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Service Quality and Digital Experience: Effects on Loyalty Via Satisfaction at XYZ Finance Company

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ABSTRACT

This cross-sectional study examines the relationship between service quality and digital experience with customer loyalty as measured through the attitudes and intentions reported by respondents, either directly or through customer satisfaction, at XYZ Finance Company. A total of 77 customers were purposively selected from the Jakarta, Medan, and Balikpapan branches; data were analyzed with PLS-SEM, bootstrapping with 5.000 subsamples, PLSpredict, and CVPAT. Service quality ($\beta = 0{,}368$; $p < 0{,}001$) and digital experience ($\beta = 0{,}272$; $p = 0{,}006$) were positively and significantly associated with customer satisfaction, while customer satisfaction was positively and significantly associated with customer loyalty ($\beta = 0{,}481$; $p < 0{,}001$). Neither service quality nor digital experience had a statistically significant direct association with customer loyalty. However, both indirect associations through customer satisfaction were significant, indicating indirect-only mediation. The model explains 29,2% of the variance in customer satisfaction and 24,9% of the variance in customer loyalty. Although the model's prediction is better than the linear benchmark, the Q^2predict of loyalty is only 0,004 and the three loyalty indicators have negative Q^2predict, so their predictability is still limited. The findings are consistent with the evaluative mechanism of Expectancy-Disconfirmation Theory but do not fully test the theory or establish causality. The results only represent the perceptions and intentions of the respondents in the sample, not the actual refinancing behavior.

INTRODUCTION

Increasing competition requires companies not only to acquire new customers but also to maintain relationships with existing ones. In this context, satisfaction is one of the important evaluation results because it is formed from a comparison between customer expectations and the service performance they feel (Oliver, 1980). Kotler and Keller (2016) explain that satisfaction arises when performance is able to meet or exceed expectations. This is relevant for the finance industry because customers have alternative providers and can switch when the service experience is considered unsatisfactory.

In the vehicle finance industry in Indonesia, the issue of service quality and digital experience is becoming increasingly important given the large market size and slowing growth. Data from the Financial Services Authority show that finance companies' receivables reached Rp507,02 trillion in February 2025 with an annual growth of 5,92% (Financial Services

Authority, 2025b). In the same month, motor vehicle financing reached Rp355,31 trillion and remains a key component of the multifinance industry (Financial Services Authority, 2025b). This magnitude of value shows strong market potential, but at the same time companies need to work harder to retain customers when growth slows and consumer behavior continues to change.

The pressure on the service aspect is also reflected in consumer protection data. OJK recorded 449.163 service requests through the Consumer Protection Portal Application (APPK) from January 1, 2024 to January 15, 2025, which included 35.939 complaints; 7.595 of them were related to finance companies (Financial Services Authority, 2025a). These data show that industry challenges are not only related to business expansion, but also include service quality, clarity of information, speed of response, and complaint resolution. On that basis, the research is focused on the customer experience of XYZ Finance Company in using vehicle financing services, not on specific brands or automotive companies.

The internal condition of XYZ Finance Company shows symptoms that are in line with these challenges. The customer churn rate, which in this study is defined as the proportion of customers who do not take new financing until 12 months after the contract ends, increased from 65% in 2023 to 70% in 2024. The 12-month horizon is used because the company started operating in 2021 so that the number of customers who have completed the contract and passed the observation period is still limited. With this definition, only customers who have completed the 12-month observation period are included in the churn calculation, while customers who have not reached the deadline are excluded from the calculation.

In addition to churn, the company also has a record of complaints that can describe service areas that still need improvement. Throughout 2023–2024, there were 42 official complaints received through branch offices, telephone services, and digital channels. The content of complaints is mainly related to the duration of the administrative and repayment process, clarity of contract information, installments and fines, and constraints on digital services. Although these data are not used as a measure of overall dissatisfaction, they indicate that service quality and digital experience still have room for improvement, which may be associated with customer satisfaction and loyalty. This condition reinforces the relevance of testing this research model.

The relevance of service quality and digital experience is based on the initial triangulation between the company's operational symptoms, customer service contact points, and literature review. The increase in churn based on the company's operational definition (65% in 2023 to 70% in 2024) indicates retention issues that need to be explored; 42 official complaints during 2023–2024 show problems with administration/settlement time, clarity of information and digital channels. However, these two sets of aggregate data do not prove that service quality or digital experience causes churn. The constructs were selected as plausible explanatory factors to be tested based on complaint patterns, the existence of conventional and digital service interactions, and previous research findings. Thus, their relevance is supported by evidence of investigative needs, not the assumption of proven causal influence.

Previous research findings show that service quality remains an important factor in shaping customer evaluations. Amri et al. (2020) discussed the application of the Customer Satisfaction Index (CSI) for the measurement of management service satisfaction in the

university environment, so their findings do not directly represent the financing industry. On the other hand, consumer expectations in the automotive and vehicle finance sectors increasingly include transparency, process speed, contract clarity, complaint handling, and ease of digital access. When these expectations are not met, satisfaction can decrease. Balinado et al. (2021) show the relationship between automotive after-sales service quality and customer satisfaction, while Vu (2021) discusses the relationship between service quality and customer satisfaction.

The increase in customer expectations makes finance companies need to compete not only through price, but also through service quality and experience innovation. Digital information and online recommendations now also influence the customer decision-making process (Simamora & Pratama Sulistyo, 2023). When prices, services, or promotions do not meet expectations, the tendency to maintain relationships can weaken. Amri et al. (2020) discuss the CSI method to measure satisfaction with university management services, while Tahir et al. (2023) show that customer expectations have expanded to digital aspects, including access to information online, ease of transactions, and speed of technology-based services.

