The Effect of Service Quality on Loyalty of Tri Indonesia Cellular Operator

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Abstract - This research was conducted to explain service quality as the main factor that determines the level of customer satisfaction in service quality dimensions. In addition, this research investigates whether the level of service quality provided by Tri Indonesia can increase customer satisfaction in using Tri cellular operator. The respondents of this research were Tri cellular operator users in Indonesia which were divided into three regions with a total sample of 400 respondents and conducted using non-probability sampling technique. Data processing tools was PLS-SEM and the findings indicated that there was a significant effect between service quality and loyalty. Moreover, this research can be used as a competitive strategy with business competitors, and can measure the quality performance provided by companies by looking at the level of consumer loyalty.

Keywords - Cellular Operator, Indonesia, Loyalty, Service Quality, Tri.

I. INTRODUCTION

PT Hutchison 3 Indonesia (H3I) is a cellular operator providing telecommunications services with a national license with a 2G, 3G and 4G LTE GSM network in Indonesia. PT H3I launched a service provider product called "3" (Tri) which was established in 2007. Tri Indonesia is committed to providing competent and affordable telephone, SMS and internet-based communication services because it has spread to 227 cities in Indonesia. The high demand for smart phone usage has caused many cellular operator products to cause fluctuating conditions in the community regarding the selection of providers to be used because customers do not only have one card, but they have two kinds of cards that are used from one smart phone^[27].

In accordance with the condition of the use of Tri cellular operator services in Indonesia, in the period of 4 years during 2014-2018, Tri Indonesia tended to not have many users compared to competitors. In 2014 Tri Indonesia cellular service operators had 50,160,000 users, in 2015 there were 55,500,000 users, in 2016 there were 55,500,000 users, in 2017 there were 63,617,547 users, and in 2018 there was a significant decrease to 32,315,440 users. This is when totaled as many as 257,092,987 users and get the fourth position out of the five total user users in Indonesia within 4 years^{[10][25][27][29]}.

This research was conducted using an outer model evaluation method whose purpose is to find out the performance of the research instrument and the inner model evaluation using R^2 as a measure of the degree of variation in a change from a variable independent of the dependent variable. The purpose of this study is to show how much impact Service Quality has on customer loyalty.

II. LITERATURE REVIEW

Marketing is a method of creating relationships with customers that can be attempted with the method of delivering products to customers themselves. Aspects obtained in marketing include pricing, determining product choices, distribution, and promotion. Marketing activities must be driven by capabilities gained in an organization, successful marketing activities can realize organizational goals^{[14][26]}. Service is a non-product service that has benefits that can be offered to others and is intangible^{[14][19]}.

Service quality is an activity in serving customers with, paying attention to important aspects such as high quality, achieving high market share, can increase company profits. While customer service is an activity in marketing products / services. Therefore, service quality is an indicator of the company in carrying out services to customers by its employees. Services determined by service quality will be of higher quality and in accordance with the choice of the consumers^[23].

Measuring power in service quality is determined by various multi-item scales that have been set up in order to know customer perceptions and expectations, such as tangible, empathy, responsiveness, reliability, assurance^[26].

Loyalty is a strength of the relationship of individual attitudes in relation to repetition and loyalty, where the individual is committed to being a customer in a buying and selling activity that occurs repeatedly and consistently^[18].

A. Hypothesis

Hypothesis is an unexpected relationship of two variables that are tested through empirical so that it can be formulated in a proposition^[9].

H₁: Tangibles has a positive effect on loyalty

H₂: Reliability has a positive effect on loyalty

H₃: Responsiveness has a positive effect on loyalty

H₄: Assurance has a positive effect on loyalty

H₅: Empathy has a positive effect on loyalty

B. Population and Sampling

Population is a whole with a number that includes objects and has certain criteria that have been determined in a study in order to create results and conclusions^[21]. This study looked for populations with the criteria of Tri Indonesia cellular operator users and who had visited / contacted outlets / call centers.

The sampling method is a way to get selected samples by random sampling^[6]. The formula used is the Slovin formula and produces a total of 400 respondents. This study will use a regional division, namely the West Indonesia Region at 338 samples, the Central Indonesia Region at 64 samples, and the Eastern Indonesia Region at 8 samples.

III. METHOD

The research methodology used in this study is quantitative methods. Quantitative research is a form of scientific research by examining a problem that relates a phenomenon to the intended variable or based on a causal relationship. The type of research investigation is to use the causal type to find out the cause of the problem based on the time of this research using a cross section method, which is a type of survey that examines an object between one or more variables^{[11][12][21]}.

A. Test Validity and Reliability

Validity test is useful for testing selected research instruments in order to determine the measurement of the level of accuracy in measuring data that should be measured or not^[7].

Reliability test is a useful measurement tool to determine the consistency of the measurement results. This measurement works by comparing the results of one study with another will show the same thing or not. The reliability test of instrument items in this study is in the form of a scale with the Cronbach Alpha^[22].

