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The Effect of Service Quality and Price on Customer Loyalty Mediated by Customer Satisfaction at PT Indosat Ooredoo Hutchison in South Jakarta

Rizka Rahmadina [1*], Budi Prasetyo [1]
[1] *Universitas Telkom, Indonesia*

budiprasetiyo@telkomuniversity.ac.id*

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Abstract

This research seeks to examine the influence of service quality and pricing on customer loyalty, while considering customer satisfaction as a mediating variable among prepaid users of PT Indosat Ooredoo Hutchison in South Jakarta. The study is motivated by a decline in the number of customers as well as fluctuating perceptions regarding service quality and pricing, which are assumed to impact customer loyalty. A quantitative research design was applied using a survey method, where data were gathered through questionnaires distributed to prepaid Indosat users. The analysis was conducted using Structural Equation Modeling with a Partial Least Squares (PLS-SEM) approach. The findings reveal that both service quality and price significantly and positively affect customer satisfaction. In addition, customer satisfaction is proven to have a significant positive impact on customer loyalty. Service quality and price also directly influence customer loyalty. Moreover, customer satisfaction is found to act as a significant mediating variable that strengthens the relationship between service quality, price, and customer loyalty. These results suggest that enhancing service quality and implementing pricing strategies that align with customers' perceived value are essential for increasing both customer satisfaction and loyalty.

Keywords: Service Quality, Price, Customer Satisfaction, Customer Loyalty, PLS-SEM

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INTRODUCTION

The rapid development of digital technology in recent years has significantly transformed various aspects of human life, including communication patterns, economic activities, and access to information. Digital transformation has increased society's dependence on internet services as a fundamental infrastructure supporting daily activities such as communication, education, and digital business (Pennathur et al., 2024; Seid Ahmed & Milani, 2025). In this context, the telecommunications industry plays a strategic role in providing reliable and high-quality connectivity services (Kaymakcı et al., 2022; Mangruwa, 2024; Wang et al., 2011; Waseem et al., 2025).

Along with the increasing penetration of internet usage, competition in the telecommunications industry has intensified. Companies are required not only to expand network coverage but also to deliver superior service quality and competitive pricing strategies to retain customers (Almanwari et al., 2024; Liu et al., 2025). In highly competitive service industries, customer loyalty becomes a crucial determinant of business sustainability, as loyal customers tend to repurchase and recommend services to others (Mohsin et al., 2023; Pasianus, 2021; Zhang et al., 2025).

Previous international studies have demonstrated that service quality has a significant effect on customer loyalty, either directly or indirectly through customer satisfaction as a mediating variable (Akbari et al., 2017; Junaidi, 2019; Mohsin et al., 2023; Söderlund, 2024). In addition, price plays a critical role in shaping perceived value, where the alignment between price and perceived benefits influences both satisfaction and loyalty (Mounir & Ali, 2023; Xiong & Li, 2024). In the telecommunications sector, factors such as network reliability, service responsiveness, and user experience are key determinants of customer loyalty (Pintor et al., 2025; Qasim et al., 2025; Serra-Simón et al., 2025).

In Indonesia, internet usage has shown a continuous upward trend, reflecting the growing reliance on digital services. However, this increase has not been fully accompanied by consistent improvements in service quality (Yunani et al., 2024). This condition indicates a gap between customer expectations and the actual performance of telecommunications services (Gidaković & Zabkar, 2021; Hou, 2020; Lechermeier et al., 2020).

Table 1: Internet Speed Ranking in Asia

No.	Country	Internet Speed (Mbps)	Rank
1	Singapore	394.30	1
2	Thailand	262.42	9
3	Vietnam	261.80	10
4	Malaysia	154.03	41
5	Philippines	105.17	54
6	Brunei Darussalam	83.14	78
7	Cambodia	49.32	105
8	Laos	47.46	109
9	Indonesia	39.88	116
10	Myanmar	26.90	132

Furthermore, competition among telecommunications providers in Indonesia is becoming increasingly intense. Each company strives to enhance service quality and offer competitive pricing to attract and retain customers (Wardhana et al., 2023). However, customer loyalty is not solely determined by service quality and price but is also strongly influenced by customer satisfaction (Saragih et al., 2022). Customer satisfaction represents an evaluative response resulting from the comparison between expectations and perceived service performance (Akbari et al., 2017; Cepiku et al., 2022; Murad et al., 2022; Söderlund, 2024; Walsh, 2024).

