Amount	Total Score	Ideal Score
1	I will do a repeat order with the company	0	0	6	55	15	76	313	380
		0.0	0.0	7,9	72,4	19,7	100.0	82.4	
2	I share positive things about the Company	0	0	2	61	13	76	315	380
		0.0	0.0	2,6	80.3	17,1	100.0	82.9	
3	I feel proud when I use the Company's products	0	0	7	57	12	76	309	380
		0.0	0.0	9,2	75.0	15,8	100.0	81.3	
4	I will recommend other companies to use the company's products	2	0	4	59	11	76	305	380
		2,6	0.0	5,3	77,6	14.5	100.0	80.3	
Total Score Total								1242	
Score Percentage								81.7%	

3.3. SEM-PLS

3.3.1. Path Diagrams

The SEM structural model in this study tested several hypotheses including:

a. *customers Relationships Management* can influence the customer Satisfaction and Customer Loyalty.
b. customers Satisfaction can affect customers Loyalty.
c. *customers Relationships Management* is influenced by *the Customer shared Value, Customer Bonding, Customer Trust, Customer Tangibility, and Customers Commitment.*

The SEM estimation method used in this study is the Partial method Least Square considering the number of samples <100 respondents and nonparametric cases[3]. The complete structural model path diagram design in this study can be seen in Figure 3.

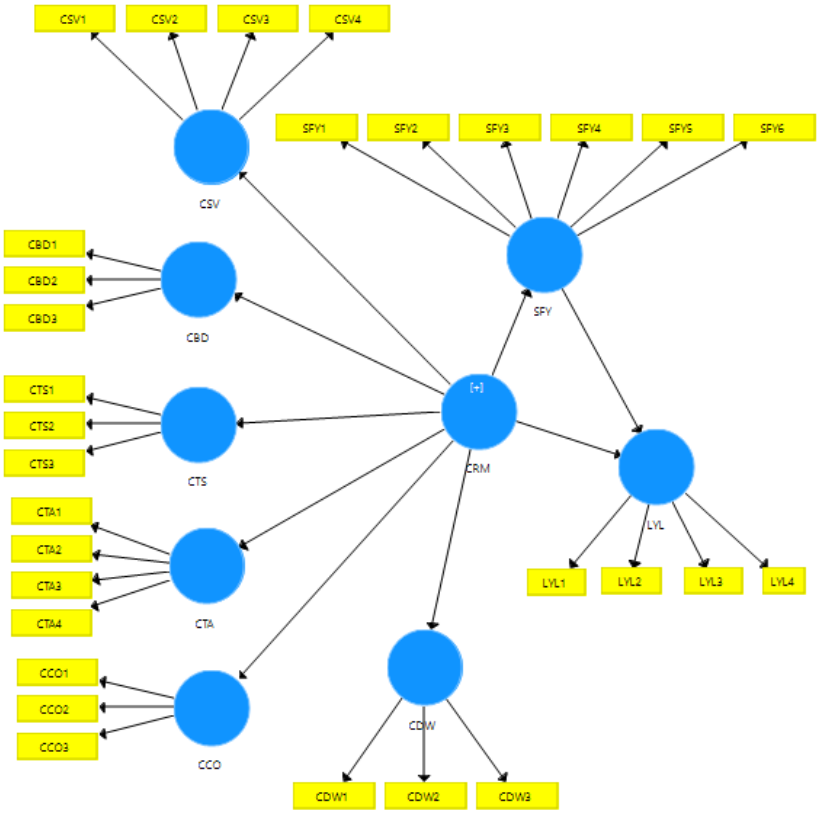

Figure 3. Full Model Structural Diagram Design

3.3.2. Measurement model analysis

Measurement model analysis is an analysis carried out to examine the relationship between latent variables and manifest variables. Evaluation of model measurement results in this analysis uses the confirmatory method—factor analysis by testing the validity and reliability of latent constructs. The measurement model test consists of convergent validity, discriminant validity, and reliability tests.

3.3.2.1. Convergent Validity and Reliability

Convergent validity is carried out to measure the degree of correlation of the manifest variables of a construct. The rule of thumb usually used to assess convergent validity is by looking at the loading value factor. If the loading value factor manifests the variable of a construct > 0.7, then the model is confirmatory. If the loading value of the manifest variable of a construct is between 0.6-0.7 and the average value variances extracted (AVE) > 0.5, then the model is exploratory. In other literature, a value > 0.5 is still considered sufficient (chin, 1998; Hair et al., 2019).

