



# Unraveling the Service Chain: How Quality Drives Satisfaction and Loyalty at Telkomsel GraPARI Banjarmasin

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## Article Info

### Article history:

Received: 12 Oktober 2025

Revised: 17 Oktober 2025

Accepted: 17 Oktober 2025

### Keywords:

Customer loyalty

Product quality

Customer satisfaction

Service performance

Telecommunications industry

## ABSTRACT

The telecommunications industry in South Kalimantan has become increasingly competitive, requiring firms to deliver superior service quality and continuously innovate to retain customer loyalty. This study investigates the effects of product quality and customer satisfaction on customer loyalty at Telkomsel GraPARI Banjarmasin. Employing a quantitative research design, data were collected from 100 randomly selected respondents drawn from a population of 156,812 customers in 2023. A structured questionnaire using a five-point Likert scale was administered, and the data were analyzed through multiple linear regression, supported by validity, reliability, and classical assumption tests to ensure analytical robustness. The findings reveal that product quality exerts a significant influence on customer loyalty, accounting for 13.6% of its variance, while customer satisfaction emerges as the strongest predictor, explaining 45.4%. Jointly, both variables explain 85.3% of the total variance in loyalty, indicating their substantial contribution to long-term customer retention. The results underscore the strategic importance of enhancing customer satisfaction and maintaining consistent product quality in sustaining loyalty within highly competitive markets. Telecommunication firms are encouraged to prioritize reliable service performance, continuous product innovation, and customer-oriented strategies to achieve sustainable competitive advantage.

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## 1. INTRODUCTION

In the modern digital economy, connectivity transcends its technological foundation and has become a fundamental driver of how people communicate, conduct business, and engage socially. Indonesia exemplifies this transformation, with over 78% of its population having internet access by

2023—most through mobile connections (Choczyńska 2024). Telecommunications services now underpin daily life, from media streaming and e-commerce to mobile banking, reflecting the nation's rapid adoption of digital technologies. In South Kalimantan, increasing use of smartphones, social media, and online platforms has elevated consumer expectations for faster, more reliable, and feature-rich telecommunications services. For service providers, this heightened demand presents both opportunity and challenge: to secure market share, they must not only meet fundamental service standards but also innovate continuously to sustain customer loyalty in a highly competitive environment (Sujatha 2025).

Within Indonesia's telecommunications landscape, **Telkomsel** has long been the industry leader, commanding approximately 66.4% of the national market and serving more than 169 million subscribers (Iqbal and Indradewa 2023); Saputra et al. (2025)). Its success is built upon extensive network coverage, diverse service offerings, and a strong, well-established brand image. However, despite these competitive advantages, the market remains volatile. Local and national competitors are adopting aggressive, data-driven pricing models and personalized digital service strategies to appeal to an increasingly discerning consumer base. This evolution mirrors global trends in telecommunications, where customer experience and personalization have emerged as the key sources of sustainable competitive advantage.

Customer loyalty has consistently been identified as a cornerstone of long-term business sustainability and profitability in service industries (Helgesen, 2010]; Matshona, 2019; Olugbenga & Omoyebagbe, 2022). In telecommunications, loyalty not only sustains revenue through repeat subscriptions but also generates intangible benefits such as favorable word-of-mouth, reduced churn rates, and greater receptivity to new service innovations (Ribeiro, Barbosa, & Moreira, 2024; Sujatha, 2025). Within this context, **product quality** and **customer satisfaction** have been widely recognized as the two most influential determinants of customer loyalty.

Product quality is a multidimensional construct encompassing both tangible and perceptual attributes. Garvin's (1984) seminal framework identifies dimensions such as performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality, which collectively shape consumer evaluations. In the telecommunications sector, these dimensions translate into network reliability, service accessibility, technological innovation, and consistent performance (Berry et al., 1994; Khan, 2019; Abd-Elrahman, 2023). Product quality functions as a critical foundation for building trust and sustaining long-term relationships with customers.

