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Customer Satisfaction Mediating Digital Experience, E-Service Quality, Perceived Value, and Customer Loyalty Alfagift Members

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Abstract
This study aims to examine the influence of digital customer experience, e-service quality, and perceived value on customer loyalty, with customer satisfaction as a mediating variable, among users of the Alfagift app in Lamongan Regency, Indonesia. This study employed a quantitative approach using probability random sampling. Data were collected from 96 respondents via a questionnaire and analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The results indicate that e-service quality is the most dominant factor in shaping customer satisfaction and loyalty. In addition to having a direct, positive, and significant effect on both variables, e-service quality is the only variable that has a significant indirect effect on customer loyalty through customer satisfaction. Conversely, digital customer experience does not significantly affect customer satisfaction or loyalty, while perceived value positively and significantly affects customer loyalty but not satisfaction. These findings confirm that improving the quality of electronic services through system reliability, ease of use, security, and service responsiveness is the most effective strategy for enhancing satisfaction and strengthening customer loyalty toward the Alfagift app. This study is limited to Alfagift users in Lamongan Regency and uses cross-sectional data; therefore, the results cannot be broadly generalized. This study clarifies the mediating role of customer satisfaction in the formation of customer loyalty in the digital retail sector.

Keywords*: Customer Loyalty, Customer Satisfaction, Digital Customer Experience, E-Service Quality, Perceived Value*

1. INTRODUCTION

Rapid technological advancements have driven changes in various aspects of life and enhanced users' digital experiences. Today, digital development has become an essential part of daily life, offering convenience and practicality in various human activities, thereby saving time without disrupting users' work (Wismiyanti, Perdana, Aqmala, & Anomsari, 2025). One concrete example of such digital innovation is the well-known retail company, Alfamart. Alfamart is one of the leading minimarket retail companies that has been providing convenience and comfort in shopping for decades to Indonesian public. Building on this experience and a commitment to continuous improvement to deliver the best for its loyal customers, Alfagift launched an online store offering tens of thousands of daily-need products across diverse categories. Alfagift ranks among the highest in brand awareness in Indonesia, but there are several issues experienced by Alfagift users, such as inconsistent user experiences, unstable system reliability, and a mismatch between users' expectations and the actual value and benefits they receive from the app. Examples include slow loading times, glitches during checkout, discrepancies between promotional prices and those at physical stores, delivery delays, and slow response times, all of which lead to disappointment among some Alfagift app users.

Several factors must be examined in relation to the variables mentioned above. Similarly, in the context of digital customer experience, customer experience is a response to both rational and emotional bonds, shaped by relationships involving sense, feel, thing, act, and relationship (Tiffany & Singagerda, 2025). Additionally, e-service quality, which encompasses efficiency, system availability, fulfillment, and privacy, will also foster customer loyalty to the Alfagift app (Kunadi & Wuisan, 2021). Furthermore, perceived value, which has indicators related to expectations, assessments during the buying and selling process, and evaluations Citra and Sunaryanto (2026), which influences the indicators of customer loyalty including purchase intention, reduced price sensitivity, feedback to the firm, and increased business engagement (Philo, Az-Zahra, & Nugraha, 2025). In addition, there is also the variable customer satisfaction, which plays a mediating role in the relationships among the variables. Customer satisfaction is measured using indicators such as preference, price-to-quality ratio, and overall satisfaction (Ningsih & Hurnis, 2023).

Previous research from Rahayu and Faulina (2022) found that digital customer experience has a positive and significant effect on customer loyalty. However, Philo et al. (2025) state that digital customer experience has a positive effect on customer loyalty and that e-service quality also has a significant effect on customer loyalty. Research from Dewi and Ramli (2023) states that e-service quality does not have a positive effect on customer loyalty, but perceived value does have a positive effect on customer loyalty. Furthermore, research by Meryawan, Suryawan, and Handayani (2022) states that perceived value does not have a positive effect on customer loyalty, Nasution and Adiwijaya (2024) state that e-service quality has a positive and significant effect on customer loyalty, and research by Kunadi and Wuisan (2021) states that e-service quality has an indirect effect on customer loyalty through customer satisfaction. Citra and Sunaryanto (2026) stated that perceived value and customer satisfaction positively affect customer loyalty. Furthermore, a study from Handriano (2020) states that e-service quality does not have a positive effect on customer loyalty, while perceived value has a positive effect on customer loyalty. This indicates a research gap that needs to be addressed, particularly regarding the role of customer satisfaction as a mediating variable that may explain the relationship between these variables and customer loyalty.

