The Effect of Service Quality towards Customers Satisfaction on Mobile Telecommunication in Indonesia

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Abstract

Telecommunications is the exchange of information over significant distances by electronic means and refers to all types of voice, data and video transmission. Nowadays, peoples are getting more concern about their needed. The firm has to know what customer want, what the customer needed. In telecommunication sector, people prefer the well-known brand so it is necessary for companies to know the how significantly the service quality influence the satisfaction of the customer. Indonesian people are tend to change their card to get the cheapest price of the internet data that the provider gave. It causing a Churn Rate of 20% each month because of it. The objective of this research is to analyze factors in an integrated model which involves Tangibles, Reliability, Responsiveness, Assurance, Empathy, Complaint Handling, Convenience and Network Quality. This research used data from 400 samples using non probability sampling of judgement sampling. The result revealed that reliability, empathy, convenience, and network quality influences customer satisfaction where empathy is the most significant variable that influences customer satisfaction. The model is categorized as moderate model thus new variables may be added to the model and encouraged to focus on app based online shopping.

Keywords : Customer Satisfaction, Service Quality, Telecommunication

1. Introduction

In today's telecommunication era, telecommunication services plays a major role to provide customers' needs for cellular data and internet services. According to IDN Times in 2018, Indonesia is currently the 6th most cellphone user country with the total user of 236 million people from 261 million total population. Which means, 90.42% Indonesians are already use a cellphone nowadays. To be fully operated, a cellphone need a sim card. In Indonesia, there are several telecommunication services company that provide the service of sim card. There are 4 major company that playing a big role in that sector. They are Telkomsel, Indosat, 3, and XL. According to Rayana research in 2018, the total of sim cards that used and reportedly active are 305 million sim cards in Indonesia. That number is higher than total population of Indonesia, it means that there are a massive churn rate that occurring which can be happened because the lack of satisfaction from telecommunication's customer in Indonesia. Therefore, a study of the effect of service quality towards customer satisfaction on mobile telecommunication in Indonesia needs to be done.

2. Theoretical Background

2.1 Service Quality

Service Quality defined as "a features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs" (Kotler & Keller, Marketing Management 14th Edition, 2012)**.** Some researcher believe that a company's service quality has a strong correlation to the customer satisfaction. When the customer found themselves on the loyalty part, it means that the customers perception on how well a service or exceeds has met their expectations (Grewal & Levy, 2012). (Ogba, 2015), explained that by measuring a service quality, the firm can gained quite easily expectation scores from the perception scores. The obtained scores then subsquently weighted to reflect the relative importance of each service quality's aspect.

2.2 Service Quality Dimensions

(Parasuraman, Zeithaml, & Berry, 1988), projected a service quality model that identified perceived service quality into five dimensions: tangibility, reliability, responsiveness, assurance, and empathy. Further, few items related to 'convenience' and 'complaint handling' were also incorporated (Negi, 2009). Technical quality dimensions: In the

context of cellular mobile communication, this dimension is related to customer perceived network quality. The measures related to this dimension were derived from literature and the subsequent feedback gained during the exploratory interviews. In all, eight dimensions for measuring service quality in cellular mobile telephony were identified. (Negi, 2009), explained that satisfaction is influenced by the dimensions (Reliability, Empathy, and Assurance).

2.3 Customer Satisfaction

There are many definitions of customer satisfaction which can be found in relevant literatures. In the competitive telecommunication industry, customer satisfaction is considered as the key to success (Siddiqi, 2011). However, customer satisfaction is not static in nature. Companies can't feel safe with their presently "appeared to be satisfied customers". Rather companies need to know how to keep their customers consistently satisfied because satisfied customers may look for better services elsewhere. Again, some customers may not switch because of the unavailability of better service to other service providers but actually they are not those of the satisfied customers (Thakur, 2011).

