

Building Trust Bridges: Strategies to Enhance Telecommunication Company's Customer Satisfaction in Batam

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Abstract: Summary. This study seeks to ascertain the impact of service quality and trust on customer satisfaction among Wi-Fi users in Batam City. This quantitative research utilized primary data gathered from questionnaires completed by 100 Wi-Fi subscribers in Batam City. The gathered data was examined by multiple linear regression analysis. The preliminary findings indicated that service quality significantly enhances customer contentment, while trust also positively influences customer satisfaction. Moreover, the concurrent findings demonstrate that both service quality and trust exert a substantial collective impact on customer satisfaction among Wi-Fi customers in Batam City.

Keywords: service quality, trust, customer satisfaction

1 First Section

Internet technology is a data network that connects the entire world, transcending spatial and temporal boundaries, and enabling a wide range of electronic activities such as E-commerce and public data services. The internet has become an integral part of modern communication due to its diverse range of facilities and conveniences. As internet usage among the public expands, backbone traffic becomes denser, posing challenges to connection quality. Both internet service providers (ISPs) and network operators offer various Quality of Service (QoS) through network traffic competition.

According to Internet World Stats, as of June 2021, out of Indonesia's 276.36 million people, approximately 212.35 million are internet users, representing a penetration rate of 76.8%. Indonesia ranks seventh in Southeast Asia for internet penetration, sandwiched between Cambodia and Vietnam with penetration rates of 73.4% and 77. 4%, respectively. This indicates that the internet business is highly promising and is also considered a business with substantial profit margins.

Given the potential profitability of the internet service business, numerous companies have entered this market. In Indonesia, companies like Telkom with its flagship product Telkom-Net Instant, which later evolved into Speedy and then IndiHome, Indosat with its M2 service, Biznet from Midholding Plaza, and newcomers like FirstMedia from LippoGroup, among others, have emerged. The increasing number of new entrants provides consumers with a wider range of choices, necessitating a stronger market position for companies in an increasingly competitive landscape.

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Establishing an internet service company is no easy feat, nor is maintaining and growing one. Such companies must strive to provide services that meet the evolving needs and expectations of their customers. The survival of a company hinges on customer satisfaction and its ability to generate profits. Every customer desire and need must be fulfilled; otherwise, customers may switch to competitors, leading to decreased profits and a loss of market competitiveness.

Internet service providers must prioritize delivering exceptional service quality, ensuring a stable and high-performance internet connection. Prompt and efficient resolution of service disruptions and customer complaints is paramount. Additionally, fostering customer trust through reliability and responsiveness is crucial. By consistently exceeding customer expectations, internet providers can cultivate lasting customer satisfaction and loyalty.

Batam has a significant historical connection to the implementation of GSM (Global System for Mobile Communications) technology in Indonesia, as well as the inaugural operation of Telkomsel services, which commenced in 1995 to serve the Indonesian populace. Batam City is the ninth location designated by Telkomsel for 4G LTE deployment utilizing a frequency of 1800 MHz, achieving speeds of up to 75 Mbps, hence enhancing user satisfaction (Kodoatie & Sama, 2020). Kodoatie & Sama (2020) conducted research on internet speed in Batam, revealing that Telkomsel's internet speed is generally higher in economically capable areas or business centers. However, higher internet speeds in densely populated regions, such as Batu Aji, do not necessarily exceed those in less populated areas, such as Batu Ampar.

A preceding study conducted by (Pasharibu et al, 2018), titled "Price, service quality and trust on online transportation towards customer satisfaction," found that service quality and trust significantly influenced customer satisfaction, while price did not exert a significant impact. A previous study by (Rukmi et al, 2017) on customer satisfaction with souvenir shops, comparing Toko Kabita and Toko Pantai Timur, revealed a 4.6% lower overall satisfaction score for Toko Kabita. This indicates that the superior service quality of Toko Pantai Timur was a significant factor in driving customer satisfaction.