In the case of PT Indosat Ooredoo Hutchison, despite being one of the major telecommunications providers in Indonesia, the company has experienced a declining trend in the number of customers in recent years. This phenomenon indicates challenges in maintaining customer loyalty, particularly in the prepaid segment.

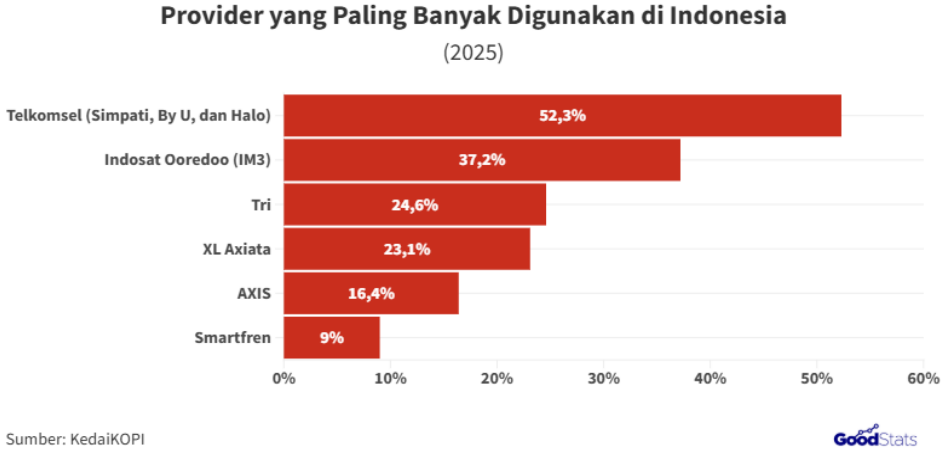

Figure 1. Mobile Service Provider Users in Indonesia
Source: GoodStats

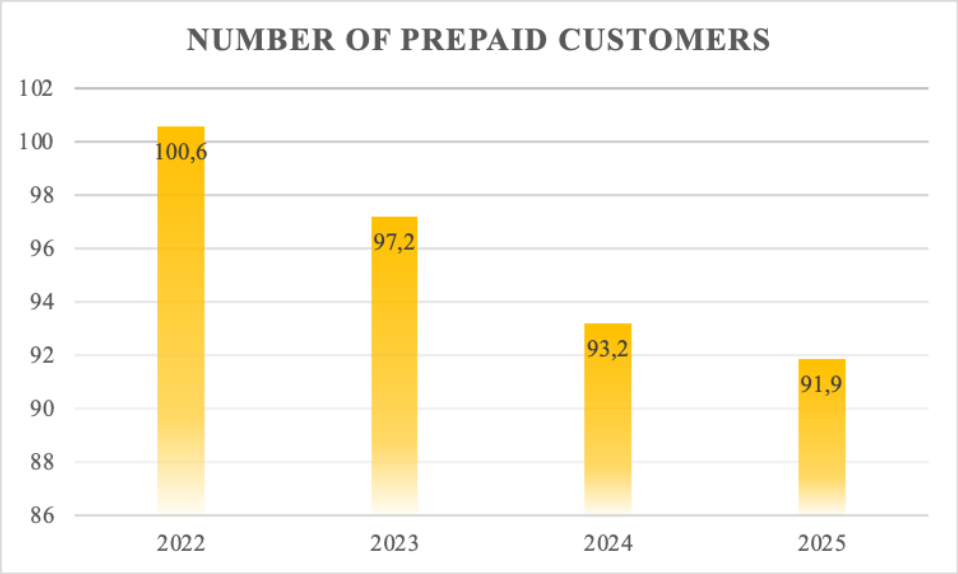

Figure 2. Decline in Indosat Customer Base
Source: Indosat 2025 Report

Additionally, customer reviews on digital service platforms reveal several complaints related to unstable network quality, slow service responses, and pricing perceptions that are not fully aligned with the benefits received. These issues indicate a gap between customer expectations and the actual service performance, which may negatively affect customer satisfaction and loyalty (Glaveli et al., 2019; Mehrajunnisa et al., 2021; Murad et al., 2022; Safavi & Karatepe, 2018). National studies also confirm that service quality and price significantly influence customer satisfaction and loyalty, particularly in service-based industries (Akbari et al., 2017; Mohsin et al., 2023; Pasianus, 2021; Yesitadewi & Widodo, 2024). However, many previous studies have primarily focused on direct relationships between variables and have not comprehensively examined the mediating role of customer satisfaction, especially in the context of digital-based telecommunications services (Khoshlahn & Ardabili, 2016; Kiki et al., 2019; Molina-Collado et al., 2021; Yazdani, 2021).