2.4 Research Framework

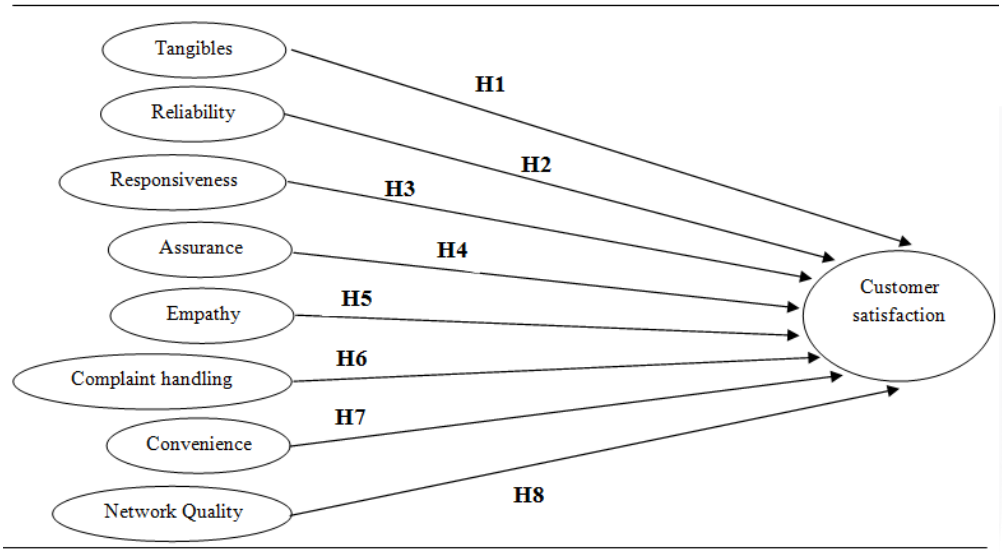

Figure 1: Research Framework
Source: Rahhal. (2015)[1]

2.5 Research Hypotheses

H1. Tangibles have no positive and significant influence towards Customer Satisfaction.
H2. Reliability has a positive and significant influence towards Customer Satisfaction.
H3. Responsiveness have no positive and significant influence towards Customer Satisfaction.
H4. Assurance has no positive and significant influence towards Customer Satisfaction.
H5. Empathy has a positive and significant influence towards Customer Satisfaction.
H6. Complaint Handling has no positive and significant influence towards Customer Satisfaction.
H7. Convenience has a positive and significant influence towards Customer Satisfaction.
H8. Network Quality has a positive and significant influence towards Customer Satisfaction.

3. Methodology

3.1 Research Characteristics

The research used a quantitative method. According to Cooper and Schindler, 2011 ; in Indrawati, 2015: 184.[8] The purpose of this study is causal research. Conclusive research or can be called as well as causal research, generally conducted when the researches already see or read prior research that discuss relationship among variables. To test whether the relationship between variables that occurred in previous research also occurred within the object or field that the researcher studied, then the researcher conducted research with conclusive or causal design (Indrawati, 2015: 116)[8]. This research is a non contrived research. According to Indrawati (2015 : 118)[8] non contrived setting

is a research that is conducted in a normal environment, that is usually happened or can be called natural. In a non contrived setting research, researcher doesn't manipulate (interference) anything. Based on implementation time and frequency of data collection and processing, then this research implements the cross sectional method. According to Indrawati (2015 : 118)[8] if the data collection conducted in a period, then the data is processed, analyzed, and then drawn conclusions then the research applies cross sectional method. The researchers more likely used cross-sectional methods because this method is relatively faster and cheaper.

3.2 Measurement Scale

The measurement scale of this research uses Likert Scale where it has 5 levels of measurement, ranging from "Strongly Disagree", "Disagree, "Neutral", "Agree", and "Strongly Agree".

3.3 Population and Sample

In this research, the population of this research is all online shoppers in Indonesia who have made purchasement on lazada.co.id. This research uses SEM and according Hair et al., (2010: 661)[9] The most commong SEM estimation procedure is maximum likely estimation (MLE). But sample size that becomes large (>400) makes the method becomes more sensitive and almost any difference is detected, making goodness-of-fit measures suggest poor. As a result. Sample size in the range of 100 to 400 are suggested. Based on the explanation above then the minimum sample size used in this research is 400.

3.4 Data Testing Technique

This study uses multivariate approach with dependence method of SEM. The analytical software to do the calculations is SmartPLS 3.0.

3.5 Validity Test

In this research to test the validity, it uses SPSS software with 40 samples. According to the result, all the items in this research are valid where According Friedenberg and Kaplan in Indrawati (2015:149)[8] suggest that the minimum number of the coefficient correlation is 0.3 to fulfill the criteria of convergent validity.

3.6 Reliability Test

SPSS sofware is used to test the reliability with 40 samples. According to Sekaran & Bougie (2010: 325)[10] the reliability value limits refer to the criteria of Cronbach's Alpha coefficient where it should be ≥ 0.60 to be considered as reliable and from the result of the research all items are reliable.

4. Research Result

4.1 Analysis of Structural Equation Model

4.1.1 Outer Model

The data gathered from 400 respondents are processed and calculated for its validity and reliability test.