Customer satisfaction, conversely, reflects the degree of alignment between customer expectations and perceived service performance (Kotler, 2015). When service experiences exceed expectations, satisfaction enhances both behavioral and attitudinal loyalty, fostering repeat patronage and advocacy. Conversely, dissatisfaction accelerates churn and weakens customer attachment (Marimon et al., 2025; Ribeiro et al., 2024; Wang et al., 2016). Satisfaction in telecommunications extends beyond the functional aspects of network quality—it encompasses perceived fairness in pricing, the responsiveness of customer service, and brand credibility (Hallencreutz & Parmler, 2021; Girsang & Faadhil, 2025; Lestari et al., 2025). Thus, customer satisfaction is best understood as a holistic evaluation that integrates both functional and experiential dimensions of service interaction.

These two constructs—product quality and satisfaction—operate in a reinforcing cycle: high-quality services enhance satisfaction, and greater satisfaction strengthens loyalty (Berry et al., 1994; Rust & Oliver, 1994). Yet, despite scholarly consensus on their importance, debates persist regarding their **relative influence and contextual variation**. Aydin and Ozer (2005) argued that in developing markets, technical reliability and network performance are the primary loyalty drivers, while satisfaction acts as a mediating outcome of perceived quality. Conversely, other studies emphasize satisfaction as the dominant determinant, asserting that emotional engagement and service experience often outweigh functional quality in shaping loyalty (Nguyen et al., 2020; Supriyanto et al., 2021; Shrestha, 2021). Furthermore, loyalty itself is conceptualized along multiple dimensions—behavioral loyalty, which refers to repeat patronage (Mustaffa et al., 2020), and attitudinal loyalty, which reflects

emotional attachment and advocacy (Dick & Basu, 1994; Oliver, 1999; Akhgari & Bruning, 2024; Imtiaz, 2022).

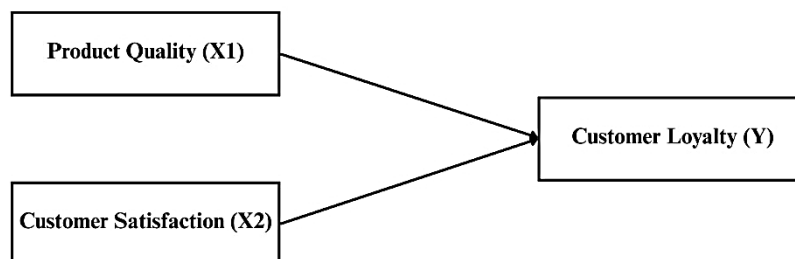
Contextual factors further influence these relationships. In advanced markets where service quality is standardized, satisfaction tends to dominate as the primary determinant of loyalty (Kim et al., 2024). In contrast, in developing regions, product quality—particularly in terms of reliability and accessibility—plays a more decisive role. Such variations underscore the importance of contextualized analysis rather than relying on generalized models of consumer behavior.

Despite extensive literature, several **gaps** remain that constrain the applicability of existing findings to specific regional contexts such as South Kalimantan. First, most prior studies have been conducted at national or global scales, often overlooking regional disparities arising from cultural norms, socioeconomic conditions, and infrastructural limitations. Consumers in major urban centers like Jakarta or Surabaya may prioritize advanced features and speed, whereas those in regional areas like Banjarmasin may value affordability, stable connectivity, and accessibility more strongly. Consequently, uniform strategies may fail to capture the nuances of regional consumer behavior.

Second, much of the prior research focuses on brand-level competition while neglecting the **micro-level service experiences** that shape consumer perceptions. Service outlets such as Telkomsel GraPARI represent key interaction points where customers directly experience the quality, responsiveness, and reliability of services. Examining these localized encounters provides richer insights into how satisfaction and loyalty are formed in practice.

Third, rapid **digital transformation** has significantly altered customer expectations, introducing new variables such as app usability, digital payment systems, and bundled service ecosystems. Yet, many existing loyalty frameworks predate these developments, reducing their explanatory relevance in today's telecommunications environment. Methodological inconsistencies across studies—ranging from the use of composite constructs to isolated variable analysis—further complicate comparative understanding and hinder theoretical refinement.