In examining the interplay between service quality, price, customer satisfaction, and customer loyalty, this research is also anchored in the Expectation-Disconfirmation Theory (EDT). Originally introduced by Richard L. Oliver (1980), this theory suggests that customer satisfaction emerges from a comparison between prior expectations and the actual performance perceived by customers. EDT identifies three possible outcomes of this evaluative process: (1) positive disconfirmation, which occurs when actual performance surpasses expectations and leads to a high level of satisfaction; (2) confirmation, where performance aligns with expectations and produces a moderate level of satisfaction; and (3) negative disconfirmation, when performance falls short of expectations, resulting in dissatisfaction.

Within the telecommunications sector, customers typically develop expectations related to service reliability, internet speed, and the fairness of pricing relative to the benefits received. When these expectations are fulfilled or exceeded, customers are more likely to experience satisfaction, which subsequently fosters loyalty.The application of EDT in this study is particularly relevant in explaining the mediating role of customer satisfaction in the relationship between service quality, price, and customer loyalty. This aligns with the fundamental premise of EDT, which views satisfaction as both a cognitive and emotional evaluation that influences future behavioral intentions, including repeat purchases and positive word-of-mouth. Hence, Expectation-Disconfirmation Theory serves as a robust theoretical

framework for understanding how service quality and pricing strategies can shape customer loyalty through the mechanism of customer satisfaction.Based on this research gap, a more comprehensive study is needed to analyze the relationships between service quality, price, customer satisfaction, and customer loyalty within an integrated research model (Yesitadewi & Widodo, 2024). This study is important because customer loyalty is a key factor in maintaining competitive advantage in the increasingly dynamic telecommunications industry (Gidaković & Zabkar, 2021; Inoyatova & Isakov, 2022; Nguyen et al., 2021). The originality of this research is reflected in its focus on the mediating function of customer satisfaction in linking service quality and pricing to customer loyalty, specifically among prepaid users of PT Indosat Ooredoo Hutchison in South Jakarta. This region is known for its intense digital engagement, which consequently raises customer expectations toward service performance. Accordingly, this study is anticipated to offer theoretical contributions to the fields of service marketing and consumer behavior, particularly in enriching the understanding of customer loyalty. From a practical perspective, the findings are expected to provide valuable insights for telecommunications providers in formulating strategies to enhance service quality and establish pricing policies that align with customer expectations, ultimately leading to increased satisfaction and loyalty.

METHOD

Research Design

This study employs a quantitative research approach with a causal design to examine the relationships between service quality, price, customer satisfaction, and customer loyalty. Quantitative research is based on a positivist paradigm and aims to test hypotheses using statistical analysis (Sugiyono, 2019). The causal approach is used to identify the direct and indirect effects among variables.

Variables and Measurement

This study involves three types of variables Independent Variables (X), Service Quality (X1), Price (X2), Mediating Variable (Z), Customer Satisfaction, Dependent Variable (Y), Customer Loyalty. Service quality is measured using the SERVQUAL dimensions, including tangibles, reliability, responsiveness, assurance, and empathy (Dalati, 2017). Price is measured based on affordability, price fairness, competitiveness, and value suitability (Kotler, 1969). Customer satisfaction is measured through expectation, performance, comparison, experience, and confirmation (Priansa, 2018), while customer loyalty is measured using repeat purchase, retention, and referrals (Gonzalez-Acevedo, 2016). All variables are measured using a Likert scale (1–5), ranging from strongly disagree (1) to strongly agree (5).

Population and Sample

The target population in this research includes prepaid users of PT Indosat Ooredoo Hutchison located in South Jakarta. Due to the absence of precise data regarding the total number of customers, the population is treated as an infinite population. This study employs a non-probability sampling approach, specifically using purposive sampling. Respondents are selected based on the following criteria:

a. Active users of Indosat prepaid services
b. Residing or conducting daily activities in South Jakarta
c. Aged at least 17 years
d. Have used Indosat services for a minimum of 6 months

The sample size is determined using G*Power analysis, with parameters: effect size (0.15), significance level (0.05), power (0.95), and 3 predictors. The result indicates a minimum sample size of 119 respondents, which is rounded to 200 respondents to ensure adequate statistical power (Sarstedt et al., 2020).

Data Collection Technique

The data for this study are gathered through the following methods:

a. Primary data: Acquired by distributing questionnaires to the respondents.
b. Secondary data: Sourced from academic journals, books, company publications, and other relevant online references.

c. The questionnaire is designed based on the indicators of each research variable and administered in a structured format.

