
The Influence Of Service Failure Severity On Brand Forgiveness Study On Telkomsel Users

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Abstract

The aims of this study are: (1) To determine the service failure severity from internet network issues according to Telkomsel users; (2) To determine the influence of service failure severity from internet network issues on brand forgiveness of Telkomsel users; and (3) To determine the influence of service failure severity from internet network issues on each brand forgiveness dimension of telkomsel users. The study used an online survey to collect data. The sample size for this study was 100 respondents. Data analysis was conducted using mean analysis and PLS-SEM. Research Findings: The study findings indicate that: (1) the service failure severity from internet network issues, according to Telkomsel users, is categorized as high; (2) the service failure severity from internet network issues has a significant negative influence on the brand forgiveness of Telkomsel users; (3) the service failure severity from internet network issues has a significant negative influence on each brand forgiveness dimension (cognitive, affective, behavioral) of Telkomsel users. This study simplifies the research conducted by Alnawas et al. (2023) by focusing only on two main variables, service failure severity and brand forgiveness, in order to provide a more focused and in-depth understanding of the relationship between severity of service failure and brand forgiveness.

Keyword : *service failure severity, brand forgiveness, telecommunication cellular.*

1. INTRODUCTION

Service failure is something that every company wants to avoid. This is because service failure represents a company failure to deliver a product or service (Roschk & Gelbrich, 2014:197). Although it is something that companies strive to avoid,

in the service industry, service failure is common, frequently occurs, and often cannot be avoided (Mesquita et al., 2023: 1827).

To determine the severity of a service failure, it is possible to measure the level of service failure severity. Service failure

severity can vary depending on the issue at hand and the customers perception (Cho et al., 2017). Therefore, service failure severity ranges from low to high.

Service failure severity can influence critical aspects, one of which is brand forgiveness. The influence of service failure severity on brand forgiveness is evidenced by research conducted by Alnawas et al. (2023) in the hotel industry in the UK. The research findings indicate that service failure severity has a significant negative impact on brand forgiveness (Alnawas et al., 2023: 1699).

The findings regarding the significant negative influence of service failure severity on brand forgiveness need to be taken into consideration by companies, including PT Telekomunikasi Selular (Telkomsel). Based on the service quality achievement report for the period of Q1 - Q4 of 2023, Telkomsel has achieved good service quality. In line with this good service quality, in 2023, Telkomsel attained a customer satisfaction index (CSI) of 7.57 out of 10 (Telkom Indonesia, 2024: 65)

Although Telkomsel has achieved good service quality and a high CSI score, there are still numerous news articles and complaints related to service failures at Telkomsel circulating in online media throughout 2023. One of the service failures frequently complained about by Telkomsel users on online media is related to internet network issues. Internet network issues refer to problems within the internet network that cause difficulties for users in accessing the internet (Lamberti, 2023).

Telkomsel needs to pay attention to service failure severity, particularly for service failures that are frequently complained about, such as internet network issues. This is because there have been previous research findings stating that service failure severity has a significant negative impact on brand forgiveness. However, it should be noted that these research findings cannot conclusively apply to cases of service failure severity arising from internet network issues and brand forgiveness among Telkomsel users, as the previous studies were conducted in different industries and countries.

Based on the above description, this study aims to determine the service failure severity from internet network issues according to Telkomsel users, to determine the influence of service failure severity from

internet network issues on brand forgiveness of Telkomsel users, and to determine the influence of service failure severity from internet network issues on each brand forgiveness dimension of Telkomsel users.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Service Failure Severity

According to Kussusanti et al. (2019), service failure severity is defined as “a customer’s assessment of the level of problems that occur in a service”. In this study, researchers define service failure severity as the consumer assessment of the level of problems that occur in a service, particularly those related to internet network issues. Service failure severity can vary depending on the issue at hand and the customers perception (Cho et al., 2017). The indicators used to measure service failure severity in this study refer to several previous studies, such as Alnawas et al. (2023), Raza et al. (2023), Liu & Li (2022), Salagrama et al. (2021), Roy et al. (2021), and Kussusanti et al. (2019).