B. Partial Least Square

Partial least square Is a technique in multivariate statistical analysis that compares multiple dependent variables at once. The purpose of this PLS is to be able to predict the effect of variable X against Y and see the theoretical relationship of the two variables^[1].

Outer model is an evaluation activity that is useful to find out how much the performance of research instruments. This research can be done if it has carried out the verification stage of the relational and causal relationships of the model to be predicted^[1].

The inner model is the evaluation activity using R^2 in the dependent construct. The trick is to test the significance of the value of the path coefficient of each path contained in the structural model. The value of R^2 is useful as a measure of the degree of variation in the change of an independent variable to the dependent variable. If the R^2 value is higher, it means the better the prediction model of the study^[1].

IV. RESULTS

The Hypotheses were tested by PLS-SEM using Smart PLS 3.0. and the results are as follows:

Fig 1. Model Partial Least Square (PLS)

A. Outer Model

Outer loading or loading factors can test convergent validity. An indicator is declared to meet convergent validity if the outer loading value is more than 0.7. Here are the results of the calculation of the outer loading of each indicator variable examined.

Tabel 1. Outer Loading

Variabel	Indikator	Outer Loading
Assurance (X1)	As1	0.864
	As2	0.851
	As3	0.710
	As4	0.731
Empathy (X2)	Em1	0.964
	Em2	0.969
	Em4	0.878
Loyalty (Y1)	Lo1	0.908
	Lo2	0.912
	Lo3	0.902
	Lo4	0.898
	Lo5	0.897
Reliability (X3)	Ri1	0.733
	Ri3	0.808
	Ri4	0.786
	Ri5	0.762
Responsiveness (X4)	Rn1	0.748
	Rn2	0.752
	Rn3	0.746
	Rn4	0.753
Tangible (X5)	Ta1	0.965
	Ta2	0.960

According to the data in Table 1 and Figure 1, it can be seen that each indicator of the research variable shows an outer loading value of more than 0.7. So that means that all indicators in this study are valid used in the study. The next step is to observe the results of outer loading and the results of the discriminant convergent can be identified through the average variant extracted (AVE) value of each indicator. The requirement for AVE is 0.5 to be said to be valid.

Tabel 2. Average Variant Extrancted (AVE)

Variable	AVE
Assurance	0.627
Empathy	0.879
Loyalty	0.816
Reliability	0.597
Responsiveness	0.562
Tangible	0.926

Based on Table 2, AVE value of each indicator variable is assurance at 0.627, Empathy 0.879, Loyalty 0.816, Reliability 0.597, Responsiveness 0.562, and Tangible 0.926. According to these data, it can be concluded that the average value produced is more than 0.5. This means that the research instruments distributed are valid. Furthermore as seen in Table 3, composite reliability were considered good.

Tabel 3. Composite Reliability

Variable	Composite Reliability
Assurance	0.870
Empathy	0.956
Loyalty	0.957
Reliability	0.856
Responsiveness	0.837
Tangible	0.962

Composite Reliability that has been generated from each of the indicators - this research gets results of Assurance 0.870, Empathy 0.956, loyalty 0.957, Reliability 0.856, Responsiveness 0.837, Tangible 0.962 resulting in an average number of more than 0.6, so it has a high level of reliability. Cronbach alpha is a reliability test to strengthen the value of composite reliability. In accordance with Table 4, it can be seen if the variable can be declared reliable if it has met the requirements of Cronbach Alpha with a Cronbach Alpha value of more than 0.7.

Tabel 4. Cronbach Alpha

Variable	Cronbach alpha
Assurance	0.803
Empathy	0.931
Loyalty	0.944
Reliability	0.788
Responsiveness	0.752
Tangible	0.921

Data from the Table 4 shows the Assurance level of 0.803, Emphaty 0.931, Loyalty 0.944, Reliability 0.788, Responsiveness 0.752, and Tangible 0.921. If it is concluded that the average value generated is more than 0.7, it can be concluded that all questions distributed are valid. To analyze the results of discriminant validity, you can use the value of cross loading in each of the biggest indicators when compared with other variables. The following results from cross loading in each indicator can be seen in Table 5.

