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The Role Of Customer Satisfaction In Mediating The Influence Of Service Quality And Product Quality On Customer Loyalty (Study on Indihome Users in Denpasar City)

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ABSTRACT

This study examines the mediating role of customer satisfaction in the relationships between service quality, product quality, and customer loyalty among IndiHome users in Denpasar City. A survey of 100 eligible customers was analyzed using partial least squares structural equation modeling (PLS-SEM). Service quality and product quality were positively related to satisfaction (β = 0.456 and 0.267) and loyalty (β = 0.254 and 0.174). Satisfaction was positively associated with loyalty (β = 0.450). The indirect effects through satisfaction were significant for service quality (β = 0.205; p < 0.001) and product quality (β = 0.120; p = 0.006), indicating complementary partial mediation. The findings suggest that improving technical product performance and customer service together may support retention among broadband subscribers.

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1. INTRODUCTION

Broadband internet has become essential to communication, work, education, and digital business. Indonesia recorded 221.56 million internet users in 2024, equivalent to 79.5% penetration [1]. This expansion creates opportunities for fixed-broadband providers while intensifying competition based on connection reliability, service responsiveness, and perceived product value.

Bali experienced considerable growth in internet use. As shown in Table 1, the proportion of residents using the internet rose from 54.08% in 2019 to 70.59% in 2022, while Denpasar reached 84.51% in 2022 [2]. The historical series provides context for the growing demand for reliable home broadband services.

Table 1. Internet use by regency/city in Bali, 2019–2022 (%)

No	Regency/City	2019	2020	2021	2022
1	Jembrana	45.86	50.60	61.84	70.10
2	Tabanan	48.06	56.64	63.90	66.16
3	Badung	67.62	72.91	77.84	79.68
4	Gianyar	54.81	62.50	65.74	67.28
5	Klungkung	47.67	53.37	54.24	65.85
6	Bangli	37.38	45.39	56.26	62.66
7	Karangasem	35.06	40.38	47.75	54.08
8	Buleleng	38.66	46.37	56.01	59.91
9	Denpasar	74.04	81.55	86.73	84.51
	Total	54.08	61.06	67.75	70.59

Source: BPS Statistics Indonesia, Bali Province (historical data, accessed 2025) [2].

Despite rising demand for connectivity, fixed-broadband providers face strong competition. The Top Brand Index for fixed internet services (Table 2) records IndiHome at 35.2% in 2024, down from 40.2% in 2023, whereas First Media and Biznet increased over the same period [3]. The index describes brand performance rather than subscriber market share and should not be interpreted as direct evidence of customer churn.

Table 2. Top Brand Index for fixed internet service providers, 2020–2024

Brand	**2020 (%)**	**2021 (%)**	**2022 (%)**	**2023 (%)**	**2024 (%)**
Indihome	36.7	34.6	33.8	40.2	35.2
First Media	23.1	24.2	16.3	25.9	27.9
Biznet.net	8.2	10.8	17.7	18.3	23.2
CBN Net	-	-	-	-	5.8
XL Net	-	-	-	-	5.4

Source: Top Brand Award, 2024 [3].

IndiHome remained the highest-ranked brand in the 2024 index, but its decline relative to 2023 highlights the importance of customer retention. Independent measurements of fixed-broadband experience in Indonesia also show differences across providers in speed, reliability, and connection consistency [4]. Together, these indicators motivate a closer examination of service quality, product quality, satisfaction, and loyalty.

Table 3. IndiHome subscribers in Denpasar, 2020–2024 (customers)

	2020	**2021**	**2022**	**2023**	**2024**
West Denpasar	2937	2034	1987	2897	3058
South Denpasar	2908	2311	2662	3428	3641
East Denpasar	1580	934	951	1526	1862
North Denpasar	2628	1617	1526	2162	2313
Grand Total	10053	6896	7126	10013	10874

Source: IndiHome Denpasar operational records (accessed February 2025).

Table 3 presents fluctuations in the reported Denpasar subscriber base: 10,053 in 2020, 6,896 in 2021, 7,126 in 2022, 10,013 in 2023, and 10,874 in 2024. The data suggest changes in customer acquisition and retention, although the table does not identify individual reasons for those changes.