A reliability test was conducted to test the instrument's accuracy, consistency, and precision in measuring constructs. A reliability test can be done by paying attention to the composite value reliability (Hair et al., 2019). rules of thumb that are usually used to assess construct reliability for confirmatory models (research that does measure not only patterns and relationships but also model suitability) is Cronbach's value alpha > 0.7 sd. 0.95, and if the model is exploratory (research that focuses on exploring data patterns and identifying relationships), then Cronbach's value alpha must be between 0.6 – 0.7. (Hair et al., 2019). This study examines the relationship between 9 latent variables measured by 38 indicators. Loading The factor in the structured model of the PLS algorithm can be seen in Figure 3, and the loading value recapitulation factor, average variances extracted (AVE), and the construct reliability value (CR) in this study can be seen in Table 6.

Table 6.LF, AVE, and CR recapitulation table

Construct	Indicator	Factor Loading	T Statistics	Conclusion	AVE	CR (Cronbach's alpha)	Conclusion
1st order Customer Relationships Management							
customers shared Values (CSV)	CSV1	0.8	16,994	Vallid	**0.516**	**0.954**	Reliable
	CSV2	0.843	13.023	Vallid			
	CSV3	0.769	6,380	Vallid			
	CSV4	0.72	5,293	Vallid			
customers Bonding (CBD)	CBD1	0.78	16,706	Vallid	**0.615**	**0.864**	Reliable
	CBD2	0.668	3,779	Vallid			
	CBD3	0.9	26,383	Vallid			
Customer Trust (CTS)	CTS1	0.818	16,698	Vallid	**0.622**	**0.830**	Reliable
	CTS2	0.522	3,632	Vallid			
	CTS3	0.841	9,094	Vallid			
customers Tangibility (CTA)	CTA1	0.754	15,724	Vallid	**0.587**	**0.808**	Reliable
	CTA2	0.696	5,259	Vallid			
	CTA3	0.783	5.015	Vallid			
	CTA4	0.846	6,277	Vallid			
customers Commitment (CCO)	CCO1	0.844	14,831	Vallid	**0.596**	**0.854**	Reliable
	CCO2	0.888	16,736	Vallid			
	CCO3	0.864	13,984	Vallid			
customers dealing with Conflicts (CDW)	CDW1	0.912	25,526	Vallid	**0.749**	**0.899**	Reliable
	CDW2	0.799	10.202	Vallid			
	CDW3	0.841	8,629	Vallid			
2nd order Customer Relationships Management							
customers Relationships Management (CRM)	CSV	0.878	23,903	Vallid	**0.726**	**0.888**	Reliable
	CBD	0.869	18,220	Vallid			
	CTS	0.854	16,093	Vallid			
	CTAs	0.951	46,664	Vallid			
	CCO	0.855	20,200	Vallid			
	CDW	0.958	84,463	Vallid			
1st order Customer Satisfying							
Customer Satisfaction (SFY)	SFY1	0.844	18.58701	Vallid	**0.714**	**0.937**	Reliable
	SFY2	0.824	15.74802	Vallid			
	SFY3	0.789	13.42726	Vallid			
	SFY4	0.842	15.59020	Vallid			
	SFY5	0.836	16.91795	Vallid			
	SFY6	0.929	46.78267	Vallid			
1st order Customer Loyalty							
customers Loyalty (LYL)	LYL1	0.846	23.01718	Vallid	**0.700**	**0.903**	Reliable
	LYL2	0.79	11.00298	Vallid			
	LYL3	0.821	15.32877	Vallid			
	LYL4	0.888	22.66888	Vallid			

3.3.2.2. Discriminant Validity

Discriminant validation is carried out to ensure that construct measurements on different variable dimensions do not have or have a lower correlation than construct measurements on the same variable dimension. The discriminant validity test on the PLS-SEM was carried out by considering the cross-value loading for the first order. Cross-value recapitulation loading in this study can be seen in Table 7.