These changes are in line with the development of digital business and marketing orientation that places digital interaction as part of the customer experience (Kotler & Keller, 2019). Companies therefore need to manage the continuity of experience between conventional and digital channels, rather than simply adding technological features. Chauhan et al. (2022) place the quality of digital interaction as an important component of the customer experience in financial services and attribute it to the sustainability of customer relationships. Thus, relevant digital experiences are included in the model because they have the potential to relate to how customers rate financing companies.

The relationship between service quality, satisfaction, and loyalty has been extensively tested in various service contexts. Balinado et al. (2021) found that in automotive after-sales service, reliability and empathy make important contributions to satisfaction, while the influence of several other dimensions is more limited. Singh et al. (2023) emphasized that the ability of service to meet or exceed customer expectations is an important part of efforts to maintain competitiveness. In the banking sector, Supriyanto et al. (2021) also found a significant link between service quality, satisfaction, and customer loyalty. Khan et al. (2022) further examined customer satisfaction as a mediator in the relationship between customer relationship management, company reputation, and customer loyalty. Together, these studies highlight the importance of service quality, customer relationship management, company reputation, and customer satisfaction in understanding customer loyalty.

Riadi et al. (2021) examined the influence of price, promotion, and service quality on consumer satisfaction of Toyota cars. The results of the study showed that price had a positive effect on satisfaction, while promotion and service quality did not show a positive influence. These findings show the importance of testing the relationship between constructs specifically according to the context. In the vehicle finance industry, the relationships among service quality, satisfaction, and loyalty need to be retested because the service process takes place through face-to-face interaction and digital channels.

The development of technology-based services makes digital customer experience even more important in shaping customer evaluations. Rahayu and Faulina (2022) found a positive relationship between digital experience, customer satisfaction, and customer loyalty. In the context of fintech, Barbu et al. (2021) show that customer experience shaped by perceived benefits, support, guarantees, speed, and innovation is related to loyalty intentions. Windasari et al. (2022) examined digital-only banking experiences among Generation Y and Z customers, highlighting the importance of ease of use and service features in shaping their intention to use digital banking. Together, these findings suggest that positive digital experiences are relevant to customers' usage and loyalty intentions in financial services.

The gap in this research is seen from the context and the theoretical side. Contextually, the previous empirical evidence came more from banking, digital banking, e-wallets, e-commerce, general digital services, and automotive after-sales services; research on vehicle financing customers in Indonesia is still more limited. Agarwal and Dhingra (2023) tested service quality, customer satisfaction, and customer loyalty with PLS-SEM; Hung et al. (2021) discussed positive user experience in online banking; Desiraju et al. (2024) examined perceptions of open banking applications; while Roberts-Lombard et al. (2025) analyzed satisfaction and future loyalty intentions in retail banking. The automotive studies by Balinado et al. (2021) and Nasir et al. (2021) focused on after-sales service. Different from this context, vehicle financing has long-term contractual relationships, administration, installment payments, credit risk management, complaint handling, and a combination of physical and digital interactions. These characteristics are the basis for the contextual gap of research.

From a theoretical point of view, the contribution of this study is not only in the form of a transfer of the model to the vehicle finance industry, but also contextual refinement: testing whether the association of service quality and digital experience with customer loyalty measured through attitudes and intentions is mainly observed through satisfaction evaluations, rather than through direct channels. The findings of indirect-only mediation can be read as an indication of the contextual boundary conditions for direct relationships in this sample, but these findings do not establish that satisfaction is a universal causal prerequisite. Expectancy-Disconfirmation Theory (EDT) is used as a framework for explanatory processes; because expectation and disconfirmation are not measured, EDT is not fully tested. The instrument remains sourced from previous studies and contextually adjusted.

Literature mapping shows differences in focus between sources on which the model is based. Agarwal and Dhingra (2023) examined the relationship between service quality, satisfaction, loyalty, and satisfaction mediation; Hung et al. (2021) examined user experience and behavior after the adoption of online banking; Desiraju et al. (2024) focused on perceptions of open banking; while Roberts-Lombard et al. (2025) examined satisfaction and attitudinal-behavioural loyalty in retail customers. This study draws on constructs and items from previous studies and makes limited adjustments to the service context to suit vehicle financing. In this way, the indicators remain empirically based without forming a new measuring tool, while the main reference remains in the research for the 2021–2025 period.

The study aims to test five direct relationships, namely the effect of service quality on customer satisfaction, digital experience on customer satisfaction, service quality on customer loyalty, digital experience on customer loyalty, and customer satisfaction on customer loyalty

at XYZ Finance Company. In addition, the study also examines two indirect relationships by placing customer satisfaction as a mediator on the influence of service quality and digital experience on customer loyalty.

The theoretical contribution of the research lies in refining the understanding of the relationship between service experience, digital experience, customer satisfaction, and customer loyalty based on attitudes and intentions in the contract-based vehicle financing. The model allows the identification of indirect-only mediation patterns and confirms the limits of inference: the variables measured are the assessment of respondents at one time, not evidence of actual retention or cause-effect relationships. Its practical contribution is in the form of prioritizing satisfaction evaluation as an intermediate output relevant to service management.

METHOD

Research Design

The study used a quantitative approach with an explanatory, cross-sectional design to examine associations among constructs in a single measurement period, rather than an experimental or longitudinal design. PLS-SEM analysis was used to assess reflective measurement models, direct paths, statistical indirect effects through Customer Satisfaction, and predictive ability. The term "influence" in the hypotheses indicates the direction of the theoretically estimated relationship, while the interpretation of the results is limited to associations because temporal sequence and causality cannot be ascertained.

Population and Sample

The study population included customers of XYZ Finance Company who had used vehicle financing services at the Jakarta, Medan, and Balikpapan branches. The list of potential respondents was obtained from the company's database after obtaining management approval. Respondents were selected by purposive sampling so that only customers with relevant experience were included in the sample. From the group of customers who met the criteria, the study used 77 respondents according to the minimum number calculated through G*Power. "Loyal" status was not used as a selection requirement because loyalty was an outcome variable measured through a questionnaire, not an initial characteristic to determine respondents.