The current research corroborates the findings of Yuliati and Wahyuningsih (2018) regarding the pivotal role of service quality, trust, and commitment in fostering customer satisfaction. By examining the experiences of telecom customers in Batam, this study contributes to the existing body of knowledge and offers valuable insights for the telecommunications industry.

This study seeks to examine the influence of service quality and trust (X) on customer satisfaction (Y) among Indi-Home Wifi users in Batam, based on the previously reported findings. The study is entitled "Building Trust Bridges: Strategies to Enhance Customer Satisfaction in Telecommunication Companies in Batam."

2 Theoretical Framework and Hypothesis

Theory of disconfirmation

In the satisfaction literature, expectations are perceived as forecasts that consumers formulate regarding potential outcomes of an exchange transaction; conversely, in the service quality literature, expectations are regarded as consumers' aspirations, specifically what they believe the service provider ought to deliver rather than what will be delivered. The service function is denoted by service quality. Consumers possess expectations regarding the functionality of a product upon purchase. The product will operate in the following manner:

- a. Positive disconfirmation occurs when a product exceeds consumer expectations. In this scenario, people typically experience satisfaction and contentment with the product.
- b. Simple Disconfirmation: This occurs when a product's performance aligns with the consumer's expectations. Consumers in this state typically exhibit ambivalent sentiments, neither too satisfied nor discontented.
- c. Negative Disconfirmation: Conversely, if the product performance is inferior to consumer expectations, this situation is termed negative disconfirmation. This negative disconfirmation frequently leads to consumer dissatisfaction and disappointment (Pasianus & Kana, 2021).

Disconfirmation refers to the juxtaposition of consumer expectations regarding a product and the product's actual performance. This comparison will subsequently ascertain the degree of consumer satisfaction. Customers possess expectations regarding the functionality of a product while making a purchase. Customer satisfaction and discontent arise from a contrast between pre-purchase expectations and the actual experience or product received (Sumarwan, 2016).

Service Quality

Service quality denotes the degree to which a service fulfills or beyond consumer expectations (Parasuraman et al., 1994). It is the comprehensive capacity of a product or service to fulfill a customer's requirements. Essentially, when a seller has provided a product or service to its fullest capability, it has fulfilled or beyond client expectations (Kotler & Keller, 2018). Parasuraman et al. (1994) established five essential dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy. These factors offer a thorough framework for evaluating service quality. pertains to the elements of hope and perceived performance/results. Customer expectations are the anticipations or beliefs regarding the outcomes of purchasing or utilizing a product or service, whereas performance refers to the customer's view of the actual results attained following consumption of the purchased items. Consequently,

management must align its perception with that of customers to achieve results that meet or surpass customer expectations (Alfajar, Mustainah, Tawil, & Polii, 2021)

Trust

Trust is the readiness of one party to depend on another, grounded in faith in that individual's reliability and integrity (Pasharibu et al., 2018; Moorman et al., 2011). It entails a conviction in the partner's capacity to behave in a manner advantageous to the trusting individual (Kotler & Keller, 2018). Customer trust is intricately linked to satisfaction with a product or service. Customer trust is derived from the happiness experienced by customers regarding the outcomes of products and services (Mahendra & Indriyani, 2018).

Customer satisfaction

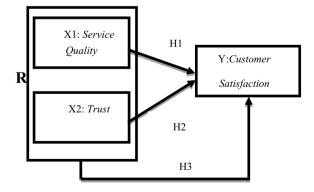
According to Guido (2014), customer satisfaction is a dynamic construct driven by multiple aspects, such as product quality, service quality, and consumer expectations. When a product or service fulfills or above client expectations, contentment is probable. Customer satisfaction is characterized as a post-purchase disposition established by evaluating the perceived performance of a product or service in relation to before purchasing expectations.

Hypothesis

 H_1 : There is a significant relationship between service quality and customer satisfaction.

H₂: Service quality has a significant impact on customer satisfaction.

H₃: Customer satisfaction is significantly influenced by service quality.