Table 7. Discriminant Validity Test Cross loading

	CBD	CCO	CDW	CSV	CTAs	CTS	LYL	SFY
CBD1	0.780	0.474	0.607	0.662	0.578	0.482	0.538	0.437
CBD2	0.668	0.400	0.472	0.449	0.498	0.601	0.457	0.367
CBD3	0.900	0.589	0.805	0.726	0.686	0.640	0.656	0.628
CCO1	0.577	0.844	0.666	0.690	0.648	0.566	0.566	0.593
CCO2	0.490	0.888	0.589	0.490	0.652	0.582	0.567	0.537
CCO3	0.552	0.864	0.800	0.496	0.800	0.648	0.563	0.487
CDW1	0.754	0.733	0.912	0.690	0.762	0.619	0.643	0.610
CDW2	0.646	0.669	0.799	0.808	0.791	0.624	0.503	0.453
CDW3	0.676	0.633	0.841	0.599	0.807	0.726	0.628	0.579
CSV1	0.577	0.843	0.815	0.800	0.778	0.573	0.552	0.536
CSV2	0.502	0.615	0.669	0.843	0.611	0.419	0.307	0.292
CSV3	0.668	0.152	0.449	0.769	0.426	0.440	0.384	0.333
CSV4	0.760	0.263	0.567	0.720	0.577	0.588	0.515	0.443
CTA1	0.608	0.658	0.676	0.720	0.754	0.616	0.626	0.548
CTA2	0.633	0.625	0.664	0.743	0.696	0.561	0.497	0.485
CTA3	0.484	0.556	0.705	0.414	0.783	0.634	0.516	0.392
CTA4	0.580	0.657	0.797	0.526	0.846	0.678	0.563	0.490
CTS1	0.523	0.724	0.664	0.646	0.757	0.818	0.664	0.672
CTS2	0.490	0.161	0.464	0.390	0.450	0.621	0.356	0.148
CTS3	0.660	0.593	0.618	0.428	0.607	0.841	0.571	0.526
LYL1	0.604	0.575	0.632	0.518	0.606	0.593	0.846	0.726
LYL2	0.456	0.460	0.457	0.367	0.562	0.537	0.790	0.654
LYL3	0.610	0.493	0.519	0.425	0.488	0.572	0.821	0.588
LYL4	0.679	0.643	0.694	0.572	0.722	0.681	0.888	0.682
SFY1	0.387	0.547	0.533	0.393	0.579	0.503	0.613	0.844
SFY2	0.556	0.531	0.584	0.446	0.543	0.567	0.648	0.824
SFY3	0.446	0.464	0.378	0.402	0.448	0.463	0.589	0.789
SFY4	0.513	0.463	0.562	0.419	0.517	0.478	0.682	0.842
SFY5	0.630	0.569	0.578	0.489	0.503	0.581	0.720	0.836
SFY6	0.580	0.574	0.601	0.489	0.575	0.599	0.755	0.929

Based on Table 7, it can be seen that all indicators have the highest correlation on latent variables with red background; for example, Satisfaction question no 1 (SFY1), SFY2, SFY3, SFY4, SFY5, and SFY6 have cross values with the highest loading on the SFY variable, as well as other indicators that have the highest correlation with the measured variable compared to other variables. Based on this, it can be concluded that the model has good discriminant validation.

3.3.3. Structural Model Analysis

Structural model analysis was carried out to determine the relationship between exogenous latent variables and endogenous latent variables or the relationship between endogenous variables and other endogenous variables. Some of the structural model tests carried out include testing R Square (R^2), Q Square (Q^2), and Goodness of Fit (GoF).

3.3.3.1. R Square test

R Square test (R^2) is carried out to check how much the manifest (independent) variables can explain the latent (dependent) variables. The results of the R Square test in this study can be seen in Table 8.

Table 8. *R Square* Results

Connection	*Path*	Partial R2	Total *R- Square*
customers Relationships Management -> Customers Satisfaction	0.680133	-	0.463
customers Relationships Management -> Customers Loyalty	0.392514	0.304426	0.713
customers Satisfaction -> Customer Loyalty	0.526978	0.408713	

Based on Table 8, it can be seen that the customer variable satisfaction can be explained by 0.463 (46.3%) by the Customer Variable Relationships Management and there is 53.7% which cannot be explained in other variables outside the model. The value of 46.3% is included in the moderate (moderate) category. Next, Customers Loyalty can be explained by 0.713 (71.3%) in total by the Customer variable Relationships Management and Customer Satisfaction. The value of 71.3% includes a good (high) model. If viewed partially, the customer variable satisfaction gives a more dominant weight of 40.8% compared to the CRM variable of 30.4% in explaining the Customer variable Loyalty. There are 28.7% of the unexplained variables outside the model.