The eligibility of prospective respondents is determined based on the criteria that have been set. The respondent is a customer of the XYZ Finance Company who still has an active contract or has completed a contract with a financing relationship duration of at least one year, is at least 25 years old, and has interacted with the company in the last 12 months. The financing is used for personal needs and the respondent has used at least one of the company's digital channels. In addition, the respondent is classified as current (Collectability category 1) and is domiciled or registered at the XYZ Finance Company branch in Jakarta, Medan, or Balikpapan.

The application of all criteria is carried out before the distribution of the questionnaire by utilizing the data available in the company's database. Thus, the screening process is not carried out through questionnaire questions. This method ensures that the respondents contacted have sufficient experience to assess service quality, digital experience, customer satisfaction, and customer loyalty to XYZ Finance Company.

Potential selection bias should be acknowledged: only customers classified as current (Collectability category 1) who had used at least one digital channel and met the specified age, domicile, and relationship-duration criteria were eligible. Thus, customers with delinquent loans, customers who do not use digital channels, and customers with negative experiences who do not meet the selection criteria may be underrepresented. Purposive selection also does not produce a probability sample for the company's entire customer base.

The minimum sample size was determined through a priori analysis on G*Power with reference to Cohen (1988) and Faul et al. (2009). The setting used was an F test for linear multiple regression: fixed model, R^2 deviation from zero, with effect size $f^2 = 0{,}15$, $\alpha = 0{,}05$, power = 0,80, and a maximum number of three predictors leading to Customer Loyalty. The results of the calculation recommended at least 77 respondents. The study then used 77 valid responses from customers who met the purposive sampling criteria for the PLS-SEM analysis.

Data Collection Procedure

Data collection was carried out on September 1–7, 2026. A total of 77 customers who had met the purposive sampling criteria based on the company's database received questionnaire invitations. All invited customers provided answers, so that the response rate was 100% (77 out of 77 invitations). Before the analysis, the data was checked for the completeness of the answers, the possibility of duplication, and unnatural answer patterns. All 77 responses were declared valid and no responses were excluded from the analysis. Thus, 77 valid responses were used in the PLS-SEM test using SmartPLS.

Research Instruments

The instrument consists of items that have been used in previous studies and does not form new indicators. Six Service Quality indicators (X1) refer to the overall service quality of Agarwal and Dhingra (2023). Seven Digital Experience (X2) indicators were derived from Hung et al.'s (2021) positive user experience construct; the cost-saving item excluded from the source study was not used. Customer Satisfaction (Z) is measured by three items from Petzer and Roberts-Lombard (2024) which refer to Giovanis et al. (2015). Customer Loyalty (Y) uses six items by Roberts-Lombard et al. (2025), which include three indicators of attitudinal loyalty and three indicators of behavioural intention, without measuring actual transaction behavior.

All statements were answered on a five-point Likert scale from 1 = Strongly Disagree to 5 = Strongly Agree. The English-language source instrument was translated into Indonesian, then the name of the service object was adjusted to XYZ Finance Company or the digital channel of XYZ Finance Company. In addition to language and context adjustments, the format of the response scale was standardized to five points without changing the structure of the indicators or their substantive meaning.

The adaptation of the instrument was carried out by the researcher through translation and adjustment of the vehicle financing context, while maintaining the substantive meaning of the indicator. The relevance of digital experience indicators that include transactions, functions, controls, and security is based on the digital service facilities provided by XYZ Finance Company. In addition to communication via WhatsApp and installment notifications, the company provides installment payment facilities using virtual accounts through ESPAY which are available to all customers. Payments through these facilities are integrated with the company's systems so that payment status is automatically updated in the customer's payment

history that can be accessed and downloaded. This facility is relevant to transaction aspects, service functions, and customer control over payment information, while the security aspect is related to customer perception of the security of using digital services. However, the availability of these facilities does not mean that all respondents have used every feature. Therefore, the results of the digital experience measurement are still interpreted as respondents' perceptions of the company's digital services, taking into account variations in the use of features among customers.

Table 1. Operationalization of Research Constructs

Variable	Item Code	Number of Items	Instrument References
Service Quality (X1)	KL1–KL6	6	(Agarwal & Dhingra, 2023)
Digital Experience (X2)	PD1–PD7	7	(Hung et al., 2021)
Customer Satisfaction (Z)	KP1–KP3	3	(Petzer & Roberts-Lombard, 2024); Initial source: Giovanis et al. (2015)
Customer Loyalty (Y)	LP1–LP6	6	(Roberts-Lombard et al., 2025)

Source: Processed from research instruments, 2026.

Instrument Adaptation Procedure

The research instruments were adapted from previous research relevant to the constructs studied. Service Quality (X1) was measured using six indicators from Agarwal and Dhingra (2023), Digital Experience (X2) using seven indicators from Hung et al. (2021), Customer Satisfaction (Z) using three indicators from Petzer and Roberts-Lombard (2024), and Customer Loyalty (Y) using six indicators from Roberts-Lombard et al. (2025). The adaptation process was carried out through the translation of the instrument from English to Indonesian by the researcher, accompanied by adjusting the terms to the context of vehicle financing services at XYZ Finance Company. Adjustments were made by maintaining the substantive meaning of each indicator. In addition, the measurement scale was standardized using a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Specifically in the customer loyalty construct, the indicators used represent the perception and intention of loyalty, not the actual refinancing behavior verified through the company's transaction data. After data collection, the measurement quality was evaluated using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, through testing for convergent validity, discriminant validity, and construct reliability.