Addressing these limitations is essential for both theoretical advancement and managerial application. Localized empirical studies can refine existing models and reveal context-specific drivers of loyalty, while practitioners can derive actionable insights to enhance regional service strategies. Therefore, this study aims to examine the **influence of product quality and customer satisfaction on customer loyalty** in a localized setting, focusing specifically on **Telkomsel GraPARI Banjarmasin**. Through a quantitative approach, this research investigates both the individual (partial) and combined (simultaneous) effects of these variables. The findings are expected to contribute to the development of a more contextually grounded understanding of customer loyalty within Indonesia's telecommunications industry, offering both theoretical enrichment and practical implications for sustainable customer retention.



Source: Processed data (2025)

**Figure 1.** Conceptual Research

**Figure 1** presents the conceptual framework of this study, illustrating the hypothesized relationships between product quality, customer satisfaction, and customer loyalty.

The novelty of this study lies in its contextual focus and empirical contribution. Unlike prior research that predominantly examines customer loyalty on a national scale, this study provides a localized analysis of how product quality and customer satisfaction interact to shape loyalty at Telkomsel GraPARI Banjarmasin. By integrating these constructs within the specific sociocultural and digital environment of South Kalimantan, this research offers a fresh perspective on customer retention strategies in developing regional markets, thus extending existing loyalty frameworks within Indonesia's telecommunications industry.

## 2. RESEARCH METHOD

This study was conducted at Telkomsel GraPARI Banjarmasin, South Kalimantan, to analyze the partial and simultaneous effects of product quality and customer satisfaction on customer loyalty. A quantitative research design was used, with 100 respondents selected from a population of 156,812 customers through simple random sampling based on Slovin's formula (10% margin of error, 90% confidence level).

Primary data were collected using structured questionnaires and observations, while secondary data came from GraPARI's internal records and literature. The research framework positioned product quality and customer satisfaction as independent variables, and customer loyalty as the dependent variable. Product quality was measured by eight indicators (e.g., network reliability, service suitability, staff competence), customer satisfaction by five indicators (e.g., perceived quality, price fairness, service accessibility), and customer loyalty by seven indicators (e.g., continued usage, brand preference, switching resistance). All items used a five-point Likert scale.

Data were analyzed using multiple linear regression in SPSS. Validity, reliability, and classical assumption tests (normality, heteroscedasticity, multicollinearity) were conducted to ensure data accuracy. Hypotheses were tested using t-tests for partial effects and F-tests for simultaneous effects at the 5% significance level.

## 3. RESULTS AND DISCUSSIONS

### Respondent Characteristics

**Table 1. Respondent Profile**

Characteristics	Category	Frequency	Percentage
<b>Gender</b>	Male	44	44%
	Female	56	56%
<b>Age</b>	< 20 years	6	6%
	21-30 years	49	49%
	31-40 years	30	30%
	> 40 years	15	15%
<b>Occupation</b>	Student	35	35%
	Employee	27	27%
	Entrepreneur	23	23%

	Others	15	15%
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Source: Processed data (2025)

The majority of respondents were female (56%) and aged 21–30 years (49%). Most respondents were students (35%), followed by employees (27%) and entrepreneurs (23%). This profile reflects Telkomsel's customer base in Banjarmasin, which is dominated by young, digitally active users and students who rely heavily on mobile services.

### Validity Test

Table 2. Validity Test Results

Variable	Range of r-calculated	r-table (N=100; $\alpha=0.05$ )	Decision
Product Quality (X <sub>1</sub> )	0.705 – 0.831	0.196	Valid
Customer Satisfaction (X <sub>2</sub> )	0.833 – 0.873	0.196	Valid
Customer Loyalty (Y)	0.838 – 0.932	0.196	Valid

Source: Processed data (2025)

All indicators for product quality, customer satisfaction, and customer loyalty showed r-values above the critical value (0.196), indicating that every item in the questionnaire was valid and could measure its intended construct.

### Reliability Test

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Threshold	Decision
Product Quality (X <sub>1</sub> )	0.894	> 0.60	Reliable
Customer Satisfaction (X <sub>2</sub> )	0.907	> 0.60	Reliable
Customer Loyalty (Y)	0.943	> 0.60	Reliable

Source: Processed data (2025)

All three constructs exceeded the minimum Cronbach's Alpha threshold of 0.60, with values above 0.89, confirming strong internal consistency and reliability.