Table 4. New IndiHome subscriptions in Denpasar, January–June 2025

	January	February	March	April	May	June	Total
Denpasar	3840	3457	3532	3480	3772	3612	21693

Source: IndiHome Denpasar operational records (accessed July 2025).

New subscriptions from January to June 2025 totaled 21,693 (Table 4), with a monthly range of 3,457–3,840. These figures describe additions during the period and should not be equated with the number of active subscriptions at a single point in time.

Table 5. IndiHome subscription cancellations in Denpasar, 2025

	January	February	March	April	May	June	Total
Denpasar	448	510	675	536	639	664	3472

Source: IndiHome Denpasar operational records (accessed July 2025).

Table 5 reports 3,472 cancellations during January–June 2025. Monthly cancellations ranged from 448 in January to 675 in March, and totaled 664 in June. Reported reasons include competing provider offers and dissatisfaction with service or product performance; the available aggregate data do not establish their relative frequency.

Table 6. IndiHome customers with bills overdue by more than three months, January–June 2025

	January	February	March	April	May	June	Total
Denpasar	2277	2569	2382	2389	2600	2274	14491

Source: IndiHome Denpasar operational records (accessed July 2025).

Table 6 reports a cumulative total of 14,491 monthly observations of customers whose bills were overdue by more than three months (2,277, 2,569, 2,382, 2,389, 2,600, and 2,274, respectively). Because the same customer may appear in multiple months, the sum must not be interpreted as 14,491 distinct customers. Persistent arrears indicate a need to evaluate service delivery and customer relationships, but they do not independently establish the causes of non-payment.

The Denpasar market presents a useful setting for investigating customer loyalty among broadband subscribers. Studies of IndiHome customers have linked service quality, product quality, and customer satisfaction to loyalty [5], [6]. Prior work on Indonesian telecommunications similarly emphasizes the role of satisfaction in translating service experiences into continued use [7], [8].

Customer loyalty reflects customers' intention to maintain a relationship, recommend a provider, and resist switching. Research on digital services identifies customer satisfaction as an important mechanism connecting perceived service quality with loyalty [7]. Evidence from Indonesian mobile-service users also indicates that trust and loyalty programs may complement service quality in explaining loyalty [8].

Service quality encompasses reliability, responsiveness, security, information quality, ease of use, and interface design. Research on IndiHome in Jepara found a positive relationship between service quality and customer satisfaction [9], whereas research on Indonesian telecommunications suggests that the relative strength of service-related drivers varies by context [8]. This supports testing both direct and mediated effects rather than assuming one universal relationship.

Product quality includes network performance, features, reliability, durability, conformity to specifications, serviceability, aesthetics, and perceived quality. Research on IndiHome subscribers in Padang demonstrates that product and service quality can influence satisfaction and loyalty [5]. Research in the Indonesian fixed-broadband market likewise supports studying these constructs together [6], [10].

Customer satisfaction is the evaluation of whether experienced performance meets prior expectations. Satisfaction can reinforce repeat use and recommendations, making it a plausible mediator

between quality perceptions and loyalty [7], [11]. Evidence specific to IndiHome also supports an indirect association between service quality and loyalty through satisfaction [5], [12].

A preliminary survey of 30 IndiHome users in Denpasar identified concerns relevant to the proposed model. Fourteen respondents expressed dissatisfaction with service quality, 15 with product quality, and 18 reported low loyalty. Although exploratory and not representative of all subscribers, these responses motivated the main survey.

The preliminary findings suggest that favorable evaluations of selected service attributes may coexist with dissatisfaction and intentions to switch. Examining satisfaction as a mediator may therefore clarify how service and product quality relate to customer loyalty in Denpasar. This study examines seven paths: the direct effects of service quality and product quality on satisfaction and loyalty, the effect of satisfaction on loyalty, and two indirect effects through satisfaction. It focuses on active IndiHome users in Denpasar City.