Ethical Considerations and Data Collection Consent

This research was carried out by obtaining the approval of the management of XYZ Finance Company to use the customer database as the basis for determining prospective respondents who meet the research criteria. The approval is a form of company permission in the implementation of research data collection. Prospective respondents are determined through purposive sampling techniques based on predetermined criteria. The questionnaire is then distributed to customers who meet the research criteria through the available communication channels. In the introduction to the questionnaire, the researcher conveys the purpose of the research, the use of answers for academic purposes, and the commitment to maintain the confidentiality of respondents' information. This research focuses on customer

assessments of service quality, digital experience, customer satisfaction, and perception of loyalty to XYZ Finance Company. The data obtained is used for the purposes of scientific analysis and the preparation of research reports.

Protection of Anonymity and Confidentiality of Respondent Data

The protection of respondents' identities was carried out by not requesting the inclusion of names and email addresses in the questionnaire form. The answer data collected thus did not contain the two direct personal identifiers. The use of customer databases in the early stages of the study was aimed at identifying potential respondents who met the purposive sampling criteria, while the questionnaire answer data was used as the basis for analyzing the relationship between the research variables. The results of the study were presented in the form of descriptive statistics and aggregate analysis results, without including the individual identity of the customer. In addition, the company name was disguised as XYZ Finance Company to maintain the confidentiality of the organization's information. With this approach, the research sought to minimize the disclosure of respondents' identities and maintain the confidentiality of customer information in the presentation of the research results. The absence of names and email addresses in the questionnaire limits the collection of direct identifiers, but does not in itself guarantee absolute anonymity, especially if the invitation process uses the customer database. Therefore, the protection of respondents in this study is stated as an effort to maintain the confidentiality of answers and aggregate reporting, without claiming technical anonymity that has not been verified.

Data Analysis Techniques

Data analysis was carried out using PLS-SEM with the help of SmartPLS. Evaluation was carried out through measurement models (outer model) and structural models (inner model), as well as hypothesis testing and mediation effects using bootstrapping 5.000 subsamples at a significance level of 5%. The predictive ability of the model was also evaluated using PLSpredict and CVPAT (Hair et al., 2022; Liengaard et al., 2021; Shmueli et al., 2019).

RESULTS AND DISCUSSION

A total of 77 valid responses were analyzed using SmartPLS. Examinations were carried out sequentially on measurement models, structural models, bootstrapping results of 5.000 subsamples for direct and indirect pathways, and evaluation of out-of-sample predictions through PLSpredict and CVPAT.

Respondent Characteristics

The characteristics of the 77 respondents were presented based on demographics, length of relationship, frequency of financing, digital channels used, and registered branches. Respondents from the Jakarta branch amounted to 30 people (39,0%), Balikpapan 24 people (31,2%), and Medan 23 people (29,9%). The combined percentage may total 100,1% due to rounding to one decimal place.

Table 2. Characteristics of Respondents

Characteristics	Categories	n	%
Gender	Male	38	49,4
	Female	39	50,6
Age	25–30 years	7	9,1
	31–40 years	40	51,9
	41–50 years	25	32,5
	> 50 years	5	6,5
Final education	High School/Vocational School	6	7,8
	Diploma	39	50,6
	Bachelor	24	31,2
	Postgraduate	8	10,4
Jobs	Employees	15	19,5
	Self-employed	61	79,2
	Professional	1	1,3
Long time customer	1–2 years	21	27,3
	3–4 years	45	58,4
	> 4 years	11	14,3
Frequency of using financing services	1 time	30	39,0
	2 times	39	50,6
	> 2 times	8	10,4
Digital channels used	WhatsApp/digital messages/installment notifications	77	100,0
	Website	3	3,9
	E-mail	7	9,1
Registered branches	Jakarta	30	39,0
	Balikpapan	24	31,2
	Medan	23	29,9
Number of respondents		77	100,0

Source: Primary data was processed from 77 valid responses to the questionnaire, September 1-7, 2026. Note: digital channels are multiple responses, so the total percentage between types of channels can exceed 100%. The distribution of branches is Jakarta 30 (39,0%), Balikpapan 24 (31,2%), and Medan 23 (29,9%); the number of branch percentages can differ by 0,1 points due to rounding.

The characteristics of the respondents showed a relatively balanced gender composition, namely 50,6% of women and 49,4% of men. The age group of 31–40 years dominated at 51,9%, while the most common highest educational attainment was a Diploma (50,6%). In terms of employment, the majority of respondents were self-employed (79,2%). The majority of respondents had been customers for 3–4 years (58,4%), while the frequency of using financing services was 2 times (50,6%), followed by 1 time (39,0%) and more than 2 times (10,4%). All respondents used WhatsApp/digital messages/installment notifications (100,0%); in addition, 9,1% used email and 3,9% used websites. The profile showed that most respondents had sufficient experience in financing relationships and the use of digital channels

to assess constructs in the study. Based on registered branches, 30 respondents came from Jakarta (39,0%), 24 from Balikpapan (31,2%), and 23 from Medan (29,9%).

Evaluation of Measurement Models

The results of the outer model showed that all indicators met the criteria for convergent validity. The lowest outer loading was PD4 of 0,717, while the highest value was found in KP2 of 0,907. All AVE values were above 0,50 and Cronbach's Alpha and Composite Reliability values exceeded 0,70. Cross loading, Fornell-Larcker, and HTMT checks also support discriminant validity; the highest HTMT is only 0,537, still below the limit of 0,85. Thus, all four constructs meet the validity and reliability requirements used in the study.

Table 3. Summary of Measurement Model Evaluation

Construct	Loading Range	Alpha	CR	AVE	Conclusion
Service Quality	0,802–0,876	0,921	0,938	0,717	Valid and reliable
Digital Experience	0,717–0,899	0,922	0,937	0,680	Valid and reliable
Customer Satisfaction	0,841–0,907	0,833	0,898	0,747	Valid and reliable
Customer Loyalty	0,839–0,903	0,937	0,950	0,760	Valid and reliable

Source: SmartPLS Output, 2026.

Discriminant Validity: Cross Loading and HTMT

Cross loading is used to ensure that each indicator has the highest load on the construct it is measuring compared to other constructs.