Although various studies have examined the relationship between digital customer experience, e-service quality, perceived value, customer satisfaction, and customer loyalty, their findings remain inconsistent. Furthermore, most previous studies have only tested direct relationships between variables or used a single independent variable, Consequently, the mechanisms underlying the formation of customer loyalty to e-grocery services have not yet been comprehensively explained. This situation indicates that there remains an empirical gap requiring further testing, such as the discrepancies in the results of previous studies regarding the effects of digital customer experience, e-service quality, and perceived value on customer loyalty highlight a gap between studies. This suggests that other factors play a role in explaining the relationships among these constructs, one of which is customer satisfaction as a mediating variable. Therefore, this study was conducted to provide relevant empirical evidence based on the actual conditions of Alfamart members using the Alfagift app in Lamongan City, as well as to serve as a basis for the company to evaluate and improve its digital service strategies and sustain customer loyalty over the long term.

In addition to the research gap, there is a knowledge gap. Most previous studies have been conducted in the context of marketplaces, e-wallets, mobile banking, or digital transportation services, whereas research on e-grocery apps, particularly Alfagift, remains relatively limited. Lamongan Regency has a consumer base that differs from that of metropolitan cities because the adoption rate of digital services and the public's shopping patterns are still evolving (Suyatna, Kafaa, Budiono, Firdaus, & Wibowo, 2026). The novelty of this study lies in the development of a customer loyalty model by integrating three main determinants: digital customer experience, e-service quality, and perceived value through customer satisfaction as a mediating variable in the context of the Alfagift e-grocery app. Unlike previous studies, which generally tested only one or two variables, this study examines all three constructs simultaneously, thereby providing a more comprehensive understanding of how customer loyalty is formed in digital retail services

The research question in this study is how to enhance customer loyalty through digital customer experience, e-service quality, and perceived value, with customer satisfaction serving as the mediating variable, among Alfamart members who use the Alfagift app and are located in the city of Lamongan. This study aims to analyze the role of digital customer experience, e-service quality, and perceived value in customer satisfaction, as well as to test the role of customer satisfaction as a mediating variable in the relationship between these three variables and customer loyalty among Alfamart members who use the Alfagift app, specifically in the city of Lamongan. This study is expected to expand the development of digital marketing theory by explaining the mechanism through which digital customer experience, e-service quality, and perceived value shape customer loyalty via customer satisfaction as a mediator. The findings of this study are also expected to clarify the inconsistencies in previous research regarding the relationships among these variables

2. LITERATURE REVIEW

2.1 Customer Loyalty

Customer loyalty means that a consumer is considered loyal if they exhibit consistent purchasing patterns or are in a situation that requires them to make at least two purchases within a certain timeframe (Wismiyanti et al., 2025). Rahayu and Faulina (2022) define loyalty as a steadfast commitment to purchasing or subscribing to a specific good or service in the future, despite situational factors and marketing efforts that might alter behavior. Loyalty is defined as a committed attitude toward repurchasing a service or product and recommending that product or service to other consumers. Customer loyalty can be understood as a consumer's commitment to consistently return to a company's website or app to make repeat purchases because that app is preferred over others (Gwigon, Pidada, & Aryana, 2024). Customer loyalty is the belief that a service provider can consistently meet customer needs. This concept serves as the foundation for building long-term commitment and strengthening the relationship between customers and companies. Customer trust, a crucial element of loyalty, is essential for fostering sustained interactions and exchanges, particularly in business-to-business environments (Nasution & Adiwijaya, 2024).

2.2 Customer Satisfaction

Customer satisfaction can be defined as the result of a sale of goods or services that meets customer expectations (Ningsih & Hurnis, 2023). Customer satisfaction is a variable used to understand existing or new customers (Wismiyanti et al., 2025). According to Nasution and Adiwijaya (2024), customer satisfaction results from a comparison between a person's expectations and the actual outcomes they receive. This creates a feeling of satisfaction or disappointment based on the comparison between the perceived and expected outcomes. Customer satisfaction is the difference between a customer's expectations and their perception of the actual product received from an organization. This helps evaluate the product based on customer expectations (Mugova, Kiliswa, & Mashizha, 2025).