1. Convergent Validity

Convergent validity is to test the accurate level of items inside a variable to measure the research object. The indicator used in this test is using Factor Loading (FL). According to Heir et al. (2010) in Indrawati (2015)[8], the item is having a convergent validity if the Factor Loading (FL) score is ≥ 0.5. The result of the Factor Loading is listed on Table 1:

Table 1 Loading Factor Result.

Latent Variable	Indicator	Loading Factor	Conclusion
Assurance	AS2 <- AS	0.74	Valid
	AS3 <- AS	0.79	Valid
	AS4 <- AS	0.78	Valid
	AS5 <- AS	0.80	Valid
Convenience	C1 <- C	0.82	Valid
	C2 <- C	0.85	Valid
	C3 <- C	0.81	Valid
Complaint Handling	CH1 <- CH	0.91	Valid
	CH2 <- CH	0.89	Valid
Customer Satisfaction	CS1 <- CS	0.81	Valid
	CS2 <- CS	0.86	Valid
	CS3 <- CS	0.78	Valid
Empathy	E3 <- E	0.91	Valid
	E4 <- E	0.88	Valid
Network Quality	NQ3 <- NQ	0.87	Valid
	NQ4 <- NQ	0.89	Valid
Reliability	RL2 <- RL	0.76	Valid
	RL3 <- RL	0.79	Valid
	RL4 <- RL	0.75	Valid
	RL5 <- RL	0.82	Valid
Responsiveness	RP2 <- RP	0.79	Valid
	RP3 <- RP	0.82	Valid
	RP4 <- RP	0.81	Valid
Tangibles	T2 <- T	0.85	Valid
	T3 <- T	0.86	Valid

Source: SmartPLS 3.0 Processed Data Result.

Based on the Table 1, every items listed in the Table 1 are passing the margin of Factor Loading (FL) which ≥0,5. So all items are valid.

The next test in Convergent validity is the AVE, where according to The AVE score which passes the margin 0.50 shows that the items of variable has an enough convergent validity (Hair et al., 2010; Ghozali, 2008) in Indrawati (2015)[8]. The result of AVE is listed on Table 2:

Table 2 AVE Scores

Variable	Average Variance Extracted (AVE)
Assurance	0.614
Convenience	0.687
Complaint Handling	0.817
Customer Satisfaction	0.680
Empathy	0.811
Network Quality	0.783
Reliability	0.612
Responsiveness	0.662
Tangibles	0.742

Source: SmartPLS 3.0 Processed Data Result.

Based on the table 2, AVE score of each constructs is above the margin which is ≥0,50. Therefore, the questionnaire fulfills the criteria of convergent validity.

2. Discriminant Validity

Alongside the convergent validity, it is also required discriminant validity to fulfill the validity tests. According to Heir et al. (2017)[11] The fornell-Larcker criterion, cross loadings, and especially the heterotrait-monotrait (HTMT) ratio of correlations can be used to examine discriminant validity. The cross loadings result is shown on Table 3:

Table 3 Cross Loadings Correlation

	AS	C	CH	CS	E	NQ	RL	RP	T
AS2	**0.749**	0.463	0.400	0.390	0.384	0.219	0.487	0.416	0.427
AS3	**0.793**	0.524	0.356	0.383	0.332	0.223	0.491	0..384	0.454
AS4	**0.784**	0.510	0.360	0.348	0.374	0.237	0.414	0.428	0.476
AS5	**0.808**	0.467	0.363	0.379	0.424	0.262	0.487	0.472	0.474
C1	0.520	**0.821**	0.448	0.411	0.318	0.275	0.435	0.375	0.484
C2	0.547	**0.851**	0.388	0.416	0.329	0.307	0.441	0.416	0.550
C3	0.489	**0.814**	0.374	0.399	0.321	0.346	0.409	0.423	0.410
CH1	0.447	0.404	**0.910**	0.383	0.440	0.258	0.537	0.484	0.462
CH2	0.406	0.479	**0.897**	0.359	0.407	0.240	0.495	0.501	0.428
CS1	0.376	0.406	0.277	**0.817**	0.373	0.341	0.380	0.350	0.372
CS2	0.416	0.442	0.374	**0.869**	0.444	0.325	0.462	0.446	0.430
CS3	0.393	0.371	0.359	**0.786**	0.405	0.331	0.400	0.409	0.416
E3	0..449	0.345	0.370	0.474	**0.915**	0.253	0.482	0.444	0.485
E4	0.421	0.358	0.484	0.414	**0.886**	0.285	0.482	0.478	0.470
NQ3	0.243	0.337	0.235	0.345	0.252	**0.877**	0.300	0.317	0.255
NQ4	0.287	0.323	0.253	0.366	0.273	**0.892**	0.335	0.327	0.294
RL2	0.426	0.346	0.450	0.373	0.397	0.319	**0.760**	0.451	0.370
RL3	0.428	0.376	0.501	0.386	0.481	0.278	**0.793**	0.464	0.373
RL4	0.460	0.382	0.376	0.336	0.374	0.188	**0.755**	0.331	0.407
RL5	0.555	0.495	0.456	0.465	0.420	0.325	**0.821**	0.496	0.469
RP2	0.487	0.457	0.465	0.404	0.351	0.302	0.424	**0.798**	0.462
RP3	0.476	0.411	0.450	0.390	0.431	0.285	0.465	**0.829**	0.508
RP4	0.361	0.322	0.414	0.399	0.463	0.301	0.485	**0.813**	0.390
T2	0.460	0.473	0.402	0.421	0.468	0.272	0.443	0.459	**0.859**
T3	0.544	0.528	0.446	0.429	0.446	0.263	0.453	0.500	**0.864**