Table 4. Cross Loading

Indicator	Customer Satisfaction	Service Quality	Customer Loyalty	Digital Experience
KL1	0,394	**0,856**	0,258	0,285
KL2	0,413	**0,863**	0,234	0,398
KL3	0,525	**0,839**	0,239	0,375
KL4	0,400	**0,876**	0,243	0,312
KL5	0,359	**0,842**	0,187	0,400
KL6	0,306	**0,802**	0,292	0,336
KP1	**0,841**	0,379	0,424	0,318
KP2	**0,907**	0,522	0,479	0,459
KP3	**0,843**	0,305	0,350	0,292
LP1	0,465	0,261	**0,848**	0,113
LP2	0,459	0,179	**0,903**	0,302
LP3	0,287	0,254	**0,839**	0,073
LP4	0,412	0,236	**0,887**	0,104
LP5	0,478	0,313	**0,903**	0,193
LP6	0,422	0,247	**0,847**	0,071
PD1	0,366	0,363	0,137	**0,877**
PD2	0,386	0,401	0,204	**0,899**
PD3	0,281	0,361	0,084	**0,836**
PD4	0,148	0,331	-0,014	**0,717**
PD5	0,455	0,331	0,198	**0,815**
PD6	0,309	0,349	0,088	**0,873**
PD7	0,338	0,269	0,134	**0,738**

Source: SmartPLS Output, 2026.

The results of cross loading showed that all indicators had the highest loading value in the construct they measured compared to the loading value in other constructs. Thus, the indicators of Service Quality, Digital Experience, Customer Satisfaction, and Customer Loyalty were able to distinguish their respective constructs and support the fulfillment of discriminant validity.

Table 5. Heterotrait-Monotrait Ratio Matrix (HTMT)

Construct	Customer Satisfaction	Service Quality	Customer Loyalty	Digital Experience
Customer Satisfaction	—			
Service Quality	0,520	—		
Customer Loyalty	0,537	0,307	—	
Digital Experience	0,435	0,451	0,165	—

Source: SmartPLS Output, 2026.

The highest HTMT value was 0,537 in the Customer Satisfaction and Customer Loyalty pair. All HTMT values were below the 0,85 limit recommended by Hair et al. (2022), so that the discriminant validity between constructs was declared met.

Evaluation of Structural Models and Predictive Capabilities

The collinearity check yielded an inner VIF between 1,207 and 1,413 so that it did not indicate a multicollinearity problem. R^2 Customer Satisfaction was 0,292 with Adjusted R^2 0,273, while R^2 Customer Loyalty was 0,249 with Adjusted R^2 0,218; based on Chin's (1998) criteria, both were in the weak category. Based on Cohen (1988), the f^2 values for Customer Satisfaction → Customer Loyalty (0,218) and Service Quality → Customer Satisfaction (0,158) indicated medium effect sizes. Digital Experience to Customer Satisfaction had f^2 = 0,087, indicating a small effect size. In contrast, the direct paths from Service Quality and Digital Experience to Customer Loyalty only had f^2 of 0,007 and 0,005, respectively. The SRMR value of 0,072 is still below the limit of 0,08 (Hair et al., 2022) and meets the SRMR threshold used; the SRMR value does not by itself prove the overall suitability of the model in all aspects.

Table 6. Summary of Explaining and Predicting Power of Endogenous Constructs

Endogenous constructs	R^2	Adj. R^2	Q^2predict	RMSE	MAE
Customer Satisfaction	0,292	0,273	0,237	0,898	0,750
Customer Loyalty	0,249	0,218	0,004	1,025	0,866

Source: SmartPLS Output, 2026.

PLSpredict yields a Q^2predict at the construct level of 0,237 for Customer Satisfaction and only 0,004 for Customer Loyalty (Y). The value of 0,004 is positive, but it is very close to zero and indicates a very limited additional predictive power of customer loyalty compared to the naïve predictions at the construct level. At the indicator level, six of the nine endogenous indicators had a positive Q^2predict, while LP2, LP4, and LP6 were negative, so the prediction

performance was uneven, especially on customer loyalty. Although the RMSE PLS-SEM was lower than the linear model across all indicators and the overall CVPAT was better than the linear benchmark (difference = -0,314; t = 3,630; p < 0,001), these comparative findings do not mean that the model can strongly predict self-reported customer loyalty or actual refinancing behavior. The results need to be interpreted in a balanced manner with the R^2 of customer loyalty 0,249 and the limited sample size. As an additional comparison, the overall CVPAT against the indicator average was not significant (difference loss = -0,072; t = 1,180; p = 0,242), even in the Customer Loyalty construct the difference was also not significant (p = 0,932). Therefore, the advantage over the linear benchmark should not be interpreted as a consistent advantage over all comparators.

Testing the Direct Influence Hypothesis

Table 7. Direct Effect Test Results

Hypothesis	Pathway	β	t	p-value	CI 95%	Verdict
H1	Service Quality → Customer Satisfaction	0,368	3,674	< 0,001	[0,172; 0,563]	Supported
H2	Service Quality → Customer Loyalty	0,085	0,654	0,513	[-0,172; 0,345]	Not supported
H3	Customer Satisfaction → Customer Loyalty	0,481	4,339	< 0,001	[0,252; 0,686]	Supported
H4	Digital Experience → Customer Satisfaction	0,272	2,765	0,006	[0,082; 0,475]	Supported
H5	Digital Experience → Customer Loyalty	-0,072	0,557	0,578	[-0,309; 0,185]	Not supported

Source: SmartPLS bootstrapping output, 2026.