2.2. Brand Forgiveness

According to Christodoulides et al. (2021), brand forgiveness is defined as “the consumer's cognitive, affective, and behavioral response to a brand's perceived wrongdoing, with the aim of maintaining a constructive relationship with the brand”. In this study, researchers define brand forgiveness as the cognitive, affective, and behavioral responses of consumers after experiencing wrongdoing from a brand, particularly wrongdoing related to internet network issues, which aim to maintaining good relations between consumers and brands.

Brand forgiveness consists of cognitive, affective, and behavioral dimensions (Christodoulides et al., 2021 : 2). The cognitive dimension involves consumers evaluations and thoughts after having a negative experience with a brand (Christodoulides et al., 2021 : 5). The affective dimension reflects consumers feelings of betrayal, disappointment, and loss of trust in the brand (Christodoulides et al., 2021 : 5). The behavioral dimension indicates unforgiveness and is related to switching behaviour (Christodoulides et al., 2021 : 5). The dimensions and indicators used to

measure brand forgiveness in this study refer to Christodoulides et al. (2021).

2.3. Relationship Between Service Failure Severity and Brand Forgiveness

When the service failure severity is classified as low, consumers tend to consider the loss as trivial and ignore their negative emotions (Sengupta et al., 2015). Meanwhile, when the service failure severity is classified as high, consumers tend to perceive greater losses, give more negative evaluations (Sengupta et al., 2015), and need to manage the negative emotions that arise (Roehm & Brady, 2007).

Based on this, consumers who experience service failure with service failure severity classified as low tend to give more positive cognitive, affective, and behavioral responses to perceived errors from a brand. Meanwhile, consumers who experience service failure with service failure severity classified as high tend to give more negative cognitive, affective, and behavioral responses to perceived wrongdoing from a brand.

Thus, it can be said that service failure severity can influence brand forgiveness. The influence of service failure severity on brand forgiveness has been proven by research conducted by Alnawas et al. (2023). This research was conducted on the hospitality industry in the UK. The results showed that service failure severity has a significant negative effect on brand forgiveness (Alnawas et al., 2023).

2.4. Hypothesis

In this study, more specific hypotheses were formulated to determine the influence of service failure severity on each dimension of brand forgiveness. The hypotheses in this study are as follows:

- H1 : Service failure severity has a significant negative influence on brand forgiveness.
- H2 : Service failure severity has a significant negative influence on the cognitive dimension of brand forgiveness.
- H3 : Service failure severity has a significant negative influence on the affective dimension of brand forgiveness.
- H4 : Service failure severity has a significant negative influence on the behavioral dimension of brand forgiveness.

3. RESEARCH METHODS

This study used a single cross sectional design. According to Nunan et al. (2020), a single cross sectional design is a research design that takes samples from the target population at one specific time and the information obtained from the sample is only one time. In this study, the sample was taken during February 2024 and the information obtained from the sample was only one time. The data collection technique used in this research is the survey method. The survey in this study was conducted online using Google Form.

The population in this study are Telkomsel users who have experienced internet network issues. In determining the minimum sample size, this study refers to Chin (1999). This study refers to Chin (1999) because this study uses PLS-SEM for verification analysis. According to Chin (1999), the minimum sample size for PLS-SEM is recommended between 30 and 100. According to Hair et al. (2021), there is no identification problem when using a small sample size. However, to improve the accuracy of PLS-SEM estimates, a larger sample size can be used (Hair et al., 2021). For this reason, in this study the number of samples used was 100 samples.

This study employs judgmental sampling. The judgments for sampling in this study are Telkomsel users who have experienced internet network issues in the last three months. The three-month period was chosen to avoid bias related to respondent memories (Chatterjee, 2018). Then, the study sample consists of 95% Telkomsel prepaid service users and 5% Telkomsel postpaid service users. The percentage of the sample adjusts the percentage of prepaid and postpaid service users in Telkomsel, which is 95.3% of prepaid service users and 4.7% of postpaid service users (Bestari, 2023).