Customer satisfaction is generally based on trust, experience, and quality of service provided to consumers (Tedjokusumo & Murhadi, 2023). Customer satisfaction can be described as falling somewhere between satisfaction and dissatisfaction, which arises after customers compare the performance of the product or service they receive with their prior expectations (Asy'ari & Fauziah, 2026). Consumers make decisions about their satisfaction by assessing how well a service performs relative to their prior expectations, whether the service exceeds or falls short of those expectations. High levels of customer satisfaction are a key metric for demonstrating the quality of service received by consumers (Kunadi & Wuisan, 2021). Conceptually, customer satisfaction acts as a mediating mechanism that explains how the digital customer experience, e-service quality, and perceived value translate into loyalty. Digital customer experience, e-service quality, and perceived value do not always directly increase loyalty. These three constructs first form a positive evaluation in the form of customer satisfaction, which subsequently fosters long-term commitment and loyalty. Therefore, customer satisfaction is viewed as a variable that bridges the relationship between digital service quality and loyal customer behavior (Rezeki, Majid, & Kassim, 2023).

2.3 Digital Customer Experience

Digital customer experience is a key factor in enhancing customer loyalty and satisfaction. Research on the impact of digital customer experience on customer satisfaction is particularly urgent and relevant, given the intensity of business competition in today's digital era (Rismanto, 2025). Digital customer experience is an online expression of customers. It should be noted that consumers generally do not analyze the various phases of their journey as marketers do. Whether in physical or virtual interactions, offline or online, people expect consistency across all channels and throughout their experience with the brand. For consumers, this forms a single, unified experience with the brand. Companies must possess both interpersonal skills and technical knowledge to execute digital campaigns while ensuring that the transition between these overlapping worlds runs smoothly (Rahayu & Faulina, 2022).

Digital customer experience refers to the overall experience that each customer has during a digital transaction between the customer and the seller, whether in a marketplace or other applications. It can be defined as the consumer's physical or emotional interaction with a company that leaves a lasting impression on the consumer, which, in turn, can influence the consumer's evaluation of the company (Ningsih & Hurnis, 2023). According to the theory of digital customer experience, interactions with digital platforms shape customers' cognitive and affective evaluations of the services they receive. Positive digital experiences, such as ease of navigation, intuitive interface design, and seamless interactions throughout the process from search to purchase, enhance customers' perception that the service meets their expectations.

2.4 E-Service Quality

E-service quality refers to a website or application that facilitates online purchases and payments, with the aim of making it easier for consumers and sellers to conduct transactions. E-service quality refers to the ability of a website or application to facilitate the purchase, sale, and delivery of goods and services. The quality of electronic services makes it easier for customers to order services or products online, accompanied by service notifications, so that customers can easily monitor the service through the application (Wismiyanti et al., 2025). E-service quality plays a significant role in building customer trust and satisfaction. Good e-service quality such as facilitating various access points within the application greatly influences customer loyalty and affects customer satisfaction levels with a digital service (Siahaan, Jodhinata, & Ardyan, 2025). E-service quality refers to the extent to which an online website enhances the efficiency and effectiveness of customer navigation and consumption, including links to services such as distribution and consultation (Nasution & Adiwijaya, 2024).

E-service quality refers to the ability to deliver performance and quality when serving customers, including ease of use, smooth application performance, reliability, responsiveness, and the quality of the customer interface. Service quality is considered good if it meets or exceeds expectations, resulting in high customer satisfaction and building customer loyalty Setiabudi and Sutanto (2024). From an e-service perspective, customer satisfaction arises when the quality of service provided meets or exceeds the user's expectations. Dimensions such as efficiency, system reliability, security, ease of use, and speed of service determine customer evaluations of e-service quality (Al Firdaus & Rachmawati, 2024).

2.5 Perceived Value

One of the essential components for a business to gain a competitive advantage is perceived value, a business tends to stand out more in the market when its products or services offer high perceived value to consumers. This competition not only helps companies excel in a competitive market but also drives competitors to take steps to maintain their competitive position (Liu, Alli, & Yusoff, 2024). Perceived value is a key variable in marketing that influences attitudes, satisfaction, loyalty, and purchase intent. In contrast, perceived value is often defined as the value that arises from a customer's feelings, encompassing pre-purchase expectations, evaluations during the buying process, and post-purchase assessments (Citra & Sunaryanto, 2026).