2. METHOD

This explanatory, quantitative study assesses whether customer satisfaction mediates the effects of service quality and product quality on customer loyalty among IndiHome users in Denpasar City. The conceptual model and analysis follow the partial least squares structural equation modeling (PLS-SEM) approach [13].

Denpasar was selected because internet use was relatively high (84.51% in the 2022 historical series; Table 1). Local company records identified 10,874 IndiHome customers at the end of 2024 as the sampling frame. The target population comprised IndiHome subscribers living in Denpasar. The study used the reported population size of N = 10,874 to estimate a minimum survey sample. Customers were recruited from the four Denpasar districts; the description of district-based recruitment is retained, but the available report does not document a verifiable probability-selection procedure. The sample comprised 100 adult respondents. Eligibility criteria included residence in Denpasar and at least 14 months of experience using IndiHome. Screening questions were used to check eligibility. Using the approximation $n = N/(1 + Ne^2)$, with N = 10,874 and e = 0.10, the estimated sample size is n = 99.09, rounded up to 100. This rule-of-thumb calculation does not, by itself, establish the representativeness of the recruited sample.

$$n = N/(1 + Ne^2) = 10{,}874/[1 + 10{,}874(0.10^2)] = 99.09 \approx 100. \quad (1)$$

Data were collected through questionnaires administered both offline and online using Google Forms. The instrument included eligibility screening, demographic questions, and Likert-scale indicators of service quality, product quality, customer satisfaction, and customer loyalty. One hundred eligible responses were analyzed. Reflective measurement quality was assessed using indicator loadings, average variance extracted (AVE), Cronbach's alpha, and composite reliability. Structural paths and indirect effects were assessed through PLS-SEM bootstrapping at a 5% significance level, with the reported t and p statistics [13].

3. RESULTS AND DISCUSSION

IndiHome is a fixed-broadband service delivered through the Telkom Group. Its customer experience combines network reliability, digital account management, and assistance when service issues occur. Accordingly, both technical product performance and responsive customer support are relevant dimensions of perceived quality. The following analyses summarize respondent profiles, descriptive assessments of the four constructs, measurement-model diagnostics, and direct and mediated path estimates. Findings are discussed alongside recent research on Indonesian broadband and digital services [5]–[8].

3.1 Respondent Profile

The sample consisted of 100 IndiHome customers in Denpasar. Respondent characteristics are summarized in Table 7.

Table 7. Demographic characteristics of respondents (n = 100)

No	Characteristics	Classification	Amount Respondents (person)	Percentage Respondents (percent)
1	Gender	Man	56	5 6
		Woman	44	44
Amount			**100**	**100**
2	Age	18 - 25 years old	26	26
		26 - 33 years old	24	24
		34 - 41 years old	33	33
		> 41 years	17	17
Amount			**100**	**100**
3	Education	High School/Vocational School	8	8
		Diploma	13	13
		S1	56	56
		S2	17	17
		S3	6	6
Amount			**100**	**100**
4	Work	Student	36	36
		Self-employed	17	17
		Private employees	15	15
		Civil Servants/TNI/Polri	24	24
		Other	8	8
Amount			**100**	**100**
5	Income	<Rp.4,000,000.00	7	7
		Rp.4,000,001.00- Rp.7,000,000.00	62	62
		Rp.7,000,001.00- Rp.10,000,000.00	18	18
		> 10,000,000.00	1 3	13
Amount			**100**	**100**

Source: Survey data, 2025.

As shown in Table 7, 56% of respondents were male and 44% female. The largest age group was 34–41 years (33%); 56% had a bachelor's degree. Students represented the largest occupational group (36%). These distributions describe the sample, not the full population of IndiHome subscribers.
The most common reported income range was IDR 4,000,001–7,000,000 (62%), followed by IDR 7,000,001–10,000,000 (18%). The sample profile should be considered when interpreting and generalizing the study findings.

3.2 Descriptive Analysis

Item assessments used a five-point Likert scale. The class interval was calculated as (5 − 1)/5 = 0.80; the resulting score bands are summarized in Table 8.