Data Analysis Technique

The data analysis in this study is conducted using both descriptive statistics and Structural Equation Modeling based on Partial Least Squares (PLS-SEM). Descriptive analysis is applied to present the characteristics of respondents and their responses to each research variable, including frequency distributions, percentages, and mean values. Furthermore, this study employs PLS-SEM using SmartPLS software to examine the relationships among variables, as this method is suitable for predictive analysis, complex research models, and relatively small sample sizes (Hair et al., 2021).

The evaluation of the measurement model (outer model) includes testing convergent validity through outer loadings greater than 0.70 and Average Variance Extracted (AVE) values above 0.50, discriminant validity using HTMT ratios below 0.85 or 0.90, and reliability measured by Composite Reliability and Cronbach's Alpha values exceeding 0.70. Meanwhile, the structural model (inner model) is assessed using several indicators, including R-Square (R^2) to determine the model's explanatory power, effect size (f^2) to evaluate the influence of exogenous variables, and predictive relevance (Q^2), where values above zero indicate good predictive capability. In addition, path coefficients are analyzed to identify the direction and strength of relationships between variables. Hypothesis testing is carried out using the bootstrapping method with 5,000 subsamples to ensure the robustness of the results.

RESULT AND DISCUSSION

Respondent Characteristics

This study involved 200 respondents who met the criteria as active prepaid users of PT Indosat Ooredoo Hutchison in South Jakarta. The sample size exceeds the minimum requirement suggested by G*Power analysis, indicating that the data are adequate for further statistical analysis using PLS-SEM. Based on the screening question regarding the use of prepaid Indosat services, all respondents (100%) confirmed that they are current users of Indosat prepaid services. This result indicates that the sample is fully relevant to the research objectives, as all participants have direct experience with the service being studied.

Descriptive Analysis

Descriptive analysis was conducted to examine respondents' perceptions of the four main variables: service quality, price, customer satisfaction, and customer loyalty.

a. Service Quality (X1)

The descriptive analysis of service quality (X1), measured using 10 indicators, shows that all items are categorized as good, with individual scores ranging from 77.4% to 81.0%. The highest score is observed in the indicator related to the company's attention to customer needs (81.0%), while the lowest score is associated with network stability (77.4%). Overall, respondents perceive the digital service interface as easy to understand and visually appealing, the network coverage as wide, transactions as efficient, and the service as secure, responsive, fair, and professional in handling customer issues. The total score achieved is 7,991 out of an ideal score of 10,000, resulting in an overall percentage of 79.9%. Based on the continuum scale interpretation, this indicates that the service quality of Indosat prepaid services is classified as good.

b. Price (X2)

The descriptive analysis of price (X2), measured using seven indicators, shows that all items are categorized as good, with scores ranging from 77.9% to 80.6%. The highest score is found in the indicator reflecting the alignment between network quality and price (80.6%), while the lowest score relates to the perceived suitability between price and benefits received (77.9%). Overall, respondents perceive that Indosat prepaid prices are affordable, competitive, and aligned with customers' purchasing power, with attractive pricing variations and promotional offers. In addition, customers express satisfaction with the tariff structure, indicating that the costs incurred are proportional

to the service quality received. The total score obtained is 5,548 out of an ideal score of 7,000, resulting in an overall percentage of 79.3%. Based on the continuum scale interpretation, this indicates that the price variable is classified as good.

c. Customer Satisfaction (Z)

The descriptive analysis of customer satisfaction (Z), measured using ten indicators, indicates that all items fall within the good category, with scores ranging from 71.4% to 87.0%. The highest score is observed in the indicator related to the fulfillment of customer expectations (87.0%), while the lowest score is associated with the perceived superiority of Indosat services compared to competitors (71.4%). Overall, respondents perceive that Indosat prepaid services are capable of meeting user needs, providing clear information, handling complaints effectively, offering service variety, and delivering a satisfying and comfortable user experience. In addition, customers express strong satisfaction with network quality and the extent to which the service meets their expectations. The total score obtained is 7,942 out of an ideal score of 10,000, resulting in an overall percentage of 79.4%. Based on the continuum scale interpretation, this indicates that customer satisfaction is classified as good.

d. Customer Loyalty (Y)

The descriptive analysis of customer loyalty (Y), measured using six indicators, shows that all items are classified as good to very good, with scores ranging from 74.8% to 86.0%. The highest score is observed in the intention to continue subscribing to Indosat prepaid services in the future (86.0%), while the lowest score relates to the tendency to make Indosat the primary choice (74.8%). Overall, respondents demonstrate strong loyalty, reflected in repeat purchases, resistance to switching to other providers, willingness to recommend the service, and sharing positive experiences with others. The total score obtained is 4,841 out of an ideal score of 6,000, resulting in an overall percentage of 80.7%. Based on the continuum scale interpretation, this indicates that customer loyalty is categorized as good.