Perceived value can also be defined as a comparison of benefits and sacrifices, in which customers view the quality of a product or service as a benefit. It is defined as a consumer's overall evaluation of a product's usefulness based on their perception of what they receive versus what they expect (Kunadi & Wuisan, 2021). Consumers tend to feel more satisfied when the perceived value of a product or service exceeds their initial expectations; this can also increase customer loyalty, encourage positive recommendations to others, and strengthen the relationship between consumers and the company (Tedja, Al Musadieq, Kusumawati, & Yulianto, 2024). Based on value theory, customers evaluate the benefits received compared to the costs, time, and effort expended while using the service. If the benefits obtained are considered greater than the sacrifices made, customers will perceive high value, which ultimately increases their satisfaction (Putriana & Efrata, 2026).

3. METHODOLOGY

This study employed a quantitative research approach. Quantitative research aims to observe and describe the existence of independent variables separately without analyzing the relationships between variables, in accordance with the descriptive (Sugiyono, 2017). Quantitative research methods hold that every object under study must be observable, measurable, classifiable, causal in nature, and value-free (Sugiyono, 2017). Based on the data collected, the sample consisted of Alfamart members who used the Alfagift app in Lamongan. Respondents will be recruited online via a Google Form shared on social media. The sampling technique used in this study was probability sampling with random sampling. Respondents were selected based on several criteria: they must reside in Lamongan Regency, be at least 17 years old, have an Alfagift app account, and have made at least one transaction using the Alfagift app within the past month. These criteria were established to ensure that respondents had actual experience using the app so that they could provide objective assessments of the digital experience, quality of electronic services, perceived value, satisfaction levels, and loyalty toward the Alfagift app. For the data analysis technique, the Cochran formula is used when the study population is unknown. In this case, the sample size was calculated using the Cochran formula (Sugiyono, 2017). The Cochran formula is as follows:

$$n = \frac{z^z pq}{e^2} \tag{1}$$

Formula 1 shows that n represents the required sample size, and z refers to the value of the normal distribution curve at a 5% significance level, which is 1.96. p represents the probability of being correct, which was set at 50%, and q represents the probability of being incorrect, which was also set at 50%. Meanwhile, e indicates the acceptable sample error rate, which is set at 10%. Based on the sample size calculation using Cochran's formula, the result was n=96.04. Since the sample size must be a whole number, the sample size selected for this study was 96. This sample size was deemed representative of the population, the exact size of which remains unknown. The use of a 10% error margin (e=0.1) and a 95% confidence level (z=1.96) indicated that the sample size met the statistical criteria for obtaining sufficiently accurate and generalizable research results. To ensure consistency in responses and facilitate quantitative analysis, each question was measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This scale allows respondents to express varying degrees of agreement or disagreement with each statement, thereby capturing their experiences, feelings, and judgments in greater depth. The analysis was conducted using Smart-PLS 4.0. The analysis stages included the measurement model test (outer model), structural model test (inner model), hypothesis testing (bootstrapping), and mediation analysis (indirect effects) to determine the role of customer satisfaction in mediating the effects of digital customer experience, e-service quality, and perceived value on loyalty.

The PLS-SEM method was chosen because it is suitable for nonparametric data, and all variables involved are constructs or latent variables, as they cannot be measured directly (Sudibjo, Aulia, & Harsanti, 2022). Data analysis in this study utilized Partial Least Squares Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS 4.0 software. The PLS-SEM method was chosen because the study's objective was not only to test direct relationships among latent constructs but also to analyze indirect effects via customer satisfaction as a mediating variable. Additionally, this research model involves several latent constructs measured using several reflective indicators, thus requiring an analytical method capable of simultaneously estimating structural relationships and measurement models. According to Hair and Alamer (2022), PLS-SEM is particularly well-suited for research that focuses on prediction, conceptual model development, and testing complex relationships involving mediating effects. This method does not strictly require a multivariate normal distribution and is still capable of producing stable parameter estimates for relatively small to medium sample sizes.

The research instrument was a structured questionnaire adapted from indicators that had been used and validated in previous studies. The digital customer experience variable was measured using the five dimensions of customer experience identified by Rahayu and Faulina (2022), namely sense, feel, thing, act, and relationship for e-service quality, which includes efficiency, system availability, fulfillment, and privacy (Kunadi & Wuisan, 2021). Furthermore, the indicators for the perceived value variable are expectations, assessments during the buying and selling process, and evaluations (Citra and Sunaryanto (2026), which will influence customer loyalty, which has indicators such as purchase intention, lower price sensitivity, feedback to the firm, and doing more business (Philo et al. (2025). For the mediating construct of customer satisfaction, the indicators included preference, price-to-quality ratio, and overall satisfaction (Ningsih & Hurnis, 2023).