Table 8. Interpretation of mean scores on the five-point scale

Average Score	Criteria			
	Customer Loyalty	Quality of Service	Product Quality	Customer satisfaction
1.00 - 1.79	Very Low	Very Bad	Very Bad	Very Low
1.80 - 2.59	Low	Not good	Not good	Low
2.60 - 3.39	Moderate	Pretty good	Pretty good	Moderate

Average Score	Criteria			
	Customer Loyalty	Quality of Service	Product Quality	Customer satisfaction
3.40 - 4.19	High	Good	Good	High
4.20 - 5.00	Very high	Very good	Very good	Very high

Source: Calculated score intervals for the five-point survey scale.

The score categories provide a consistent interpretation across the four constructs. Item-level distributions and average scores are retained in Tables 9–12.

Table 9. Respondent assessments of customer loyalty

No.	Statement	Frequency of Respondents' Answers					Average	Note:
		1	2	3	4	5		
1	I have been using the Indihome service for a long time.	0	1	8	47	44	4.34	Very high
2	I recommend Indihome services to friends, family, or acquaintances	0	1	10	42	47	4.35	Very high
3	I tend to stick with Indihome services even though there are attractive offers from other similar *providers* .	0	0	17	44	39	4.22	Very high
4	I use additional services from Indihome such as home telephone services or cable TV.	0	0	11	48	41	4.24	Very high
Total average value							**4.29**	**Very high**

Customer loyalty achieved a mean score of 4.29 (very high; Table 9). Recommendation intention was rated highest (4.35), followed by length of use (4.34), continued use despite competing offers (4.22), and use of additional services (4.24). The responses indicate favorable self-reported intentions among sampled users.

Table 10. Respondent assessments of service quality

No.	Statement	Frequency of Respondents' Answers					Average	Note:
		1	2	3	4	5		
1	I rarely experience any disruptions or problems when using Indihome services.	0	1	5	56	38	4.31	Very good
2	The speed of response from Indihome customer service in responding to complaints requests	0	0	7	56	37	4.30	Very good
3	I believe that Indihome maintains the security of customers' personal data well.	0	0	15	46	39	4.24	Very good
4	The information provided by Indihome, as stated in the application, is useful according to your needs.	0	0	11	48	41	4.30	Very good
5	I can easily navigate the features available in the Indihome service.	0	0	14	42	44	4.30	Very good
6	The appearance of the features provided by Indihome is in accordance with customer needs.	0	0	11	51	38	4.27	Very good

No.	Statement	Frequency of Respondents' Answers					Average	Note:
		1	2	3	4	5		
Total average value							**4.29**	**Very good**

Service quality had an overall mean of 4.29 (very good; Table 10). Ratings ranged from 4.24 for privacy/security to 4.31 for connection reliability. The comparatively lower privacy score suggests that data protection assurance remains important even where the overall service assessment is favorable.

Table 11. Respondent assessments of product quality

No.	Statement	Frequency of Respondents' Answers					Average	Note:
		1	2	3	4	5		
1	Indihome service performance in providing internet connection is satisfactory	3	4	24	45	24	3.83	Good
2	The additional features offered by Indihome are very complete, so they meet customer needs.	1	2	15	43	39	4.17	Good
3	Indihome services rarely experience disruptions that interfere with their use.	1	6	18	43	32	3.99	Good
4	The operational design characteristics of Indihome services are in accordance with established specification standards.	0	2	18	44	36	4.14	Good
5	Daily use of the long-lasting power of Indihome network services is good	0	10	23	44	23	3.80	Good
6	The speed of service quality from Indihome employees in resolving complaints or problems is good.	2	4	28	50	16	3.74	Good
7	Indihome TV products have visuals that are satisfying for users	3	3	24	45	25	3.86	Good
8	Customer perception in using Indihome is good	4	1	23	46	26	3.89	Good
Total average value							**3.93**	**Good**

Product quality averaged 3.93 (good; Table 11). Perceived completeness of additional features scored highest (4.17), while the speed of technical complaint resolution was lowest (3.74). The results indicate opportunities to improve stability and serviceability alongside core product features.