Measurement Model Evaluation (Outer Model)

The assessment of the measurement model was carried out by examining convergent validity, discriminant validity, and reliability.

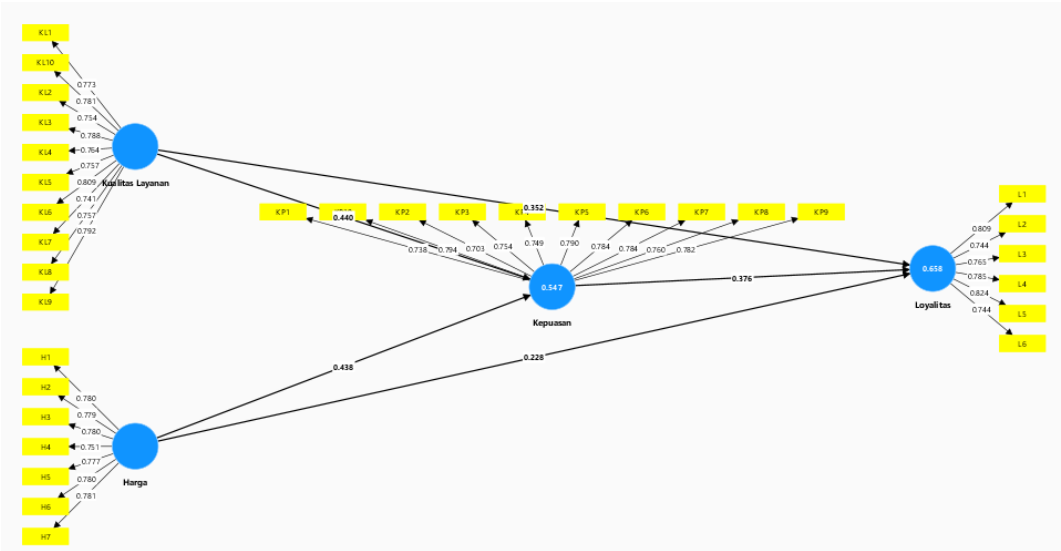

Figure 3. Outer Model

a. Convergent Validity

All indicators show outer loading values above the recommended threshold of 0.70, indicating that each item adequately represents its respective construct. Furthermore, the Average Variance Extracted (AVE) values for all variables exceed 0.50, namely:

Table 2. Outer Loadings

Variable	Item	Outer Loading	AVE	Remark
Service Quality	KL1	0.773	0.596	Valid
Price	H1	0.780	0.601	Valid
Customer Satisfaction	KP1	0.738	0.584	Valid
Customer Loyalty	L1	0.809	0.607	Valid

The results of the measurement model indicate that all indicators meet the validity requirements, as evidenced by outer loading values exceeding the threshold of 0.70. In addition, the Average Variance Extracted (AVE) values for all constructs—service quality (0.596), price (0.601), customer satisfaction (0.584), and customer loyalty (0.607)—are above the recommended minimum of 0.50, confirming adequate convergent validity. These findings demonstrate that all measurement items are reliable in explaining their respective constructs and that the model has good construct validity. Therefore, all indicators are retained for further analysis in the structural model.

b. Discriminant Validity

Discriminant validity was evaluated through cross-loading analysis and the Heterotrait-Monotrait Ratio (HTMT). The results show that each indicator exhibits a higher loading on its corresponding construct than on other constructs, indicating satisfactory discriminant validity. Furthermore, all HTMT values are below the recommended threshold of 0.90, suggesting that each construct is empirically distinct from one another.