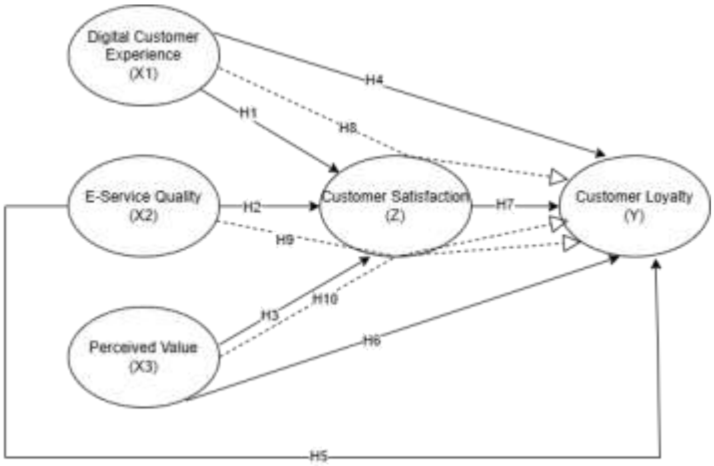

Figure 1. Conceptual framework

Figure 1 shows the relationships among digital customer experience (X_1), e-service quality (X_2), and perceived value (X_3) as independent variables; customer satisfaction (Z) as a mediating variable; and customer loyalty (Y) as the dependent variable. The model proposes that digital customer experience, e-service quality, and perceived value influence customer satisfaction, which subsequently affects customer loyalty. Furthermore, the framework examines the indirect effects of the independent variables on customer loyalty through the mediating role of satisfaction. The proposed relationships among these constructs were formulated into several research hypotheses (H_1–H_{10}), which evaluated both direct and mediation effects. This model aims to explain how positive digital experiences, high-quality electronic services, and perceived value contribute to increasing customer satisfaction, ultimately strengthening customer loyalty.

4. RESULTS AND DISCUSSIONS

4.1 Respondent Characteristics

The respondents in this study were Alfagift app users in Lamongan Regency. The characteristics of these respondents were analyzed based on their residential address (subdistrict) within Lamongan Regency, age, and frequency of Alfagift app usage over a one-month period. The descriptive findings show that the largest group of respondents was in the 17–25 age group. This indicates that the respondents were interested in using the Alfagift app. Therefore, the collected data can be considered representative of Alfamart members who use the Alfagift app

Table 1. Respondent characteristics

Characteristics	Category	Frequency	Percentage (%)
	Babat	7	7
	Bluluk	3	3
	Brondong	3	3
	Close	7	7
	Glagah	3	3
	Kalitengah	4	4

Address	Karangbinangun	3	3
	Karanggeneng	3	3
	Kedungpring	9	9
	Kembangbahu	3	3
	Lamongan	4	4
	Laren	5	5
	Maduran	3	3
	Ngimbang	4	4
	Paciran	3	3
	Pucuk	2	2
	Sambeng	3	3
	Sarirejo	3	3
	Sekaran	2	2
	Solokuro	2	2
	Sugio	2	2
	Sukodadi	4	4
	Sukorame	3	3
	Tikung	3	3
	Turi	2	2
	Total	**96**	**100**
Age	17–25 years	55	57
	26–30 years	30	31
	>30 years	11	11
	Total	**96**	**100**
Purchase Frequency	1–2 times	30	31
	3–5 times	33	34
	>5 times	33	34
	Total	**96**	**100**

Table 1 shows that the most active respondents were those aged 17–25 years. This productive age group reflects the general profile of active app users, and it can be seen that the frequency of Alfagift app usage is higher than just 1–2 times per month. Practically speaking, it can be concluded that these respondents' characteristics, including their digital experience and the importance they place on the app, play a significant role in user loyalty to the Alfagift app.