3 **Research Method**

Variable	Indikator	Skala
	Tangible	
	Reliability	
Service Quality (X_1)	Responsiveness	Ordinal
	Assurance	
	Empathy	
	Benevolence	
Trust (X ₂)	Integrity	Ordinal
	Competence	
	Overall Customer Satisfaction	
Customer Satisfaction(Y)	Confirmation Of Expectations	Ordinal
	Willingness To Recommend	

Table 1. Variable Operations

This research included both primary and secondary data. Primary data was gathered via a questionnaire administered to Wi-Fi subscribers. Secondary data was acquired via books, literature, library research, publications, and various online references. A Likert scale was employed for evaluation in this research.

The research population comprises all active Wi-Fi subscribers in Batam City. The sample size was calculated using the Lemeshow formula due to the absence of knowledge regarding the overall population. The minimum sample size was 96.04, and this study utilized 100 samples. The sample approach employed was nonprobability purposive sampling, focusing on users of a WiFi provider in Batam City who had sustained a membership for a minimum of three consecutive months. The data collection technique involves using a Google Form for WiFi consumers visiting the facility, as well as leveraging social media channels like Facebook.

		1		
Variable	Item Number	Calculated r-value	Significance Level (p- value)	Validity
Service Quality	1 2 3 4 5 6 6 7 7 8 9 9 10 111 12 2 13	0.55 0.548 0.789 0.608 0.652 0.752 0.822 0.845 0.77 0.633 0.886 0.754 0.688	0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.31	Valid Valid Valid Valid Valid Valid Valid Valid Valid
	13	0.000	0.31	
	1	0.787	0.31	
Trust	2	0.76	0.31	Valid
	3	0.885	0.31	Valid
Customer Satisfaction	1	0.93	0.31	Valid Valid
Sausiacuon	3	0.923	0.31	

Table 2. Validity Test Result

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The validity test results indicate that the calculated t-value for each item is greater than the critical t-value, suggesting that each item from variables (X) service quality, trust, and variable (Y) customer satisfaction is deemed accurate as a measurement tool for the research variables.

Variable	Number of Items	Cronbach's Alpha	Cut-off Point	Reliability
Service Quality	14	0.928	0.7	Reliable
Trust	3	0.738	0.7	Reliable
Customer Satisfaction	3	0.885	0.7	Reliable

Table 3. Reliability test result

Source: Data Processed by SPSS 24 (2021)

The reliability analysis presented in Table 3 demonstrates that all items in the measurement scales exhibited excellent internal consistency, as indicated by Cronbach's alpha values consistently exceeding the recommended threshold of 0.70.

Classical Assumptions Test

Table 4. Normality Test Result

	Unstandardized Residual		
Asymp.sig: (),200		
Source: Dat	ta Processed by SPSS 24 (2021)		
Table .	5. Multiclonality Test Result		
	Collinearity Statistics		
Tolerance		VIF	
0,459		2.179	
0,459		2.179	
Source: Dat	ta Processed by SPSS 24 (2021)		
Table 6	6. Heteroskedastic test Result		
Variabel		ABS_RES	
	Sig. (1-tailed)	0,753	
Service Quality (X1)	Ν	100	
True of (NA)	Sig. (1-tailed)	0,217	
Trust (X2)	Ν	100	

Source: Data Processed by SPSS 24 (2021)

The normality assumption was met, as evidenced by the asymptotic significance value of 0.200 (p > 0.05) for the unstandardized residuals (Table 4). Additionally, the multi-

collinearity diagnostics (Table 5) revealed no evidence of multicollinearity among the independent variables, as the tolerance values exceeded 0.1 and the variance inflation factors were below 10.

The heteroscedasticity test, as shown in Table 6, was conducted to assess the assumption of constant variance of the error terms. The results indicate that the assumption of homoscedasticity is not violated, as the significance levels (1-tailed) for both Service Quality and Trust variables are greater than the 0.05 threshold.