Table 3. Heterotrait-Monotrait Ratio (HTMT)

Variables	Correlation
Satisfaction ↔ Price	0.683
Service Quality ↔ Price	0.455
Service Quality ↔ Satisfaction	0.670
Loyalty ↔ Price	0.691
Loyalty ↔ Satisfaction	0.819
Loyalty ↔ Service Quality	0.758

The correlation results indicate moderate to strong relationships among the study variables. The strongest relationship is observed between customer satisfaction and loyalty (0.819), suggesting that higher satisfaction is closely associated with increased customer loyalty. Service quality also shows a strong correlation with loyalty (0.758) and satisfaction (0.670), indicating its important role in influencing both constructs. Meanwhile, price demonstrates moderate correlations with satisfaction (0.683) and loyalty (0.691), but a relatively weaker relationship with service quality (0.455). Overall, these results suggest that all constructs are sufficiently distinct yet meaningfully related, supporting the discriminant validity of the measurement model.

c. Reliability Test

The reliability of the constructs was examined using Cronbach's Alpha and Composite Reliability measures. The results indicate that all constructs achieve values above the recommended threshold of 0.70, demonstrating a high level of internal consistency. Specifically, the reliability values obtained are 0.933 for service quality, 0.910 for price, 0.934 for customer satisfaction, and 0.896 for customer loyalty.

Table 5. Reliability and Validity Assessment

Variable	Cronbach's Alpha	Composite Reliability (ρa)	Composite Reliability (ρc)	AVE	Remark
Service Quality	0.925	0.926	0.936	0.596	Reliable
Price	0.890	0.891	0.913	0.601	Reliable
Customer Satisfaction	0.921	0.922	0.933	0.584	Reliable
Customer Loyalty	0.870	0.871	0.902	0.607	Reliable

The reliability test results indicate that all constructs demonstrate high internal consistency. This is evidenced by Cronbach's Alpha values exceeding 0.70 for all variables, ranging from 0.870 to 0.925. Similarly, both composite reliability measures (ρa and ρc) are above the recommended threshold of 0.70, confirming strong construct reliability. In addition, all Average Variance Extracted (AVE) values exceed 0.50, indicating adequate convergent validity. These findings confirm that all measurement constructs service quality, price, customer satisfaction, and customer loyalty are reliable and suitable for further structural model analysis.

Structural Model Evaluation (Inner Model)

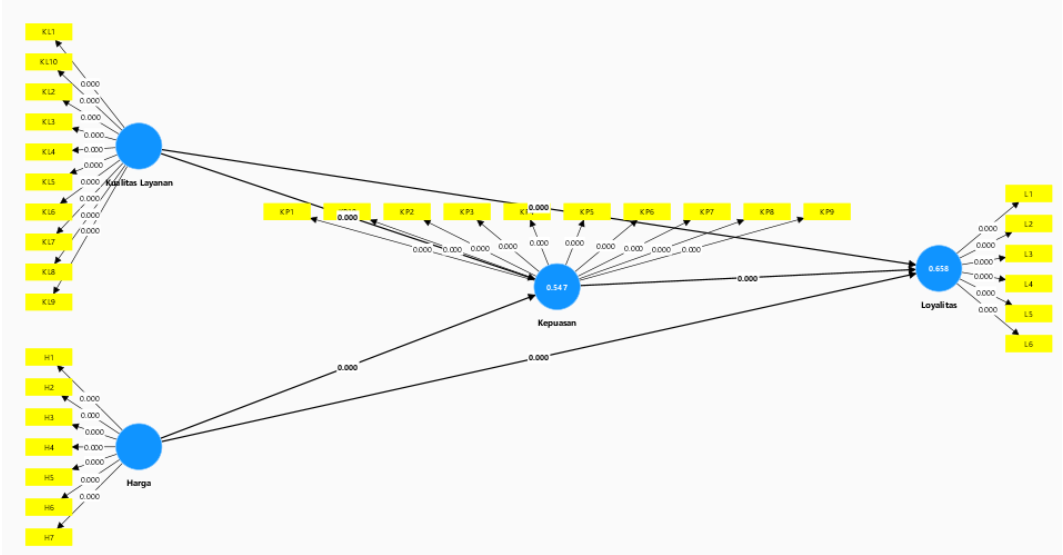

Figure 4. Inner Model

a. Coefficient of Determination (R^2)
The R^2 values indicate the explanatory power of the model:
Customer Satisfaction = 0.546 (moderate)
Customer Loyalty = 0.637 (substantial)
This means that service quality and price explain 54.6% of customer satisfaction, while service quality, price, and satisfaction explain 63.7% of customer loyalty.