4.2 Evaluation of the Measurement Model

The measurement model was evaluated to ensure that the research instrument accurately and consistently measured the intended constructs. This stage included testing for convergent validity, construct reliability, and discriminant validity (Ratnaningtyas, Martaleni, & Wijayanti, 2026). The results showed that all indicators achieved acceptable loading values, indicating that each questionnaire item successfully represented the corresponding construct. Furthermore, all variables met the recommended thresholds for composite reliability and AVE, indicating satisfactory internal consistency and construct validity (Anharita, Suswati, & Mulyono, 2026). More specifically, the questionnaire used in the sample selection for this study was sufficiently reliable and accurate for measuring Digital Customer Experience (DCX), E-Service Quality (ESQ), Perceived Value (PV), Customer Satisfaction (CS), and Customer Loyalty (CL).

Table 2. Results of the convergent validity test (outer loadings)

Variables	Outer Loading Range	Description
Digital Customer Experience	0.718 – 0.814	Valid
E-Service Quality	0.822 – 0.868	Valid
Perceived Value	0.767 – 0.845	Valid
Customer Satisfaction	0.813 – 0.850	Valid
Customer Loyalty	0.735 – 0.831	Valid

The recommended outer loading is 0.70 (Hair & Alamer, 2022). In Table 2, all indicators show outer loading values greater than those previously recommended to represent the measured construct and are thus adequate. Therefore, all indicators met the criteria for convergent validity. These results indicate that each indicator has a strong correlation with its respective latent construct, confirming that the measurement model has an acceptable indicator reliability.

Table 3. Reliability and convergent validity tests

Variables	Cronbach's alpha	Composite Reliability	AVE	Notes
CL	0.876	0.877	0.617	Reliable
CS	0.889	0.896	0.691	Reliable
DCX	0.924	0.933	0.590	Realibel
ESQ	0.942	0.943	0.710	Reliable
PV	0.863	0.870	0.646	Reliable

Table 3 shows that the internal consistency reliability was assessed using Cronbach's Alpha and Composite Reliability (CR), with a cutoff value of 0.70 (Hair & Alamer, 2022). All constructs had Cronbach's Alpha and Composite Reliability values greater than 0.70. Regarding Average Variance Extracted (AVE), a rule of thumb is a value of 0.50 or higher to provide evidence of convergent validity for the assumed constructs. These findings indicate that the research instrument has a high level of reliability and adequate convergent validity.

Table 4. Validity test via cross-loading

	CL (Y)	CS(Z)	DCX(X1)	ESQ(X2)	PV(X3)	Notes
CL1	0.735	0.424	0.202	0.473	0.490	Valid
CL3	0.767	0.565	0.284	0.550	0.491	Valid
CL4	0.798	0.486	0.158	0.501	0.411	Valid
CL6	0.760	0.468	0.215	0.456	0.467	Valid
CL7	0.831	0.484	0.146	0.555	0.473	Valid
CL8	0.818	0.446	0.182	0.529	0.424	Valid
CS1	0.545	0.828	0.219	0.566	0.482	Valid
CS3	0.402	0.813	0.333	0.332	0.355	Valid
CS4	0.550	0.826	0.172	0.495	0.349	Valid
CS5	0.479	0.850	0.179	0.461	0.306	Valid
CS6	0.537	0.840	0.256	0.560	0.382	Valid
DCX1	0.192	0.237	0.760	0.143	0.386	Valid
DCX10	0.167	0.135	0.786	0.132	0.527	Valid
DCX2	0.193	0.193	0.718	0.075	0.346	Valid
DCX3	0.242	0.217	0.752	0.111	0.386	Valid
DCX4	0.240	0.217	0.803	0.114	0.477	Valid
DCX5	0.223	0.323	0.753	0.214	0.483	Valid

DCX6	0.165	0.143	0.726	0.166	0.450	Valid
DCX7	0.070	0.169	0.798	0.011	0.492	Valid
DCX8	0.116	0.082	0.814	0.067	0.454	Valid
DCX9	0.197	0.216	0.764	0.195	0.535	Valid
ESQ1	0.608	0.450	0.201	0.839	0.489	Valid
ESQ2	0.480	0.481	0.196	0.822	0.326	Valid
ESQ3	0.499	0.492	0.138	0.841	0.447	Valid
ESQ4	0.524	0.539	0.114	0.834	0.390	Valid
ESQ5	0.531	0.466	0.090	0.837	0.460	Valid
ESQ6	0.584	0.551	0.154	0.868	0.485	Valid
ESQ7	0.570	0.506	0.146	0.858	0.402	Valid
ESQ8	0.589	0.507	0.138	0.843	0.399	Valid
PV1	0.567	0.400	0.482	0.427	0.845	Valid
PV2	0.445	0.402	0.577	0.412	0.808	Valid
PV4	0.487	0.336	0.470	0.404	0.795	Valid
PV5	0.393	0.311	0.486	0.342	0.801	Valid
PV6	0.437	0.372	0.355	0.436	0.767	Valid