This study utilizes a Likert scale with five response categories, referenced from Nunan et al. (2020). Descriptive analysis conducted in this study employs mean analysis with SPSS 25. The mean values in this study are categorized into five categories, as described by Kusumah (2023). Verification analysis in this study is conducted using partial least squares path modeling (PLS-SEM) with SMART PLS 4. Two measurements are conducted in PLS-SEM for second order and

first-order. Different approaches are employed in measuring second-order (Hair Jr. et al., 2021: 280). In this study, the second-order measurement is performed using a disjoint two-stage approach. The steps for second order and first-order measurement in this study are referred to by Yamin (2023) and Hair Jr. et al. (2021) with some adjustments.

4. RUSULT AND DISCUSSION

Result

Descriptive Characteristics of Respondents

Table 1

Descriptive Characteristics of Respondents		
Category	Group	Percentage (N=100)
Gender	Female	79%
	Male	21%
Age	17 - 26	81%
	27 - 36	5%
	37 - 46	6%
	47 - 56	5%
	> 56	3%
Domicile	Aceh	2%
	Banten	4%
	Central Java	10%
	East Java	11%
	East Kalimantan	1%
	North Sumatera	1%
	Riau	2%
	South Sumatera	3%
	Special Capital Region of Jakarta	6%
	Special Region of Yogyakarta	7%
	West Java	53%
Occupation	Civil Servant	2%
	Entrepreneur	8%
	Housewife	3%
	Private Employee	15%
	Students	68%
	Teaching Assistant	1%
	Unemployed	3%
Monthly Income	< Rp1.000.000	30%
	Rp1.000.000 - Rp2.500.000	30%
	> Rp2.500.000 - Rp4.000.000	21%
	> Rp4.000.000 - Rp5.500.000	8%

Category	Group	Percentage (N=100)
Telkomsel service used	> Rp5.500.000 - Rp7.000.000	4%
	> Rp10.000.000	7%
	Prepaid service	95%
	Postpaid service	5%
Have experienced internet network issues in the last three months	Yes	100%
	No	0%
Frequency in experiencing internet network problems during the last three months	1 - 2 times	20%
	3 - 4 times	38%
	5 - 6 times	30%
	7 - 8 times	11%
	> 10 times	1%

The majority of respondents are female, aged 17 to 26, residing in West Java, students, with a monthly income ranging from less than Rp1,000,000 to Rp2,500,000, and users of Telkomsel prepaid service. All respondents have experienced internet network issues in the last three months, with the majority experiencing such problems 3-4 times during this period.

Mean Analysis for Service Failure Severity

Table 2

Mean for Service Failure Severity			
Indicator	Items	Mean	Category
SFS.1	In my opinion, the internet network issues I experienced are a major problem.	3.37	Medium
SFS.2	In my opinion, the internet network issues I experienced have a significant impact.	3.44	High
SFS.3	In my opinion, the internet network issues I experienced are an important problem.	3.49	High
SFS.4	In my opinion, the internet network issues I experienced are a serious problem.	3.42	High
SFS.5	In my opinion, the internet network issues I experienced are severe.	3.37	Medium

SFS.6	In my opinion, the internet network issues I experienced caused me discomfort.	3.45	High
SFS.7	In my opinion, the internet network issues I experienced made me angry.	3.47	High
Average		3.43	High

The average mean score for the indicators on service failure severity is 3.43. A mean score of 3.43 is categorized as high. This indicates that, on average, respondents rated the severity of internet network issues as high. Internet network issues are categorized as high because, according to the average respondent, the experienced issues have a significant impact, considered important and serious, and cause discomfort and anger.

Mean Analysis for Brand Forgiveness

Table 3
Mean for Brand Forgiveness

Indicator	Items	Mean	Category
C.1	I think Telkomsel should get appropriate consequences for what happened. *	3.19	Medium
C.2	I wish that others could see that Telkomsel is not good.*	3.29	Medium
C.3	I disapprove Telkomsel.*	3.39	Medium
A.1	I feel sympathy for Telkomsel. **	3.28	Medium
A.2	I have compassion for Telkomsel, which has wronged me. **	3.34	Medium
A.3	I feel that my faith in Telkomsel has been restored. **	3.31	Medium
B.1	I avoid using Telkomsel.*	3.40	Medium
B.2	I do not consider Telkomsel anymore when evaluating alternatives.*	3.38	Medium
B.3	I am less likely to use Telkomsel again.*	3.41	High
Average		3.33	Medium

* = Reverse scoring
** = Reverse question

The average mean score for the indicators on brand forgiveness is 3.33. A mean score of 3.33 is categorized as medium. This indicates that, on average, respondents give a balanced cognitive, affective, and behavioral response to the experienced internet network issues. On one hand, the cognitive, affective, and behavioral responses of the respondents to the experienced internet network issues are negative. However, on the other hand, the cognitive, affective, and behavioral responses of the respondents to the experienced internet network issues are positive.