3.3.3.2. Q Square test

Q Square test is an alternative that can measure how much a manifest variable can explain a latent variable. The results of the Q Square test in this study can be seen in Table 9.

Table 9. Predictive results relevance Q Square

Endogenous Variables	SSO	SSE	Q2	Conclusion
CUSTOMER LOYALTY	304	158,341	0.479	Has *predictive Relevance*
CUSTOMER SATISFACTION	456	308,651	0.323	Has *predictive Relevance*

Source: 2022 Research Data Processing

Table 9 shows that the variable Customer Loyalty and Customer Satisfaction has a value of Q 2 > 0, which means that the model can be used as a relevant predictive model.

3.3.3.3. GoF Test

Goodness Testing of fit (GoF) is performed to validate the combined performance of the measurement model and the structural model, which is for overall validation of whether this model can be used. The GoF value of the index is calculated based on the multiplication between the averages communalities index and R 2 Model. The Goodness Value of Fit in this research model is as follows:

$$GoF = \sqrt{\overline{AVE}\ x\ \overline{R^2}}$$

GoF = √((0.647) x (0.356))

GoF = 0.486

Based on the results of these calculations, the *GoF value is obtained* of 0.486, which means that the model in this study is included in the *GoF*categoryBig.

3.3.3.4. Model Structural Analysis

The next step after evaluating the goodness of fit, namely the structural model analysis stage[14]. This stage is carried out to conclude the direct or indirect influence of the hypotheses from the structured relationships formed. The structural relationship hypotheses include the following:

a. *customers Relationships Management* has influence over the *customer Satisfaction* (H1)
b. *customers Relationships Management* has influence over the *customer Loyalty* (H2)
c. *customers Satisfaction* has an influence on *customers Loyalty* (H3)
d. *customers RelationshipManagement* has influence over the *customer Loyalty with Customer* mediation *Satisfaction*. (H4)

the results of the recapitulation analysis were carried out by taking into account the Path Coefficient, T-statistics, and P-Value[14]. The results of the path coefficient, T-statistic, and P- value in this study can be seen in Table 10.

Table 10. Statistical Test

hypothesis	Connection	*Path* (Path Coefficient)	T-Statistics	*P- Value*	Conclusion
Direct effects					
1	*customers RelationshipsManagement -> Customer Satisfaction*	0.680	5,945	0.000	H1 Accepted
2	*customers RelationshipsManagement -> Customer Loyalty*	0.393	3,000	0.003	H2 Accepted
3	*customers Satisfaction ->customers Loyalty*	0.527	4,465	0.000	H3 Accepted
Indirect effects					
4	*customers RelationshipsManagement -> Customer Satisfaction -> CustomerLoyalty (Indirect)*	0.358	3,894	0.000	H4 Accepted
	customers RelationshipsManagement -> Customer Loyalty (Total Effect)	**0.751**	**6,956**	0.000	

In addition, do an analysis based on the effect size f two, which in this study the results can be seen in Table 11. The value of f^2 provides information about the influence of each manifest variable on the latent variable and the magnitude of its effect. The f two analysis guidelines can refer to the guidelines of Cohen (1988)[14], which shows that, if the value of f^2<0.02 then the manifest variable does not affect the latent variable:

- if the value of $f^2 \geq 0.02$ then the manifest variable has a small effect on the latent variable
- if the value of $f^2 \geq 0.15$ then the manifest variable has a moderate effect on the latent variable
- if the value of $f^2 \geq 0.35$ then the manifest variable has a large effect on the latent variable

Table 11. Recapitulation of test results f^2

	Latent variable	
Manifest Variable	**CRM**	**CUSTOMER SATISFACTION**
CRM		
CUSTOMER BONDING	3,094	
CUSTOMER COMMITMENTS	2,725	
CUSTOMER DEALS	11.256	
CUSTOMER LOYALTY	0.289	0.520
CUSTOMER SATISFACTION	0.861	
CUSTOMER SHARE VALUE	3,376	
CUSTOMER TANGIBILITY	9,490	
CUSTOMER TRUST	2,703	

IV. Discussion

1. Customer Influence Relationships Management of Customers Satisfaction

Based on the results of hypothesis testing in Table 10 first line and Table 11, it can be seen that CRM is influenced by Customer Satisfactioncompany of 0.68. there is a positive influence between the Customer variable Relationships Management of Customers Satisfaction of 0.762. there is a positive influence between customer Relationships Management of Customers Satisfaction of 0.73.