Table 6. Coefficient of Determination (R^2)

Variable	R-Square	Adjusted R-Square	Remark
Customer Satisfaction	0.547	0.542	Moderate
Customer Loyalty	0.658	0.653	Substantial

The coefficient of determination (R-square) results indicate that the model has moderate to substantial explanatory power. Customer satisfaction has an R-square value of 0.547, meaning that 54.7% of its variance is explained by the independent variables, which is categorized as moderate. Meanwhile, customer loyalty shows an R-square value of 0.658, indicating that 65.8% of its variance is explained by the model, reflecting a substantial level of explanatory power. These findings suggest that the proposed model is reasonably strong in explaining both customer satisfaction and customer loyalty.

b. Effect Size (f^2)
The effect size analysis shows:
Price → Satisfaction (0.350, medium)
Service Quality → Satisfaction (0.352, medium)
Satisfaction → Loyalty (0.188, medium)

Service Quality → Loyalty (0.221, medium)
Price → Loyalty (0.093, small)

Table 7. Effect Size (f^2) Results

Relationship	F-Square	Remark
Price → Customer Satisfaction	0.350	Medium
Price → Customer Loyalty	0.093	Small
Customer Satisfaction → Loyalty	0.188	Medium
Service Quality → Satisfaction	0.352	Medium
Service Quality → Loyalty	0.221	Medium

The effect size (f-square) analysis shows that most relationships in the model have a moderate effect. Service quality has a moderate effect on customer satisfaction (0.352) and customer loyalty (0.221), indicating its important role in shaping both constructs. Similarly, price demonstrates a moderate effect on customer satisfaction (0.350), but only a small effect on customer loyalty (0.093), suggesting that price has a more limited direct influence on loyalty. Furthermore, customer satisfaction has a moderate effect on customer loyalty (0.188), highlighting its role as an important mediating variable. Overall, these results indicate that service quality and satisfaction play more substantial roles in influencing customer loyalty compared to price.

a. Predictive Relevance (Q^2)
The Q^2 values for endogenous variables are:
Customer Satisfaction = 0.524
Customer Loyalty = 0.546

Table 8. Predictive Relevance (Q^2) Results

Endogenous Variable	Q^2 Predict	RMSE	MAE
Customer Satisfaction	0.533	0.698	0.501
Customer Loyalty	0.582	0.663	0.504

The predictive relevance (Q^2 predict) results indicate that the model has strong predictive capability for both endogenous variables. Customer satisfaction shows a Q^2 value of 0.533, while customer loyalty has a slightly higher value of 0.582, both exceeding zero, which confirms that the model has good predictive relevance. In addition, the RMSE and MAE values are relatively low, indicating acceptable prediction errors and good model accuracy. Overall, these findings suggest that the proposed model is robust and has strong predictive power in explaining customer satisfaction and customer loyalty.

b. Hypothesis Testing
Direct Effects
The results of hypothesis testing using bootstrapping are as follows:

Table 9. Direct Effects

Relationship	Original Sample (O)	Sample Mean (M)	STDEV	T-Statistics	P-Values
Price → Customer Satisfaction	0.438	0.436	0.063	6.912	0.000
Price → Customer Loyalty	0.228	0.229	0.053	4.271	0.000
Customer Satisfaction → Loyalty	0.376	0.375	0.055	6.871	0.000

Service Quality → Satisfaction	0.440	0.440	0.056	7.826	0.000
Service Quality → Loyalty	0.352	0.352	0.053	6.597	0.000

The hypothesis testing results indicate that all proposed relationships are positive and statistically significant. Service quality has a significant positive effect on customer satisfaction ($\beta = 0.440$, $t = 7.826$, $p < 0.001$) and customer loyalty ($\beta = 0.352$, $t = 6.597$, $p < 0.001$). Similarly, price significantly influences customer satisfaction ($\beta = 0.438$, $t = 6.912$, $p < 0.001$) and customer loyalty ($\beta = 0.228$, $t = 4.271$, $p < 0.001$), although its effect on loyalty is relatively weaker. Furthermore, customer satisfaction has a significant positive effect on customer loyalty ($\beta = 0.376$, $t = 6.871$, $p < 0.001$), confirming its role as an important mediating variable. Overall, these findings suggest that both service quality and price play key roles in enhancing customer satisfaction, which in turn strengthens customer loyalty.

Table 10. Indirect Effects (Mediation Test)

Relationship	Original Sample (O)	Sample Mean (M)	STDEV	T-Statistics	P-Values
Price → Customer Loyalty	0.165	0.164	0.035	4.715	0.000
Service Quality → Customer Loyalty	0.166	0.165	0.032	5.170	0.000

The indirect effect analysis shows that both price and service quality have significant positive indirect effects on customer loyalty through customer satisfaction. Price demonstrates a significant indirect effect on loyalty ($\beta = 0.165$, $t = 4.715$, $p < 0.001$), while service quality also shows a significant indirect effect ($\beta = 0.166$, $t = 5.170$, $p < 0.001$). These results confirm the mediating role of customer satisfaction in strengthening the relationship between both independent variables and customer loyalty. Overall, this indicates that improvements in price perception and service quality can enhance customer loyalty not only directly but also indirectly through increased customer satisfaction.