### Classical Assumption Tests

Table 4. Classical Assumption Test Results

Test	Results	Decision
Normality	Histogram and P-P plot followed normal line	Normal distribution
Heteroscedasticity	Scatterplot showed random distribution	No heteroscedasticity
Multicollinearity	Tolerance = 0.271; VIF = 3.687 (< 10)	No multicollinearity

Source: Processed data (2025)

The normality, heteroscedasticity, and multicollinearity tests confirmed that the data met regression assumptions. Therefore, the regression model was feasible for hypothesis testing.

### Hypothesis Testing

**Table 5. Regression Coefficients (t-Test)**

Variable	$\beta$ Coefficient	t-value	Sig.	Partial R <sup>2</sup>	Decision
Product Quality (X <sub>1</sub> )	0.304	3.922	0.000	0.136	H <sub>1</sub> accepted
Customer Satisfaction (X <sub>2</sub> )	1.084	8.998	0.000	0.454	H <sub>2</sub> accepted

*Source: Processed data (2025)*

**Table 6. F-Test and Model Summary**

F-value	F-table	Sig.	Adjusted R <sup>2</sup>	Decision
288.708	3.09	0.000	0.853	H <sub>3</sub> accepted

*Source: Processed data (2025)*

The regression analysis shows that both product quality and customer satisfaction significantly affect customer loyalty, both partially and simultaneously. Customer satisfaction ( $\beta=1.084$ ; partial R<sup>2</sup>=45.4%) exerts the strongest effect, while product quality ( $\beta=0.304$ ; partial R<sup>2</sup>=13.6%) also contributes significantly. Together, the two variables explain 85.3% of the variance in customer loyalty.

The results highlight several important insights. First, customer satisfaction is the strongest predictor of loyalty. With a coefficient of 1.084 and contribution of 45.4%, satisfaction factors such as perceived service quality, fairness of pricing, professionalism, brand image, and accessibility strongly influence whether customers remain loyal. This finding supports (Oliver 1999) loyalty framework and is consistent with Rust & Oliver (1994), Ribeiro et al., (2024); Shrestha (2021), who emphasize that satisfied customers are less likely to switch and more likely to advocate for the brand.

Moreover, product quality remains a significant determinant. Although its contribution (13.6%) is smaller compared to satisfaction, product quality still plays a vital role in customer loyalty. For Telkomsel, this includes network reliability, service stability, useful features, staff competence, and trustworthy digital platforms. This aligns with Aydin & Ozer (2005); Garvin (1984); Omoregie et al., (2019), who argue that consistent product quality forms the foundation for customer trust and retention.

Finally, the model's explanatory power is remarkably strong. With an Adjusted R<sup>2</sup> of 0.853, the combination of product quality and customer satisfaction explains the vast majority of customer loyalty variance. This suggests that these two factors are not just important but central in retaining customers in the telecommunications service sector.

The findings carry important managerial implications for telecommunications providers. First, firms should prioritize customer experience by continuously improving service speed, transparent pricing, complaint handling, and ease of access, as these factors exert the strongest influence on loyalty. Second, safeguarding core product quality remains essential; maintaining stable networks, consistent service delivery, and competent staff is critical since even minor failures in performance can erode customer satisfaction. Finally, integrating service and product improvements

into a combined strategy will allow companies to maximize both the functional dimensions of quality and the emotional aspects of satisfaction, thereby reinforcing long-term loyalty. Overall, these findings affirm that customer loyalty at Telkomsel GraPARI Banjarmasin is a function of both product and service dimensions, with satisfaction serving as the dominant driver.

#### 4. CONCLUSION

This study concludes that achieving optimal customer loyalty depends not only on the consistency of product quality but also, and more importantly, on the level of customer satisfaction that accompanies service experiences. Customer satisfaction proves to be a stronger driver, transforming perceptions of quality into repeat purchases, trust, and resistance to switching. Therefore, the synergy between product quality and customer satisfaction is a crucial foundation for sustaining long-term customer loyalty in the telecommunications sector. From the results of hypothesis testing, the following conclusions are obtained:

1. The first hypothesis, which states that product quality has a positive and significant effect on customer loyalty, is supported. This means that the higher the quality of products and services provided by Telkomsel, the higher the level of customer loyalty.
2. The second hypothesis, which states that customer satisfaction has a positive and significant effect on customer loyalty, is supported. This indicates that the more satisfied customers are with Telkomsel's services, pricing, and accessibility, the more likely they are to remain loyal.
3. The third hypothesis, which states that product quality and customer satisfaction simultaneously have a positive and significant effect on customer loyalty, is supported. This finding implies that loyalty is best achieved when both service quality and customer experience are enhanced together, as reflected in the high Adjusted R<sup>2</sup> value (85,3%).