Table 12. Respondent assessments of customer satisfaction

No.	Statement	Frequency of Respondents' Answers					Average	Note:
		1	2	3	4	5		
1	My expectations were met because Indihome met my needs.	0	2	9	44	45	4.32	High
2	Indihome's performance is as promised	0	1	10	39	50	4.38	Very high
3	If I compare my expectations before subscribing to Indihome with the current situation, Indihome fulfills my expectations.	0	3	21	44	32	4.05	High

No.	Statement	Frequency of Respondents' Answers					Average	Note:
		1	2	3	4	5		
4	The good experience that Indihome provides makes me happy to use it.	0	2	13	45	40	4.23	Very high
5	I confirm that I am happy with Indihome because the internet I received met my expectations.	0	3	17	48	32	4.09	High
Total average value							**4 , 21**	**Very high**

Customer satisfaction averaged 4.21 (very high; Table 12). Agreement that service performance matched promises scored highest (4.38), while comparison with prior expectations scored 4.05. These findings indicate generally positive experiences while leaving room for improvement in expectation management.

3.3 PLS-SEM Measurement and Structural Models

3.3.1 Convergent Validity

Convergent validity was assessed using standardized outer loadings and AVE, following recent PLS-SEM guidance [13]. The original output is reported in Table 13.

Table 13. Indicator outer loadings and significance

		Outer Loadings	*p-values*	Information
M1.1	Expectations ,	0.771	0,000	*Valid*
M1.2	Performance	0.829	0,000	*Valid*
M1.3	Comparison	0.704	0,000	*Valid*
M1.4	Experience	0.819	0,000	*Valid*
M1.5	Confirmation	0.765	0,000	*Valid*
X1.1	*Reliability*	0.839	0,000	*Valid*
X1.2	*Responsiveness*	0.843	0,000	*Valid*
X1.3	*Privacy/* security	0.772	0,000	*Valid*
X1.4	*Information quality / benefit* (benefit/quality of information)	0.815	0,000	*Valid*
X1.5	*Ease to use /* usability	0.739	0,000	*Valid*
X1.6	*Web design* (site design)	0.825	0,000	*Valid*
X2.1	*Performance*	0.801	0,000	*Valid*
X2.2	*Features*	0.809	0,000	*Valid*
X2.3	*Reliability*	0.734	0,000	*Valid*
X2.4	*Conformance to Specifications*	0.763	0,000	*Valid*
X2.5	*Durability*	0.713	0,000	*Valid*
X2.6	*Serviceability*	0.717	0,000	*Valid*
X2.7	*Aesthetics*	0.794	0,000	*Valid*
X2.8	*Perceived Quality*	0.725	0,000	*Valid*
Y1.1	Repeat purchases	0.854	0,000	*Valid*
Y1.2	*Referral*	0.856	0,000	*Valid*
Y1.3	*Retention*	0.822	0,000	*Valid*
Y1.4	cross-product line purchasing	0.784	0,000	*Valid*

All reported loadings are above 0.70 (range 0.704–0.856), supporting indicator reliability. The use of 0.70 as the preferred guideline is more conservative than the 0.50 threshold stated in the initial manuscript [13].

3.3.2 Discriminant Validity

The manuscript reports diagonal square roots of AVE, as shown in Table 14. However, the corresponding interconstruct correlations are not supplied, so the Fornell–Larcker criterion cannot be independently verified from these values alone. A full correlation matrix and preferably HTMT values would strengthen the assessment [13].

Table 14. Reported square roots of AVE (diagonal values)

	Customer satisfaction	Quality of Service	Product Quality	Customer Loyalty
Customer satisfaction	0.779			
Quality of Service		0.806		
Product Quality			0.758	
Customer Loyalty				0.829

The reported diagonal values range from 0.758 to 0.829. They are consistent with the corresponding AVE values, but do not independently establish discriminant validity without off-diagonal correlations.

3.3.3 Average Variance Extracted

AVE values quantify variance captured by each construct relative to measurement error. The reported values are presented in Table 15; values above 0.50 support convergent validity [13].