Second-Order Measurement Results using Disjoint Two Stage Approach

1. First stage
 - a. The result of model estimation linking the first-order construct, which is service failure severity, with the first-order components, which are cognitive, affective, and behavioral, is as follows:

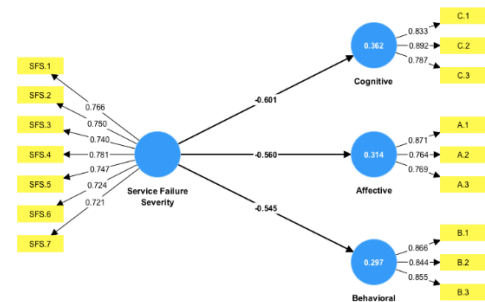


Figure 1. Model Estimation Result for First Stage of Disjoint Two Stage Approach

- b. The result of measurement model evaluation focused on the first-order component is as follows:

Table 4
Loading Factor, Composite Reliability, and Average Variance Extracted for First Stage of Disjoint Two Stage Approach

	Loading Factor	Composite Reliability	Average Variance Extracted
Cognitive		0,876	0,703
C.1	0,833		
C.2	0,892		
C.3	0,787		
Affective		0,844	0,644
A.1	0,871		
A.2	0,764		

A.3	0,769		
Behavioral		0,891	0,731
B.1	0,866		
B.2	0,844		
B.3	0,855		

Table 5

Fornell Larcker Criterion for First Stage of Disjoint Two Stage Approach

	Cognitive	Affective	Behavioral
Cognitive	0,839		
Affective	0,639	0,803	
Behavioral	0,538	0,627	0,855

First-order components have loading factors ≥ 0.708 and composite reliability (ρ_c) values ranging between 0.80 - 0.90. Therefore, the indicators of first-order components can be considered reliable. Moreover, first-order components have average variance extracted (AVE) values ≥ 0.50 and the square root of AVE value is greater than the respective correlation values. Thus, first-order components can be considered valid.

- c. From the first stage of the disjoint two-stage approach, latent variable scores (LVS) for the first-order component are obtained. These LVS will be used in the second stage of the disjoint two-stage approach

2. Second stage

- a. The result of model estimation linking the first-order construct, which is service failure severity, with the second-order construct, which is brand forgiveness, measured using LVS first-order components, cognitive, affective, and behavioral, is as follows:

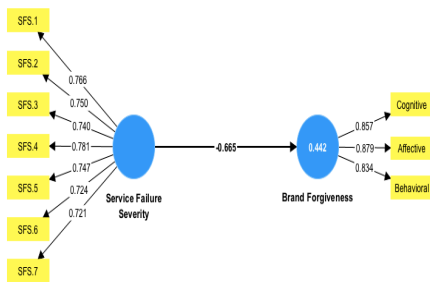


Figure 2. Model Estimation Result for Second Stage of Disjoint Two Stage Approach

- b. The result of the measurement model evaluation is as follows:

Table 6
Loading Factor, Composite Reliability, and Average Variance Extracted for Second Stage of Disjoint Two Stage Approach

	Loading Factor	Composite Reliability	Average Variance Extracted
Service Failure Severity		0.898	0.558
SFS.1	0.766		
SFS.2	0.750		
SFS.3	0.740		
SFS.4	0.781		
SFS.5	0.747		
SFS.6	0.724		
SFS.7	0.721		
Brand Forgiveness		0.892	0.734
Cognitive	0.857		
Affective	0.879		
Behavioral	0.834		

Table 7

Heterotrait Monotrait Ratio for Second Stage of Disjoint Two Stage Approach

	Service Failure Severity	Brand Forgiveness
Service Failure Severity		
Brand Forgiveness	0.783	

First-order construct and second-order construct have loading factors ≥ 0.708 and composite reliability (ρ_c) values ranging between 0.80 - 0.90. Therefore, the indicators of first-order construct and second-order construct can be considered reliable. Moreover, first-order construct and second-order construct have average variance extracted (AVE) values ≥ 0.50 and heterotrait monotrait ratio (HTMT) values < 0.90 . Thus, first-order constructs and second-order construct can be considered valid.