Overall, the findings show that customer loyalty depends not only on strong product quality but also on strategies that improve customer satisfaction, which is the most influential factor. Practically, Telkomsel should improve service professionalism, ensure reliable networks, develop loyalty programs, maintain transparent pricing, and enhance digital access. By doing so, the company can strengthen customer ties, reduce churn, and achieve lasting competitive advantage.

#### ACKNOWLEDGEMENTS

The author gratefully acknowledges the Department of Business Administration, Politeknik Negeri Banjarmasin, for providing institutional support and research facilities that enabled the completion of this study. Appreciation is also extended to Telkomsel GraPARI Banjarmasin for granting access to data and participants essential to this research. The author further acknowledges the valuable insights and constructive comments from academic colleagues, which significantly contributed to enhancing the rigor and clarity of this manuscript.

#### REFERENCES

- Aydin, Serkan, and Gökhan Ozer. 2005. "National Customer Satisfaction Indices: An Implementation in the Turkish Mobile Telephone Market." *Marketing Intelligence and Planning* 23(5):486–504. doi:10.1108/02634500510612654.
- Choczyńska, Agnieszka. 2024. "INTERSECTIONAL DIGITAL INEQUALITY IN INDONESIA \* Agnieszka Choczyńska." *Insights into Regional Development* 6(3):11–22.

- Garvin, David A. 1984. "Product Quality ' . An Important Strategic Weapon." (April):14–15.
- Iqbal, M. Ali, . Parwoto, and Rhian Indradewa. 2023. "The Effect of Customer Value and Service Quality on Customer Satisfaction and the Implications for Telkomsel Prepaid Card Purchasing Decisions." *International Journal of Research and Review* 10(7):831–43. doi:10.52403/ijrr.20230798.
- Oliver. 1999. "Applications for Hydrous Ferric Oxide Mine Water Treatment Sludge - A Review." *Reliable Mine Water Technology: Proceedings of the International Mine Water Association Annual Conference 2013, Vols I & II* 63:519–24.
- Omoregie, Osaretin Kayode; Addae, John Agyekum; Coffie, Stanley; Ampong, George Oppong Appiagyei ; Ofori, Kwame Simpe. 2019. "Factors Influencing Consumer Loyalty : Evidence from the Ghanaian Retail Banking Industry." *International Journal of Bank Marketing*. doi:10.1108/IJBM-04-2018-0099.
- Ribeiro, Hugo, Belem Barbosa, and Antonio C. Moreira. 2024. "Customer Experience , Loyalty , and Churn in Bundled Telecommunications Services." (June):1–16. doi:10.1177/21582440241245191.
- Rust, Contributors Roland T., and Richard L. Oliver. 1994. "Service Quality : New Directions in Theory and Practice Service Quality : Insights and Managerial Implications from the Frontier Chapter 1 : Service Quality : Insights and Managerial Implications from the Frontier." 1–21. doi:10.4135/9781452229102.
- Saputra, Egi, Ramadania Ramadania, Heriyadi Heriyadi, and Wenny Pebrianti. 2025. "Pengaruh Kualitas Panggilan Seluler Dan Nilai Ekonomis Terhadap Loyalitas Pelanggan Dengan Kepuasan Pelanggan Sebagai Mediasi (Studi Pada Pembelian Produk Telkomsel Prabayar Simpati Di Pontianak)." *Primary Journal of Multidisciplinary Research* 1(3):80–90. doi:10.70716/pjmr.vii3.197.
- Shrestha, Purna Man. 2021. "Impact of Service Quality on Customer Satisfaction and Loyalty." *Management Dynamics* 2(2019):71–80.
- Sujatha, S. Mary. 2025. "Optimizing Customer Retention in Telecommunications Best Practices and Benefits." *REST Journal on Banking, Accounting and Business* 4(1):105–12. doi:10.46632/jbab/4/1/11.