Table 15. Average variance extracted by construct

Research Variables	***Average variance extracted* (AVE)**
Customer satisfaction	0.607
Quality of Service	0.650
Product Quality	0.574
Customer Loyalty	0.688

AVE values range from 0.574 (product quality) to 0.688 (customer loyalty), exceeding the 0.50 benchmark for all constructs.

3.3.4 Internal Consistency Reliability

Cronbach's alpha and composite reliability were examined for all four constructs, using 0.70 as the conventional minimum threshold [13].

Table 16. Reliability statistics of the research constructs

Variables	*Cronbach's Alpha*	*Composite Reliability*	Information
Customer satisfaction	0.837	0.844	*Reliable*
Quality of Service	0.893	0.906	*Reliable*
Product Quality	0.894	0.900	*Reliable*
Customer Loyalty	0.848	0.851	*Reliable*

All reported Cronbach's alpha and composite reliability values exceed 0.70, indicating satisfactory internal consistency for the measured constructs.

3.3.5 Structural Model

R^2 and adjusted R^2 summarize the explained variance in customer satisfaction and loyalty (Table 17).

Table 17. Explanatory power of the endogenous constructs

	R-square	*R-square adjusted*
Customer satisfaction	0.376	0.363
Customer Loyalty	0.531	0.516

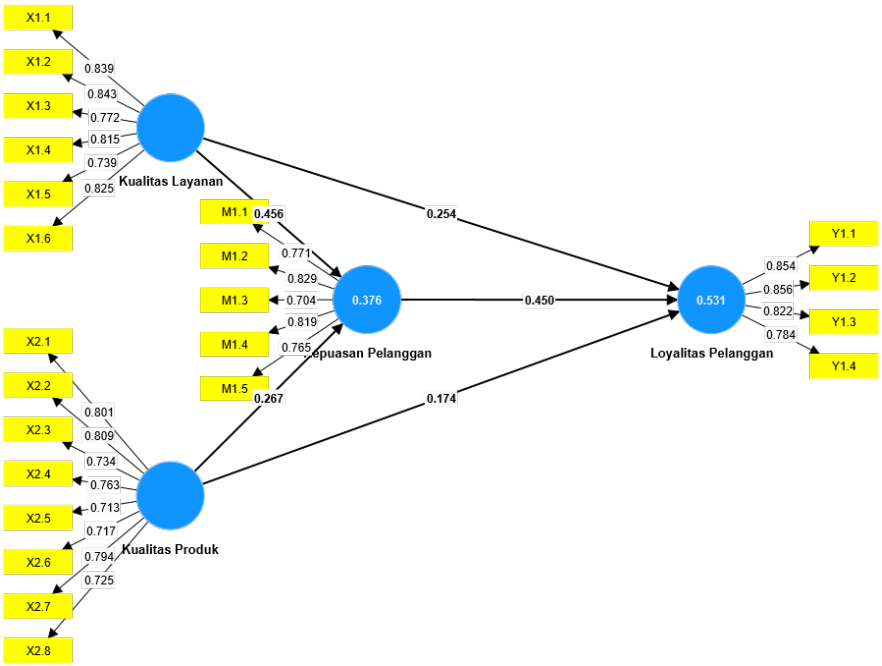
The model explains 37.6% of the variance in customer satisfaction (adjusted $R^2 = 0.363$) and 53.1% of the variance in customer loyalty (adjusted $R^2 = 0.516$). These are moderate levels of explained variance and do not imply causal identification from the cross-sectional survey alone. A previously reported index was computed from the two R^2 values as follows:

$1 - (1 - 0.376)(1 - 0.531) = 0.707.$

This arithmetic combination is not equivalent to cross-validated predictive relevance (Stone–Geisser Q^2). Therefore, no independent predictive-relevance claim is made without blindfolding or out-of-sample prediction results [13].

3.3.6 Direct Effects

Figure 1 and Table 18 present the estimated structural paths, bootstrap t statistics, and p values.



Source: Survey analysis, 2025.