Tabel 5 : Cross Loading

Indicator	Assurance	Empathy	Loyalty	Reliability	Responsiveness	Tangible
As1	0.864	0.557	0.709	0.540	0.523	0.575
As2	0.851	0.518	0.628	0.487	0.483	0.514
As3	0.710	0.410	0.451	0.556	0.566	0.338
As4	0.731	0.502	0.503	0.637	0.639	0.407
Em1	0.632	0.964	0.788	0.644	0.724	0.555
Em2	0.639	0.969	0.780	0.661	0.720	0.560
Em4	0.488	0.878	0.618	0.541	0.614	0.408
Lo1	0.700	0.643	0.908	0.665	0.558	0.551
Lo2	0.670	0.695	0.912	0.665	0.611	0.546
Lo3	0.676	0.691	0.902	0.654	0.606	0.520
Lo4	0.617	0.699	0.898	0.684	0.615	0.514
Lo5	0.669	0.803	0.897	0.657	0.673	0.572
Ri1	0.454	0.320	0.400	0.733	0.511	0.327
Ri3	0.623	0.700	0.795	0.808	0.631	0.526
Ri4	0.531	0.409	0.448	0.786	0.622	0.351
Ri5	0.458	0.464	0.465	0.762	0.633	0.346
Rn1	0.468	0.429	0.387	0.617	0.748	0.323
Rn2	0.451	0.399	0.418	0.538	0.752	0.353
Rn3	0.564	0.420	0.443	0.616	0.746	0.433

Rn4	0.540	0.801	0.679	0.574	0.753	0.486
Ta1	0.579	0.532	0.593	0.518	0.522	0.965
Ta2	0.561	0.522	0.560	0.499	0.535	0.960

Based on the data in table 5, the latency variables Assurance, Empathy, Loyalty, Reliability, Responsiveness, and Tangible from each of each indicator can produce a value of more than 0.7 higher than the other latent variables. The conclusion is that these variables are better than the other latent variables.

B. Inner Model

Tabel 6. R-Square

Indicator	R-square
Loyalty	0.749

In accordance with Table 6, R-square value of 0.749 is obtained. This means that the latent variable of Service Quality can be explained well by Loyalty of 74.9%, while 25.1% is explained by other variables that are outside of what has been studied. The results of data processing as a whole can be used to answer the research hypothesis.

The hypotheses test was done by looking at the results of the T-statistics and the value of the P-value. The research hypothesis can be accepted if the p-value shows less than 0.5. The following are the results of the research hypothesis test which can be seen in Table 7.

Tabel 7. Hypotheses Testing

Hypothesis		T-Statistics	P-Values	Results
H1	Assurance -> Loyalty	6.842	0.000	Supported
H2	Empathy -> Loyalty	9.557	0.000	Supported
H3	Reliability -> Loyalty	6.337	0.000	Supported
H4	Responsiveness -> Loyalty	2.376	0.018	Supported
H5	Tangible -> Loyalty	3.217	0.001	Supported

Table 7 shows that the five hypotheses in this study are acceptable, because each of the effects tested gets a value below 0.5. It can be concluded that the relationship between Service quality on Loyalty has a significant effect.

V. DISCUSSION

Based on the findings that has been done to answer the hypothesis, it is known from the five hypotheses that all of them are acceptable, for the effect of Assurance, Empathy, and Reliability on Loyalty get results of 0,000 with positive T-statistics and path coefficient of t-statistics of 6.842, 9.557, and 6.337 studies This has supported the research of Sudirman and Atmosphere (2018); Nurhadi and Azis (2018); Dubey and Srivavastava (2016); Agyei and Kilika (2013) that Assurance, Empathy, and Reliability have positive effects on loyalty with mixed results^{[20] [15] [5] [2]}. For tangible hypotheses get a result of 0.001 with a positive T-statistical value and a path coefficient of 3.217. This research is in accordance with the research of Belwan and Ameirah (2018)^[4]. Tangible has a positive effect even though it has a small t-statistic value because the telecommunications sector is not too concerned with the physical facilities, equipment, and appearance of employees, unlike hospitals or hospitals that should be more concerned with Tangible, the telecommunications sector is more favored by intangible asset services. Responsiveness gets a result of 0.018 with a positive T-statistical value. The path coefficient obtained has the smallest value of 2.337, and this study is in accordance with Dubey and Srivavastava (2016) which is equal to 1.831^[5].

VI. CONCLUSIONS

Based on the results of the research and discussion above, it can be concluded that the quality of service consisting of six dimensions of Service Quality as a whole has a significantly positive effect on loyalty. The explanations are as follows: Assurance has a positive effect on loyalty of Tri Indonesia cellular operator users, or the better the insurance; the more loyal consumers are in using Tri Indonesia services. Reliability has a positive effect on the loyalty of Tri Indonesia cellular operator users, or the better the reliability, the more loyal consumers are in using Tri Indonesia services. Empathy has a positive effect on the loyalty of Tri Indonesia cellular operator users, or the better the Empathy; the more loyal consumers are in using Tri Indonesia services. Responsiveness has a significantly positive effect on the loyalty of Tri Indonesia cellular operator users, meanings that the better the Responsiveness, the more loyal consumers are in using Tri Indonesia services. Tangible has a positive effect on the loyalty of Tri Indonesia cellular operator users, meanings that the better Tangible, the more loyal consumers are in using Tri Indonesia services.

VII. REFERENCES

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