- c. The result of the structural model evaluation is as follows:

Table 8
Path Coefficient and R-square for Second Stage of Disjoint Two Stage Approach

	Path Coefficient			R-square
	Original Sample (O)	T Statistics (O/STDEV)	P Value	
Service Failure Severity → Brand Forgiveness	-0.665	11.601	0	0.442

Original sample path coefficient values are negative, indicating that the influence of service failure severity on brand forgiveness is negative. Moreover, the t-value is greater than the critical value (1.65) and the p-value is smaller than the significance level (0.005), indicating that the influence of service failure severity on brand forgiveness is significant. Thus, it is known that service failure severity has a significant negative influence on brand forgiveness. Therefore, H1 can be accepted.

It is also known that the R-square value for brand forgiveness is 0.442. According to Chin (1998), an R-square value of 0.67 is considered high, an R-square value of 0.33 is considered moderate, and an R-square value of 0.19 is considered weak. Therefore, the R-square value brand forgiveness is considered moderate.

First-Order Measurement Results

1. The result of model estimation linking the first-order construct, which is service failure severity, with the first-order components, which are cognitive, affective, and behavioral, is as follows:

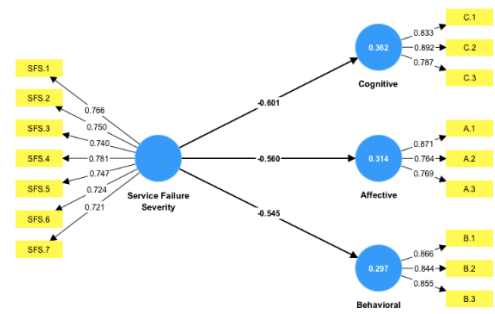


Figure 3. Model Estimation Result for First-Order

2. The result of the measurement model evaluation is as follows:

Table 9
Loading Factor, Composite Reliability, and Average Variance Extracted for First-Order

	Service Failure Severity	Cognitive	Affective	Behavioral
Service Failure Severity	0.665			
Cognitive	0.302	0.708		
Affective	0.314	0.662	0.847	
Behavioral	0.297	0.639	0.674	0.824

Table 10
Heterotrait Monotrait Ratio for First-Order

	Service Failure Severity	Cognitive	Affective	Behavioral
Service Failure Severity	0.708			
Cognitive	0.662	0.847		
Affective	0.639	0.674	0.824	
Behavioral				0.824

First-order construct and first-order components have loading factors ≥ 0.708 and composite reliability (ρ_c) values ranging between 0.80 - 0.90. Therefore, the indicators of first-order construct and first-order components can be considered reliable. Moreover, first-order construct and first-order components have average variance extracted (AVE) values ≥ 0.50 and heterotrait monotrait ratio (HTMT) values < 0.90 . Thus, first-order constructs

and first-order components can be considered valid.

- The result of the structural model evaluation is as follows:

Table 11
Path Coefficient and R-square for First-Order

	Path Coefficient			R-square
	Original Sample (O)	T Statistics (O/STDEV)	P Value	
Service Failure Severity → Cognitive	-0.601	8.660	0.000	0.362
Service Failure Severity → Affective	-0.560	8.532	0.000	0.314
Service Failure Severity → Behavioral	-0.545	8.543	0.000	0.297

All original sample path coefficient values are negative, indicating that the influence of service failure severity on each dimension of brand forgiveness is negative. Moreover, the t-value is greater than the critical value (1.65) and the p-value is smaller than the significance level (0.005), indicating that the influence of service failure severity on each dimension of brand forgiveness is significant. Thus, it is known that service failure severity has a significant negative influence on each brand forgiveness dimension (cognitive, affective, behavioral). Therefore, H2, H3, and H4 can be accepted.