DISCUSSION

The findings underscore that customer loyalty in the prepaid telecommunications sector is predominantly shaped by service quality, with customer satisfaction functioning as a pivotal underlying mechanism. Although both service quality and price significantly influence loyalty, their roles differ in magnitude and transmission pathways. This distinction suggests that loyalty is not merely an outcome of transactional evaluation but is constructed through a combination of perceived performance and value assessment (Baisoya & Mohsin, 2023; Huo et al., 2024; Yesitadewi & Widodo, 2024). Service quality emerges as the most influential determinant, exerting both direct and indirect effects on customer loyalty. This indicates that loyalty is formed not only through post-consumption evaluation (satisfaction) but also through real-time service experiences, such as network reliability, responsiveness, and service consistency. These findings reinforce the view that service quality operates simultaneously as a cognitive and experiential driver of loyalty, particularly in high-contact digital service environments (Costa et al., 2025; Pintor et al., 2025; Qasim et al., 2025).

In contrast, price demonstrates a relatively weaker direct effect on loyalty but a stronger indirect influence through customer satisfaction. This pattern suggests that price is primarily interpreted as a signal of perceived value rather than a standalone determinant of loyalty. Customers are unlikely to remain loyal based solely on affordability unless the price aligns with the benefits received. Thus, price influences loyalty through a value-based evaluation process mediated by satisfaction (Almanwari et al., 2024; Hauff et al., 2024; Xiong & Li, 2024). The central role of customer satisfaction confirms the relevance of Expectation-Disconfirmation

Theory (EDT), which posits that satisfaction arises from the comparison between expectations and perceived performance. In this study, satisfaction acts as a critical bridge linking service attributes to behavioral outcomes, particularly loyalty. The stronger mediating role observed in the price–loyalty relationship further indicates that perceived value is constructed through satisfaction rather than directly through pricing (Söderlund, 2024; Walsh, 2024).

Overall, these findings suggest that customer loyalty in telecommunications services is both value-driven and experience-based. Service quality serves as the primary trigger of loyalty, while price plays a supporting role by shaping satisfaction. Therefore, firms should prioritize improving technical performance especially network stability and responsiveness while ensuring that pricing strategies reflect perceived customer value to sustain long-term loyalty. However, the generalizability of these findings is constrained by several methodological limitations. First, the use of non-probability purposive sampling reduces the representativeness of the sample and introduces potential selection bias, limiting the extent to which the findings can be generalized to the broader population (Hair et al., 2021; Walsh, 2024). Second, the study is geographically confined to South Jakarta, an urban area characterized by high digital engagement and relatively advanced infrastructure. This context may differ substantially from other regions in Indonesia, particularly rural or less-developed areas, where service expectations and usage behavior may vary (Wardhana et al., 2023; Yunani et al., 2024).

Third, although the sample size (n = 120) meets the minimum requirements for PLS-SEM analysis, it may still limit the robustness and external validity of the findings when generalized across diverse demographic and behavioral segments. Consequently, the applicability of the results is context-bound, primarily reflecting prepaid users in urban telecommunications markets with similar characteristics. Future research should address these limitations by employing probability sampling techniques, expanding the sample size, and incorporating broader geographical coverage. Additionally, integrating variables such as perceived value, trust, and brand image, as well as adopting mixed-method or longitudinal approaches, would provide a more comprehensive understanding of customer loyalty in digital service contexts.

CONCLUSION

This study concludes that both service quality and price exert positive and significant influences on customer satisfaction and customer loyalty within the prepaid telecommunications sector. Among these factors, service quality emerges as the most influential determinant of customer loyalty, affecting it both directly and indirectly through customer satisfaction. In contrast, although price also has a significant impact on loyalty, its effect is comparatively weaker and primarily mediated by customer satisfaction. Moreover, customer satisfaction is proven to play a vital role as an intervening variable, significantly reinforcing the relationship between service quality, price, and customer loyalty. These findings highlight that enhancing service quality and establishing pricing strategies that align with customers' perceived value are critical efforts for increasing customer satisfaction and sustaining long-term loyalty.

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