Table 4 shows that the cross-loading for each construct measured was higher than that of the other constructs. Therefore, each construct met the criteria for discriminant validity. Validity through cross-loading is measured by the outer loading indicator value of the construct being measured, which must be higher than that of other constructs (Hair & Alamer, 2022). These findings confirm that each indicator has a stronger association with its corresponding construct than with other constructs, indicating that the measurement model demonstrates adequate discriminant validity.

4.3 Structural Model Evaluation

After conducting validity and reliability tests on the measurement model, the next step involves the structural model to assess the strength of the relationships between variables

Table 5. R-square values

	R-Square	**Adjusted R-Square**	**Description**
CL (Y)	0.566	0.547	Strong
CS(Z)	0.391	0.371	Moderate

Table 5 shows an R-squared value of 0.566 for customer loyalty, with an adjusted R-squared value of 0.547. This indicates that 56.6% of the variation in customer loyalty can be explained collectively by Digital Customer Experience (DCX), E-Service Quality (ESQ), and Perceived Value (PV), with Customer Satisfaction (CS) acting as a mediating variable. The R^2 value of 0.566 falls into the category of very clear and strong in explaining customer loyalty to the Alfagift app. Furthermore, the customer satisfaction variable yielded an R-squared value of 0.391, with an adjusted R-squared of 0.371. This indicates that 39.1% of the variation in customer satisfaction can be explained by DCX, ESQ and PV. The R^2 value of 0.391 falls into the modest category, indicating a sufficient ability to explain customer satisfaction.

4.4 Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping method to evaluate the significance of the relationships between the variables.

Table 6. Hypothesis testing

	Original sample (O)	T-statistics (|O/STDEV|)	P-values	Notes
H_1: DCX (X_1) → CS (Z)	0.103	0.652	0.515	Rejected
H_2: ESQ (X_2) → CS (Z)	0.504	4.313	0.000	Accepted
H_3: PV (X_3) → CS (Z)	0.141	0.986	0.324	Rejected
H_4: DCX (X_1) → CL(Y)	-0.083	0.579	0.563	Rejected
H_5: ESQ (X_2) → CL (Y)	0.325	3.086	0.002	Accepted
H_6: PV (X_3) → CL (Y)	0.339	3.153	0.002	Accepted
H_7: CS (Z) → CL (Y)	0.287	2.915	0.004	Accepted

Table 6 shows that the effect of digital customer experience on customer satisfaction (H_1) has a p-value of 0.515, which is greater than 0.05; therefore, this hypothesis is rejected, as in the study (Al-Anzahri, Farida, & Nugraha, 2025). Furthermore, the effect of e-service quality on customer satisfaction (H_2) has a p-value of 0.000. According to Hair and Alamer (2022), a p-value <0.05 and a t-statistic>1.96 indicate that the hypothesis is accepted. The next hypothesis, that perceived value affects customer satisfaction (H_3), has a p-value of 0.324, which is greater than 0.05; therefore, this hypothesis is rejected. Next, the relationship between the digital customer experience and customer loyalty (H_4) had a t-statistic of 0.579 and a p-value of 0.563. As the p-value is greater than 0.05, this hypothesis is rejected. The next hypothesis, regarding the relationship between e-service quality and customer loyalty (H_5), has a p-value of 0.002 and a t-statistic greater than 1.96; therefore, this hypothesis is accepted. The relationship between perceived value and customer loyalty (H_6) has a p-value of 0.002 and a t-statistic of 3.153; therefore, the hypothesis is accepted. Finally, the hypothesis regarding the relationship between customer satisfaction and customer loyalty (H_7) has a p-value of 0.004 and a t-statistic greater than 1.96; therefore, this hypothesis is accepted.