Customer Relationships Management within the scope of Management is a mutually beneficial cooperative relationship between service providers and customers. Customer Activities Relationships Management does not only emphasize product sales but focuses more on overall interaction with elements of business activities managed by the company. Customers Relationships Management is a business strategy to increase company profits. Customers Relationships Management is a process full of consideration in understanding and managing detailed information about individual consumers and consumers in groups to touch consumers, thereby increasing loyalty[12]. The main program of Customer activities Relationships Management at the Companies in the tower supply services conduct operations and maintenance as best as possible to take care of customer satisfaction, for example, doing trouble tickets following the SLA with the tenant.

2. Customer Influence Relationship Management of Customers Loyalty

Based on the results of hypothesis testing in Table 10, second row, and Table 11, it can be seen that Customer Relationships Management can be influenced by the Customer Loyalty The company is 0.393. This can be seen from the customers of Companies that reuse the services provided by the company share positive things about The company feels proud to cooperate with company and recommends it to others. there is a positive influence between the Customer variable Relationships Management of Customers Loyalty of 0.331.

The company's continuity depends on its ability to maintain its customers so that customers can be loyal to the company. Loyal customers are an essential asset the company must maintain to continue competing and developing. Customer loyalty is a deeply held commitment to repurchase or re-patronize a preferred product or service in the future, even though situational influences and marketing efforts have the potential to cause switching behavior[12]. Company maintaining consumer loyalty, the company carries out intimate activities with customers and maintains operation and maintenance work following the applicable SLA with tenants. For example, such as carrying out joint activities with customers.

3. Customer Influence Satisfaction to Customers Loyalty

Based on the results of hypothesis testing in Table 10, third row, and Table 11, Customer Satisfaction affects customer Loyalty company is 0.527. This can be seen from providing good operation and maintenance services so that consumers are satisfied and all customers have made repeat orders to Company.

Customer Influence Satisfaction to Customers, there is a positive influence between the Customer variable Satisfaction to Customers Loyalty of 0.524. Companies are required to fullfill customer satisfaction, so companies must be sensitive to seeing shifting needs and desires that change quickly. Buyers will consider

satisfaction based on expectations and the price paid. Customer satisfaction depends on perceived product performance relative to buyer expectations [15].

4. Customer Influence Relationships Management of Customers Loyalty mediated by the Customer Satisfaction

Based on the results of hypothesis testing in Table 10, fourth row, and Table 11, it can be seen that Customer Relationships Management influences the Loyalty of PT. Customer-mediated company Satisfaction of 0.358 indirectly with a total effect of 0.751. There is a positive influence between the Customer variable Relationships Management of Customers Loyalty mediated by the Customer Satisfaction of 0.400.

V. Conclusion

The results of the descriptive test provide information about the respondent's perception of the Customer variable Relationships Management is included in the excellent category with an average score of 4.08 or 81.6% of the ideal score. Then the respondent's assessment of the Customer variable Satisfaction is also in the sound (high) category with an average score of 4.18 (83.7%). Likewise, with the respondent's perception of the Customer variable, Loyalty is also in the sound (high) category with an average score of 3.48 (81.7%). The analysis results show that Customer Relationships Management positively and significantly affects customers Satisfaction Company with a path coefficient of 0.680 (R2 = 46.3%); customer Relationships Management has a positive and significant effect on customer Loyalty Company with the acquisition of a path coefficient of 0.393 (R2 = 30.4%), Customer Satisfaction has a positive and significant effect on customers Loyalty companies with a path coefficient of 0.527 (R2 = 40.9%), Customer Relationships Management has a positive and significant effect on customers Loyalty mediated by the Customer Satisfaction the Companies with an indirect coefficient acquisition effect of 0.358, so that the total effect is obtained from customers Relationships Management has a positive and significant effect on customers Loyalty mediated by the Customer Satisfaction of 0.751 (R2 = 71.3%).

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