Bootstrapping 5.000 subsamples resulted in support for H1, H3, and H4, while H2 and H5 gained no support. Service Quality was positively associated with Customer Satisfaction (β = 0,368; p < 0,001), and Digital Experience was also positively associated with Customer Satisfaction (β = 0,272; p = 0,006). Customer Satisfaction was then positively associated with Customer Loyalty (β = 0,481; p < 0,001). In contrast, neither Service Quality (β = 0,085; p = 0,513) nor Digital Experience (β = -0,072; p = 0,578) showed a statistically significant association with Customer Loyalty.

Indirect Effects Testing and Mediation

Table 8. Mediation Analysis Results

Hypothesis	Direct β (p)	Indirect β (p)	Total Effect	VAF*	Final Classification
H6	0,085 (0,513)	0,177 (0,003)	0,262	67,57%	Indirect-only mediation
H7	-0,072 (0,578)	0,131 (0,037)	0,059	Not interpreted	Indirect-only mediation

Source: SmartPLS bootstrapping output, 2026.

**VAF is not interpreted when direct effects and indirect effects have different directions. The calculation of VAF H7 = 220,63% is only recorded mathematically, not as a measure of the degree of mediation, because the direction of direct and indirect effects is opposite.*

The indirect path of Service Quality→Customer Satisfaction→Customer Loyalty was significant with β = 0,177; t = 3,016; p = 0,003; and CI 95% [0,073; 0,303]. Because the direct effect of Service Quality→Customer Loyalty was not significant, H6 was supported and the mediation pattern included indirect-only mediation. The VAF value of 67,57% was only used as additional information. The indirect path from Digital Experience→Customer Satisfaction→Customer Loyalty was also significant (β = 0,131; t = 2,081; p = 0,037; CI 95% [0,031; 0,280]), while the direct effect was not significant. Thus, H7 was also supported as indirect-only mediation. VAF 220,63% is not used as a basis for concluding full mediation because the direction of the direct effect is opposite to the indirect effect.

The findings showed that service quality (β = 0,368; p < 0,001) and digital experience (β = 0,272; p = 0,006) were positively associated with customer satisfaction, while customer satisfaction was positively associated with attitude- and intent-based customer loyalty (β = 0,481; p < 0,001). In contrast, neither service quality (β = 0,085; p = 0,513) nor digital experience (β = -0,072; p = 0,578) showed a statistically significant direct association with customer loyalty. This means that in this sample, the pattern of service and digital relationships with customer loyalty was mainly seen through customer satisfaction; the results did not prove that service improvements necessarily led to actual retention.

These findings are consistent with the evaluative mechanism of Expectancy-Disconfirmation Theory: customer experience is related to the evaluation of satisfaction which is subsequently related to the intention to maintain the relationship. However, the variables of expectation and disconfirmation were not observed, so the study did not test or prove EDT in its entirety. Data taken at one time also did not prove that satisfaction temporally emerged before loyalty intentions; the mediation pattern was read as a statistical mediation that was compatible with the theory and remained open to alternative models.

Service quality was significantly related to customer satisfaction (β = 0,368; f^2 = 0,158, moderate effect), but the direct link to customer loyalty was not significant (β = 0,085; p = 0,513; f^2 = 0,007, very small). Substantively, accurate, responsive, and timely administrative services may be related to the satisfaction assessment of the transaction over the life of the contract, but the decision to use financing again may also depend on the need for a new vehicle, price and interest, credit approval, financing alternatives, and the time of expiry of the contract. Good service quality may therefore be regarded as a minimum standard rather than a sufficient reason for customers to choose the company again. The indirect effect of X1→Z→Y remains significant (β = 0,177; p = 0,003), thus consistent with the mechanism by which the assessment of service quality relates to customer loyalty, especially when accompanied by customer satisfaction. The explanation is a reasonable interpretation, not a mechanism that has been tested in itself; the alternative explanatory variables are not measured. The implication of the strategy is to manage service quality improvement based on reduced friction and satisfaction responses—e.g., certainty of administrative completion times, accuracy of installment and

repayment information, and complaint recovery—rather than assuming that a higher service quality score automatically increases refinancing. These findings refine the generalization of the results of Agarwal and Dhingra (2023), Alzaydi (2024), Uzir et al. (2021), and Supriyanto et al. (2021) on contractual financial services.

Digital experience was significantly associated with customer satisfaction (β = 0,272; f^2 = 0,087, small), but was not significantly associated directly with customer loyalty (β = -0,072; p = 0,578; f^2 = 0,005). The indirect relationship through customer satisfaction was significant (β = 0,131; p = 0,037). This is consistent with the possibility that access to information, ease of communication, and clarity of prior notification are related to satisfaction evaluations, while intention to use financing again is still influenced by other factors. Interpretation of the results also needs to consider the characteristics of digital channels: all respondents reported using WhatsApp/digital messaging/installment notifications, while website (3,9%) and email (9,1%) use were relatively low. On the other hand, XYZ Finance Company provides installment payments through ESPAY virtual accounts for all customers, with automatic updates of payment status on payment history that can be accessed and downloaded. The availability of such facilities clarifies the contextual relevance of transaction aspects, functions, and payment information controls, but does not prove that each respondent has used all features or has the same perception of security. Therefore, the results of the study cannot be generalized as evidence of the success of each digital transaction feature or the security of the system. Follow-up evaluation can examine the experience of using the feature more specifically and prioritize the digital channels that customers actually use.

The two indirect effects were significant, whereas the corresponding direct effects were not significant. Therefore, H6 and H7 were classified as indirect-only mediation. This pattern provides a contextual refinement of the literature: in the group of vehicle financing customers studied, the relationship between service quality, digital experience, and customer loyalty reported by respondents was mainly reflected in the statistical path through customer satisfaction, not the direct path. This is an indication of the boundary conditions for the applicability of direct relationships in the observed context, not the general postulate that without satisfaction there can be no loyalty. In addition, loyalty items capture future attitudes and intentions; claims of actual loyalty would be unwarranted without observed repeat-financing behavior or other verified customer actions. Given the cross-sectional design and self-reported data, common method bias, reciprocal relationships, and unobserved factors remain plausible alternative explanations for the observed associations.