Multiple Linear Regression

A multiple linear regression evaluation was conducted to examine the joint effect of two independent factors on the dependent variable. The regression model employed in this investigation is specified as follows:

$$Y = a + b_1X_1 + b_2X_2 + e$$

Y = -1.911 + 0.134 X₁ + 0.547X₂+e

Analysis of Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.853ª	0,728	0,723	1,23213

Source: Data Processed by SPSS 24 (2021)

The results presented in Table 7 reveal that the model, with service quality and trust as predictors, explains 72.8% of the total variance in customer satisfaction. While this indicates a substantial portion of the variance is accounted for, it is important to note that 27.2% of the variation remains unexplained, suggesting the presence of other factors influencing customer satisfaction.

Hypothesis Test

Partial regression coefficient test

Table 8. t-test Result

M	odel	Unstandardized Coefficients	_	Standardized <u>Coefficients</u>			
		St B	d. Error	Beta		t	Sig.
1	(Constant)	-1,911	,867			-2,204	,030
	X1_SQ	,134	,023		,461	5,900	,000
	X2_Trust	,547	,094		,455	5,825	,000

Source: Data Processed by SPSS 24 (2021)

The results presented in Table 8 indicate that both service quality and trust have a significant positive relationship with customer satisfaction. The p-values for service quality and trust are both less than 0.05, providing strong evidence to reject the null hypothesis and conclude that these variables have a significant influence on customer satisfaction.

Мос	lel	Sum of Squares	df	Mean Square	F	Sig.
1	Regres- sion	394.739	2	197.37	130.007	.000 ¹
	Residual	147.261	97	1.518		
	Total	542	99			

Table 9. F-Test Result

Source: Data Processed by SPSS 24 (2021)

Table 9 demonstrates that the hypothesis test findings necessitate the rejection of the null hypothesis at the 0.05 significance level. A p-value of 0.000 indicates robust evidence that the multiple regression model is statistically significant, demonstrating that the independent variables, service quality and trust, combined account for a sub-stantial percentage of the variance in customer satisfaction.

Table 10. Regression Analysis Test

Variabel	Sig.	Hasil
Service Quality	0,000	Supported
Trust	0,000	Supported

Source: Data Processed by SPSS 24 (2021)

The data in Table 10 offers compelling evidence that service quality significantly enhances customer satisfaction. The p-value of 0.000 is far lower than the customary threshold of 0.05, signifying a very statistically significant association. This finding aligns with prior studies (Pasharibu et al., 2018; Lonardi et al., 2021; Assegaff, 2019), which have similarly shown the beneficial impact of service quality on customer satisfaction. These findings further validate the theoretical foundations of service quality, as articulated by Kotler and Keller (2018), which assert that service quality is directly associated with customer satisfaction.

The data in Table 9 offers compelling evidence that trust significantly enhances customer happiness. The p-value of 0.000 is far lower than the customary threshold of 0.05, indicating a highly statistically significant link. This conclusion aligns with prior research (Pasharibu et al., 2018; Yuliati & Wahyuningsih, 2018; Ludiana et al., 2020), which similarly evidenced the beneficial impact of trust on customer satisfaction. This suggests that clients with higher trust in a product or service are more inclined to experience satisfaction with it.

4 Conclusion

The findings of this study underscore the importance of both service quality and trust in driving customer satisfaction. With a sample of 100 respondents, the analysis revealed that:

- 1. Service quality is a key driver of customer satisfaction. The results suggest that organizations should prioritize delivering high-quality services to enhance customer satisfaction.
- 2. Trust is a critical factor in fostering customer satisfaction. By building trust with customers, organizations can significantly improve customer satisfaction levels.
- 3. WiFi provider companies can continue to improve the services and trust they have created in customers so far. To improve services, the Company can improve the quality of the network which has been good so far and it would be good to improve it again through the spread of the existing internet network. To increase trust, companies can develop creative ideas to increase trust in customers