Source: SmartPLS 3.0 Processed Data Result

As shown on table 3 all associated constructs are greater than any of its correlations on other constructs. This means that the constructs in this research has fulfilled the discriminant validity.

The second approach of assessing discriminant validity is Fornell Larcker where .It compares the square root of the AVE values with the latent variable correlations. Specifically, the square root of each construct's AVE should be greater than its highest correlation with other construct. The result of Fornell Larcker shows that all square root of AVE is greater than any correlations thus fulfilled the discriminant validity.

The third approach of assessing discriminant validity is Heterotrait-monotrait (HTMT) method. According to Henseler et al. (2015) in Heir et al. (2017)[11] is the mean of all correlations of indicators accros constructs measuring different constructs relative to mean of the average corelations of indicators measuring the same construct. In other words, an HTMT value above 0,90 suggests a lack of discriminant validity. The result of this research all HTMT result is above 0,90 which means the items are not lack of discriminant validity.

3. Composite Reliability.

To fulfill the outer model testing, Reliability Test is needed to be done. According to Indrawati (2015)[8], the reliability is related with the consistency and stability of a measurement result. Table 4 shows the reliability test result is listed

Table 4 Reliability Test

Variable	Cronbach's Alpha	Composite Reliability
Assurance	0.791	0.864
Convenience	0.722	0.868
Complaint Handling	0.776	0.899
Customer Satisfaction	0.764	0.864
Empathy	0.768	0.896
Network Quality	0.723	0.878
Reliability	0.790	0.863
Responsiveness	0.744	0.854
Tangibles	0.652	0.852

On Table 4 above shows that all variable of this research is already fulfilled the criteria of cronbach Alpha and Composite Reliability where all variables passed margin ≥0.60.

4.1.2 Inner Model

According to Indrawati (2017)[12], another test of PLS is Assessment of the structural model or Inner model Test. The test is conducted to know the influence of the latent variables towards another latent variable. The test is conducted by looking at the path value to see whether the influence is significant or not. . The result of 0.67 indicates the model is "Good"; 0.33 indicates the model is "Moderate"; and 0.19 indicates that the model is "Weak". Table 5 shows the result of R quarter of Dependent Latent Construct:

Table 5 R quarter of Dependent Latent Construct

Latent Variable	R Square	Q Square
Customer Satisfaction	0.422	0.263

Source: SmartPLS3.0 Processed Data Result.

Based on the Table 4.19 above, the R2 on CS construct is 0.422 which means Customer Satisfaction is 42.2% influenced by Tangibles, Reliability, Responsiveness, Assurance, Empathy, Complaint Handling, Convenience, and Network Quality, while the rest 57.8% are influenced by other factors that is not studied in this research. The result also indicates that the model is "Moderate".

In addition to R Quarter, research should also examine Q quarter where Q^2 values that larger than 0 suggests the model has predictive relevance for a certain endogenous construct. In contrast values of 0 or below indicates lack of predictive relevance. From the result of Table 5 all constructs are above 0 then the model has predictive relevance.