The power to explain the model is still limited: R^2 customer satisfaction is 0,292 and R^2 customer loyalty is 0,249, so the proportion of unexplained variance is around 70,8% and 75,1%, respectively. Moreover, the Q^2predict for customer loyalty of 0,004 is close to zero and the Q^2predict values for LP2, LP4, and LP6 are negative; the relative success of RMSE/CVPAT against the linear model does not negate the weakness of the prediction. Other factors worth testing include perceived value, trust, switching costs, financing costs, refinancing needs, complaint handling, and contract stages. Additional limitations arise from the single-company setting, the sample size (n = 77), purposive sampling, and the inclusion of only customers classified as current (Collectability category 1). Therefore, the findings cannot be generalized to all customers, particularly those in arrears, those who do not use digital channels, or those

whose negative service experiences were not represented. Longitudinal research with actual refinancing data is needed to assess whether intent leads to behavior.

The practical implications of this study show that XYZ Finance Company needs to prioritize improving service quality, followed by the development of digital experiences, with customer satisfaction as the main focus in supporting customer loyalty. The priority of improving service quality is based on the amount of indirect influence through customer satisfaction ($\beta = 0{,}177$; $p = 0{,}003$), which is numerically higher than digital experience ($\beta = 0{,}131$; $p = 0{,}037$). However, the difference in the magnitude of the two coefficients has not been statistically tested, so this order of priorities is a managerial recommendation. Improving service quality can be directed at service reliability, timeliness, clarity of information, and the effectiveness of handling customer complaints. Furthermore, the development of digital experiences needs to be focused on ease of use, speed of access to information, security, and effectiveness of communication through digital channels used by customers. These two aspects need to be managed in an integrated manner by placing customer satisfaction as the main indicator of the success of service improvement. Thus, the company's strategy is not only oriented toward improving service quality and digital experience separately, but also toward creating a satisfying customer experience associated with loyalty based on attitudes and intentions to reuse the service. Evaluation of actual refinancing behavior is still necessary to assess the success of the loyalty strategy in the long term. As a proposed implementation that needs to be further evaluated, companies can monitor the timeliness of administrative completion, clarity of installment and repayment information, response and complaint resolution times, readability of digital notifications, and the results of periodic satisfaction surveys. These operational indicators are not tested as variables in this PLS-SEM model; their effectiveness on actual refinancing requires further observation.

CONCLUSION

In a sample of 77 customers of XYZ Finance Company, service quality and digital experience were positively and significantly associated with customer satisfaction, while customer satisfaction was positively and significantly associated with customer loyalty measured through attitudes and behavioral intentions. Neither service quality nor digital experience showed a statistically significant direct association with customer loyalty. The indirect effects through customer satisfaction were significant, indicating indirect-only mediation. Because customer loyalty was measured through self-reported attitudes and intentions, the findings did not establish actual loyalty behavior. Given the cross-sectional design, the results indicate statistical associations rather than causal relationships.

The study contributes a contextual refinement by showing that, in this sample of vehicle financing customers, the associations of service quality and digital experience with attitude- and intention-based customer loyalty are primarily observed through customer satisfaction. This pattern is consistent with the EDT evaluative mechanism, without testing the construct of expectations and disconfirmation completely. The main implication is to prioritize the improvement of service experience related to satisfaction, while refining the digital channels that are actually used. The results need to be interpreted together with the limitations of the

selection of customers classified as current (Collectability category 1), a purposive sample of one company, R^2 customer loyalty 0,249, Q^2predict customer loyalty 0,004, and the absence of observation of actual refinancing behavior.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest related to the conduct of the research, preparation, or publication of this article.

AUTHOR CONTRIBUTIONS

All authors contributed to the preparation of this article. The first author, was responsible for the conceptualization of the study, data collection and analysis, interpretation of the results, and manuscript preparation and editing. The second author, contributed to supervision, critical review, and final approval of the manuscript.

GENERATIVE AI STATEMENT

The authors declare that no generative artificial intelligence was used in the preparation of this article.

REFERENCES

Agarwal, R., & Dhingra, S. (2023). Factors influencing cloud service quality and their relationship with customer satisfaction and loyalty. Heliyon, 9(4), e15177. https://doi.org/10.1016/j.heliyon.2023.e15177

Alzaydi, Z. (2024). Examining the mediating effect of multi-channel integration quality in the relationship with service quality, customer satisfaction and customer loyalty in the Saudi banking sector. Management & Sustainability: An Arab Review, 3(2), 132–149. https://doi.org/10.1108/MSAR-12-2022-0061

Amri, H. R., Subagio, R. T., & Kusnadi. (2020). Application of the CSI method for the measurement of management service satisfaction levels. Journal of Intelligent Systems, 3(3), 241–252. https://doi.org/10.37396/jsc.v3i3.86

Balinado, J. R., Prasetyo, Y. T., Young, M. N., Persada, S. F., Miraja, B. A., & Perwira Redi, A. A. N. (2021). The effect of service quality on customer satisfaction in an automotive after-sales service. Journal of Open Innovation: Technology, Market, and Complexity, 7(2), 116. https://doi.org/10.3390/joitmc7020116

Barbu, C. M., Florea, D. L., Dabija, D.-C., & Barbu, M. C. R. (2021). Customer experience in fintech. Journal of Theoretical and Applied Electronic Commerce Research, 16(5), 1415–1433. https://doi.org/10.3390/jtaer16050080

Chauhan, S., Akhtar, A., & Gupta, A. (2022). Customer experience in digital banking: A review and future research directions. International Journal of Quality and Service Sciences, 14(2), 311–348. https://doi.org/10.1108/IJQSS-02-2021-0027

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), Modern methods for business research (pp. 295–336). Lawrence Erlbaum Associates.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Lawrence Erlbaum Associates.