References

- 1. Alfajar, F., Tawil, M., Mustainah, M., & Polii, J. J. (2021). Pengaruh kualitas pelayanan terhadap kepuasan pelanggan pada Makassar Jeans House Kota Palu. Cenderawasih: Journal of Administration and Management Public Literation (Jamil), 1(1), 37-50.
- Assegaff, S. (2019). The Effect of Service Quality to Customer of Loyalty Using Self-Service Technology: Internet Banking. *KnE Social Sciences*, 9(1), 21–36. https://doi.org/10.18502/kss.v3i26.5413
- 3. Guido, G. (2014). The large majority of studies carried out in the field of customer satisfaction can be considered as part of a common structure constituted by the so-called.
- Kim, D. J. (2012). An investigation of the effect of online consumer trust on expectation, satisfaction, and post-expectation. *Information Systems and E-Business Management*, 10(2), 219–240. https://doi.org/10.1007/s10257-010-0136-2
- Kodoatie, A. Y & Sama, Hendi (2020). Studi Analisis Kecepatan Internet Telkomsel Di Kota Batam: Studi Geografis. Conference on Business, Social Sciences and Innovation Technology, 1(1), 498-507.
- Kotler, P., & Keller, K. L. (2018). Marketing Management. In *Essentials of Management for Healthcare Professionals*. https://doi.org/10.4324/9781315099200-17
- Lonardi, S., Lan, W. P., Hutabarat, F. A. M., Nugroho, N., & Supriyanto, S. (2021). Peranan Kualitas Pelayanan dan Harga Terhadap Kepuasan Konsumen Pengguna E-commerce Shopee Di Politeknik Cendana. *Journal of Business and Economics Research (JBE)*, 2(3), 80–85. https://doi.org/10.47065/jbe.v2i3.955

- 8. Ludiana, N., Utami, B., & Setyariningsih, E. (2020). Pengaruh Service Quality dan Customer Trust terhadap Customer Loyalty melalui Customer Satisfaction sebagai Variabel Intervening (Studi pada Konsumen Klinik Kecantikan Clarice, Sooko Mojokerto).
- 9. Mahendra, K. P & Indriyani, Ratih (2018). Pengaruh Kepercayaan Pelanggan Terhadap Kepuasan Pelanggan Cv Mitra Perkasa Utomo. AGORA, 7(1), 1-5.
- Moorman, C., Zaltman, G., & Deshpande, R. (2011). Relationships between Providers and Users of Market Research : The Dynamics of Trust within and between Organizations Author (s): Christine Moorman, Gerald Zaltman, Rohit Deshpande Source : Journal of Marketing Research, Vol. 29, No. 3 (Aug., 19. *Journal of Marketing*, 29(3), 314–328.Niedrich, R. W., Kiryanova, E., & Black, W. C. (2005). The dimensional stability of the standards used in the disconfirmation paradigm. *Journal of Retailing*, 81(1), 49–57. https://doi.org/10.1016/j.jretai.2005.01.005
- 11. Oliver, R. L. (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. 17(4), 460–469.
- 12. Oliver, R. L. (2010). Satisfaction A Behavioral Perspective on The Consumer (Second Edi). Routledge Taylors & Francis Group.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Alternative scales for measuring service quality: A comparative assessment based on psychometric and diagnostic criteria. *Journal of Retailing*, 70(3), 201–230. https://doi.org/10.1016/0022-4359(94)90033-7.
- Pasianus, Ova & Kana, A. A (2021). Pengaruh Kualitas Layanan Terhadap Loyalitas Pelanggan Melalui Kepuasan Sebagai Variabel Intervening Pada Swalayan Pamella Enam Yogyakarta. Cakrawangsa Bisnis, 2(2), 197-216.
- Pasharibu, Y., Paramita, E. L., & Febrianto, S. (2018). Price, service quality and trust on online transportation towards customer satisfaction. *Jurnal Ekonomi* Dan Bisnis, 21(2), 241–266. https://doi.org/10.24914/jeb.v21i2.1965
- Rukmi, H. S., Novirani, D., & Hada, A. (2017). Analisis Kepuasan Konsumen Terhadap Kualitas Pelayanan Toko Oleh-Oleh. Jurnal Muara Ilmu Ekonomi Dan Bisnis, 1(1), 115. https://doi.org/10.24912/jmieb.v1i1.413

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