Next Inner model test is path coefficient, t Value, and p-Value test where In this research, the significance level that author chose is 5%. By using the significant level α of 5%, it means if the t-Value generates less than to 1,65 (<1,65), then the H1 is rejected, and if t-Value generates more than or equal to 1,65 (≥1,65), means that the H1 is accepted. Meanwhile, because the significant level α is 5% ,means that if the p-Value generates more than 0,05 (>0,05), then the H0 is accepted, and if the p-Value generates less than or equal to 0,05 (≤0,05), then the H0 is rejected. The result the rest is shown on Table 6 :

Table 6 Path Coefficient, t-Value, p-Value

No	Path Diagram	Path Coefficient	t-Value	p-Value	Conclusion
1	AS -> CS	0.056	0.894	0.372	H1 Rejected, H0 Accepted
2	C -> CS	0.153	2.418	0.016	H1 Accepted, H0 Rejected
3	CH -> CS	0.001	0.021	0.983	H1 Rejected, H0 Accepted
4	E -> CS	0.190	3.701	0.000	H1 Accepted, H0 Rejected
5	NQ -> CS	0.159	3.673	0.000	H1 Accepted, H0 Rejected
6	RL -> CS	0.121	2.044	0.041	H1 Accepted, H0 Rejected
7	RP -> CS	0.105	1.719	0.086	H1 Rejected, H0 Accepted
8	T -> CS	0.100	1.558	0.120	H1 Rejected, H0 Accepted

Source: SmartPLS3.0 Processed Data Result.

According to the result on Table 6 the result shows that only 4 hypotheses are accepted.

5. Conclusion and Suggestions

5.1 Conclusion

Based on the result of the analysis of this research, author is able to draw conclusions where the result will be answer the research questions and objectives. According to the research then :

1. Tangibles have no positive and significant influence towards Customer Satisfaction. This means that even though service providers have a good website, facilities, and technology, it doesn't influence customers' satisfaction of their service providers.
2. Reliability has a positive and significant influence towards Customer Satisfaction. This means that performing the services right on time and right from the first time can increase customers' satisfaction in using the service provider.
3. Responsiveness have no positive and significant influence towards Customer Satisfaction. This means that resolves customers' complaint and request on time doesn't influence customers' satisfaction.
4. Assurance has no positive and significant influence towards Customer Satisfaction. This means that customers' satisfaction will not increase even though the employees maintain adequate knowledge to handle customer quarries.
5. Empathy has a positive and significant influence towards Customer Satisfaction. It means that the presence of individual attention that has been given by the service provider is influence the customers' satisfaction.
6. Complaint Handling has no positive and significant influence towards Customer Satisfaction. This means that the sufficient amount of procedures to receive and handle customer's complaints in the promised time does not influence customers' satisfaction.
7. Convenience has a positive and significant influence towards Customer Satisfaction. This means that the service providers' offices that facilitate in cities and suburbs are influence customers' satisfaction.
8. Network Quality has a positive and significant influence towards Customer Satisfaction. It means that the coverage signal that provided by the service providers is certainly influence customers' satisfaction.

5.2 Suggestions

5.2.1 Suggestion for Company

From the results of the research, service providers (Telkomsel, XL, Indosat, Tri, et cetera), are expected to be able to point out and identify factors that affecting the customer satisfaction. Therefore, service providers can make some improvements so they can increase the level of customer satisfaction.

First, the lowest score from reliability items in service providers fulfill their promises. The thing that currently service providers can do to improve their reliability factor is to fulfill their promises to customers. For example, when the service providers make a promotion about the improvement of their internet speed, service providers must fulfill that so customer will be satisfied with the service quality that provided by them.

Second, the lowest score from empathy items in consumers assessment is about the personal attention from service providers' employees. The current problem that service providers faced is that certain customers still don't satisfied with personal attention that have been given by service providers' employees. Service providers should improve that aspect by making their employees paying more attention to customers, for example by telling the employees to be more kind to customers, listening to customers' complaints more closely, and be more understand about the specific needs of customers

Third, from the lowest score of convenience items in consumers assessment, certains consumers still feel that there are still lack of service providers' offices or stores in suburbs. To fix this problem, service providers' needs to consider to increase the amount of their offices or stores in suburbs area, so customers that living in that area can easily facilitated and doesn't have to go to the city.

Fourth, from the lowest score of network quality items in consumer assessment, some customers of service providers feel that the coverage signal is not that good inside a building especially in basements. To fix this problem, Service providers need to improve the signal coverage by adding more signal receiver, or router, or maintain their fiber optic cable.

5.2.2 Suggestion for Future Research

For further research because the model is able to moderately predict the customer satisfaction, future research may be added another variables or change to the model such as access, communication, competence, or credibility. Future research is expected to be able to study the association between customer satisfaction and retention for corporate customer.

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