Desiraju, K., Mishra, A. N., & Sengupta, P. (2024). Customer perceptions on open banking apps: Insights using structural topic modeling. Journal of Retailing and Consumer Services, 81, 104029. https://doi.org/10.1016/j.jretconser.2024.104029

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. Behavior Research Methods, 41(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Giovanis, A., Athanasopoulou, P., & Tsoukatos, E. (2015). The role of service fairness in the service quality–relationship quality–customer loyalty chain: An empirical study. Journal of Service Theory and Practice, 25(6), 744–776. https://doi.org/10.1108/JSTP-11-2013-0263

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). Sage.

Hung, W.-H., Tseng, C.-L., Chang, F.-K., & Ho, C.-F. (2021). Effects of utilitarian and hedonic emotion on the use of online banking services. Journal of Global Information Management, 29(6), 1–20. https://doi.org/10.4018/JGIM.20211101.oa5

Khan, R. U., Salamzadeh, Y., Iqbal, Q., & Yang, S. (2022). The impact of customer relationship management and company reputation on customer loyalty: The mediating role of customer satisfaction. Journal of Relationship Marketing, 21(1), 1–26. https://doi.org/10.1080/15332667.2020.1840904

Kotler, P., & Keller, K. L. (2016). Marketing management (15th ed.). Pearson.

Kotler, P., & Keller, K. L. (2019). Marketing management (13th edition). Erlangga.

Liengaard, B. D., Sharma, P. N., Hult, G. T. M., Jensen, M. B., Sarstedt, M., Hair, J. F., & Ringle, C. M. (2021). Prediction: Coveted, yet forsaken? Introducing a cross-validated predictive ability test in partial least squares path modeling. Decision Sciences, 52(2), 362–392. https://doi.org/10.1111/deci.12445

Nasir, M., Adil, M., & Dhamija, A. (2021). The synergetic effect of after-sales service, customer satisfaction, loyalty and repurchase intention on word of mouth. International Journal of Quality and Service Sciences, 13(3), 489–505. https://doi.org/10.1108/IJQSS-01-2021-0015

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. Journal of Marketing Research, 17(4), 460–469. https://doi.org/10.1177/002224378001700405

Financial Services Authority. (2025a). Press release: Strengthening a stable and inclusive financial services sector to support national priority programs, Financial Services Industry Annual Meeting 2025. https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/Pertemuan-Tahunan-Industri-Jasa-Keuangan-2025.aspx

Financial Services Authority. (2025b). Statistics of financial institutions for the period of February 2025. https://ojk.go.id/id/kanal/iknb/data-dan-statistik/lembaga-pembiayaan/Pages/Statistik-Lembaga-Pembiayaan-Periode-Februari-2025.aspx

Petzer, D. J., & Roberts-Lombard, M. (2024). Revisiting the satisfaction–loyalty link in retail banking – An emerging market perspective. Journal of Economic and Financial Sciences, 17(1), a925. https://doi.org/10.4102/jef.v17i1.925

Rahayu, S., & Faulina, S. T. (2022). The influence of digital customer experience in creating customer satisfaction and customer loyalty in the digital era. Jesya (Journal of Sharia Economics & Economics), 5(1), 1–13. https://doi.org/10.36778/jesya.v5i1.568

Riadi, M., Kamase, J., & Mapparenta, M. (2021). The effect of price, promotion, and service quality on Toyota car consumer satisfaction (case study on PT. Hadji Kalla Alauddin Branch). Journal of Management Science (JMS), 2(1), 41–60. https://doi.org/10.52103/jms.v2i1.320

Roberts-Lombard, M., Pieterse, V. A., & Gabriel, L. (2025). Strengthening the satisfaction–loyalty link: A study of mediating factors in the retail banking industry of South Africa. European Business Review, 37(4), 599–623. https://doi.org/10.1108/EBR-04-2024-0127

Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. European Journal of Marketing, 53(11), 2322–2347. https://doi.org/10.1108/EJM-02-2019-0189

Simamora, A., & Pratama Sulistyo, A. (2023). Building digital customer experience in the millennial generation. Economics and Business, 27(2), 133–147. https://doi.org/10.24123/jeb.v27i2.5924

Singh, V., Sharma, M. P., Jayapriya, K., Bonda, K. K., Chander, A. R. N., & Kumar, B. R. (2023). Service quality, customer satisfaction and customer loyalty: A comprehensive literature review. Journal of Survey in Fisheries Sciences, 10(4S), 3457–3464. https://doi.org/10.53555/sfs.v10i4S.2218

Supriyanto, A., Wiyono, B. B., & Burhanuddin, B. (2021). Effects of service quality and customer satisfaction on loyalty of bank customers. Cogent Business & Management, 8(1), 1937847. https://doi.org/10.1080/23311975.2021.1937847

Tahir, R., Harto, B., Rukmana, A. Y., Subekti, R., Waty, E., Situru, A. C., & Sepriano. (2023). Business transformation in the digital era: Information technology in supporting business transformation in the digital era. Sonpedia Publishing.

Uzir, M. U. H., Al Halbusi, H., Thurasamy, R., Thiam Hock, R. L., Aljaberi, M. A., Hasan, N., & Hamid, M. (2021). The effects of service quality, perceived value and trust in home delivery service personnel on customer satisfaction: Evidence from a developing country. Journal of Retailing and Consumer Services, 63, 102721. https://doi.org/10.1016/j.jretconser.2021.102721

Vu, T. (2021). Service quality and its impact on customer satisfaction [Undergraduate dissertation, University of Northampton]. Figshare. https://doi.org/10.6084/m9.figshare.17089454

Windasari, N. A., Kusumawati, N., Larasati, N., & Amelia, R. P. (2022). Digital-only banking experience: Insights from generations Y and Z. Journal of Innovation & Knowledge, 7(2), 100170. https://doi.org/10.1016/j.jik.2022.100170