Figure 1. Structural equation model of the investigated relationships

All five reported direct paths are positive and statistically significant at $p < 0.05$ (Table 18). Service quality predicts satisfaction ($\beta = 0.456$), followed by product quality ($\beta = 0.267$), whereas satisfaction predicts loyalty ($\beta = 0.450$). Direct associations with loyalty are $\beta = 0.254$ for service quality and $\beta = 0.174$ for product quality.

This pattern is consistent with evidence from recent IndiHome and broader digital-service studies showing that customer satisfaction is an important correlate of loyalty [5]–[8], [12]. The estimates represent associations in the sampled data rather than proof of causal effects.

Table 18. Direct-path hypothesis tests

	Original sample (O)	*Sample mean (M)*	*Standard deviation (STDEV)*	*T statistics (|O/STDEV|)*	*P values*
Customer Satisfaction -> Customer Loyalty	0.450	0.445	0.094	4,784	0,000
Service Quality -> Customer Satisfaction	0.456	0.458	0.082	5,544	0,000
Service Quality -> Customer Loyalty	0.254	0.258	0.093	2,738	0.006
Product Quality -> Customer Satisfaction	0.267	0.279	0.069	3,881	0,000
Product Quality -> Customer Loyalty	0.174	0.174	0.083	2,083	0.037

Source: Survey analysis, 2025.

The hypothesis tests provide the following results:
H1: Service quality → customer loyalty ($\beta = 0.254$; $t = 2.738$; $p = 0.006$): supported.
H2: Product quality → customer loyalty ($\beta = 0.174$; $t = 2.083$; $p = 0.037$): supported.
H3: Service quality → customer satisfaction ($\beta = 0.456$; $t = 5.544$; $p < 0.001$): supported.
H4: Product quality → customer satisfaction ($\beta = 0.267$; $t = 3.881$; $p < 0.001$): supported.
H5: Customer satisfaction → customer loyalty ($\beta = 0.450$; $t = 4.784$; $p < 0.001$): supported.

3.3.7 Indirect Effects and Mediation

Indirect effects were evaluated using the bootstrapped estimates reported in Table 19.

Table 19. Indirect-path and mediation hypothesis tests

	Original sample (O)	*Sample mean (M)*	*Standard deviation (STDEV)*	*T statistics (|O/STDEV|)*	*P values*
Service Quality -> Customer Satisfaction -> Customer Loyalty	0.205	0.204	0.056	3,639	0,000
Product Quality -> Customer Satisfaction -> Customer Loyalty	0.120	0.125	0.044	2,742	0.006

Source: Survey analysis, 2025.

Both indirect paths were positive and statistically significant:
H6: Service quality → satisfaction → loyalty ($\beta = 0.205$; $t = 3.639$; $p < 0.001$), with a variance-accounted-for ratio of $0.205/(0.254 + 0.205) = 44.66\%$.
Because both the direct and indirect effects are significant and positive, the result is consistent with complementary partial mediation. The VAF figure is descriptive; mediation is supported primarily by the significant indirect path [13].

H7: Product quality → satisfaction → loyalty (β = 0.120; t = 2.742; p = 0.006), with a variance-accounted-for ratio of 0.120/(0.174 + 0.120) = 40.82%.

Both paths thus show complementary partial mediation in this sample. Recent research on fixed-broadband and digital services reports comparable mediation patterns [5]–[7], although differences in location and design limit direct generalization.

4. CONCLUSION

Service quality and product quality were positively associated with both satisfaction and loyalty among the 100 IndiHome respondents in Denpasar. Customer satisfaction was also positively associated with loyalty. Satisfaction partially mediated the association between service quality and loyalty (indirect β = 0.205; p < 0.001) and between product quality and loyalty (indirect β = 0.120; p = 0.006). These results suggest that customer-retention strategies should coordinate network reliability, product features, complaint handling, and expectation management rather than focusing on a single quality dimension.

The study is limited by its single-city setting, survey design, and incomplete documentation of the sampling procedure. Future studies could use probability sampling, longitudinal customer records, and fuller discriminant-validity and predictive checks to test whether the associations persist.

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