It is also known that the R-square value for cognitive is 0.362, for affective is 0.314, and for behavioral is 0.297. According to Chin (1998), an R-square value of 0.67 is considered high, an R-square value of 0.33 is considered moderate, and an R-square value of 0.19 is considered weak. Therefore, the R-

square values for cognitive, affective, and behavioral are considered moderate.

Discussion

Service Failure Severity from Internet Network Issues According to Telkomsel Users

The service failure severity from internet network issues, according to Telkomsel users, is categorized as high. This is because the internet network issues are assessed to have significant impact, considered important and serious, and causing discomfort and anger. The obstruction of various activities due to the internet network issues can be one of the possible reasons why Telkomsel users assess experienced internet network issues as having a significant impact. The frequency of experienced internet network issues can also be one of the possible reasons why Telkomsel users assess the internet network issues as important and serious, and causing discomfort and anger. This is because, based on the survey results from 100 respondents, it is known that over the past three months, 38% of respondents experienced internet network issues 3 - 4 times, 30% experienced internet network issues 5 - 6 times, 11% experienced internet network issues 7 - 8 times, and 1% experienced internet network issues more than 10 times.

The Influence of Service Failure Severity from Internet Network Issues on Brand Forgiveness of Telkomsel Users

The service failure severity from internet network issues has a significant negative influence on the brand forgiveness of Telkomsel users. The possible reason why the service failure severity from internet network issues has a significant negative influence on the brand forgiveness of Telkomsel users is because when the service failure severity of internet network issues is classified as low, Telkomsel users tend to consider the loss as trivial and ignore their negative emotions (Sengupta et al., 2015). Therefore, the cognitive, affective, and behavioral responses of Telkomsel users to the experienced internet network issues tend to be more positive. Meanwhile, when the service failure severity of internet network issues is classified as high, consumers tend to perceive greater losses, give more negative evaluations (Sengupta et al., 2015), and need to manage the negative emotions that arise (Roehm & Brady, 2007).

Therefore, the cognitive, affective, and behavioral responses of Telkomsel users to the experienced internet network issues tend to be more negative.

The Influence of Service Failure Severity from Internet Network Issues on Each Brand Forgiveness Dimension of Telkomsel Users

The service failure severity from internet network issues has a significant negative influence on each brand forgiveness dimension (cognitive, affective, behavioral) of Telkomsel users. Based on the original sample of path coefficients, it is revealed that the service failure severity from internet network issues has the greatest significant negative influence on the brand forgiveness cognitive dimension of Telkomsel users and the smallest on the brand forgiveness behavioral dimension of Telkomsel users. Cognitive dimension in brand forgiveness is related to consumers evaluation and thoughts. Meanwhile, behavioral dimension in brand forgiveness is related to consumers behavioral intentions. Thus, the service failure severity from internet network issues has the greatest significant negative influence on the evaluation and thoughts of Telkomsel users and the smallest significant negative influence on the behavioral intentions of Telkomsel users.

The possible reason why the service failure severity from internet network issues has the greatest significant negative influence on the evaluation and thoughts of Telkomsel users is because Telkomsel users have the perception that Telkomsel is the best cellular operator. This is not wrong because in 2023, Telkomsel won the award as the best telecommunications operator in Indonesia (Haryanto, 2023). As a result of this perception, when service failures related to internet network issues occur, regardless of whether they are categorizing as high or low severity, the evaluation and thoughts of Telkomsel users following these issues become more sensitive. The possible reason why the service failure severity from internet network issues has the smallest negative influence on behavioral intentions of Telkomsel users is because Telkomsel is considered a superior cellular operator compared to others. This is known from Opensignal's mobile experience report in 2023, which highlights Telkomsel's

superiority over other mobile operators in five out of nine categories (Khatri, 2023).

5. CONCLUSION

Based on the study results, it can be concluded the service failure severity from internet network issues, according to Telkomsel users, is categorized as high. The service failure severity from internet network issues has a significant negative influence on the brand forgiveness of Telkomsel users. The service failure severity from internet network issues has a significant negative influence on each brand forgiveness dimension (cognitive, affective, behavioral) of Telkomsel users. The service failure severity from internet network issues has the greatest significant negative influence on the brand forgiveness cognitive dimension of Telkomsel users and the smallest on the brand forgiveness behavioral dimension of Telkomsel users.

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