4.5 Mediation Test

Table 7. Mediation test (indirect)

	Original sample (O)	T-statistics (|O/STDEV|)	P-values	Notes
H_8: DCX (X_1) → CS (Z) → CL (Y)	0.030	0.653	0.514	Rejected
H_9: ESQ (X_2) → CS (Z) → CL (Y)	0.145	2.486	0.013	Accepted
H_{10}: PV (X_3) → CS (Z) → CL (Y)	0.040	0.874	0.382	Rejected

Table 7 shows *that* H_8, the effect of digital customer experience on customer loyalty through customer satisfaction, has a coefficient of 0.030, a t-statistic of 0.653, and a p-value of 0.514. As the p-value is greater than 0.05 and the t-statistic is less than 1.96, this indirect effect is not significant. This indicates that customer satisfaction does not mediate the relationship between digital customer experience and customer loyalty; therefore, H_9 is rejected. Furthermore, the effect of e-service quality on customer loyalty through customer satisfaction yielded a coefficient of 0.145, a t-statistic of 2.486, and a p-value of 0.013. Since the p-value is <0.05 and the t-statistic is >1.96, this indirect effect is significant; therefore, this hypothesis is accepted. In H_{10}, the effect of perceived value on customer loyalty through customer satisfaction yielded a coefficient of 0.040, t-statistic of 0.874, and p-value of 0.382. As the p-value was <0.05 and the t-statistic was <1.96, this indicated that the indirect effect was not significant, and the hypothesis was rejected.

4.6 Discussion

The results of this study show that the digital customer experience does not significantly affect customer satisfaction. This study indicates that the digital experience perceived by Alfagift app users has not yet been able to tangibly improved customer satisfaction. This may be because customers prioritize successful transactions, on-time delivery, product availability, and price competitiveness over their experience when using the app. These findings align with Al-Anzahri et al. (2025), who found that digital experience does not always enhance customer satisfaction; however, they differ from the findings of Rahayu and Faulina (2022), who stated that digital customer experience has a positive effect on customer satisfaction. Theoretically, these findings suggest that the impact of digital experience on customer satisfaction is contextual and influenced by the characteristics of the digital services used. From a managerial perspective, Alfagift needs to improve the overall quality of its digital experience, not only through an attractive interface design but also by ensuring that transaction processes are smooth, fast, and free of obstacles.

The results of this study show that e-service quality positively and significantly affects customer satisfaction. This indicates that the better the quality of the electronic service provided by the Alfagift App, the higher the level of customer satisfaction. These findings are consistent with those of Nasution and Adiwijaya (2024) and Kunadi and Wuisan (2021), who stated that e-service quality is a key factor in increasing customer satisfaction. Theoretically, these findings reinforce the concept of e-service quality, which explains that customers will be satisfied when electronic services meet or even exceed their expectations (Al Firdaus & Rachmawati, 2024). From a managerial perspective, Alfagift needs to continue improving the stability of the application, speeding up system response times, enhancing transaction security, and ensuring that customer service is responsive so that customer satisfaction can continue to increase

Furthermore, perceived value has no significant effect on customer satisfaction. This finding indicates that customers' perceptions of the benefits gained from using the Alfagift app have not yet been able to directly increased satisfaction. This may occur because customers pay more attention to their actual experience while using the app rather than merely assessing the economic benefits. These results align with Noviyani and Viwattanakulvanid (2025) but differ from those of Putriana and Efrata (2026), who found that perceived value significantly influences customer satisfaction. Theoretically, these results indicate that perceived value is not always the primary factor shaping customer satisfaction with e-grocery services (Al Firdaus & Rachmawati, 2024). Therefore, from a managerial perspective, Alfagift must offer economic value through promotions and discounts and ensure that these benefits are accompanied by consistent service quality.

This indicates that the digital customer experience does not significantly affect customer loyalty. This study shows that the digital experience perceived by customers has not yet fostered loyalty among Alfagift app users. This suggests that customers still tend to consider other factors, such as price, promotions, ease of obtaining products, and service quality, when deciding whether to continue using the app. These findings differ from those of Rahayu and Faulina (2022) and Philo et al. (2025), who stated that the digital customer experience significantly affects customer loyalty. Theoretically, these results indicate that customer loyalty toward digital retail services is influenced not only by the digital experience but also by other functional factors (Al-Anzahri et al., 2025). The managerial implication is that Alfagift needs to improve the overall user experience, including the consistency of app performance and service quality, so that the digital experience can positively impact customer loyalty

This shows that e-service quality has a positive and significant effect on customer loyalty. This means that the better the quality of electronic services provided by the Alfagift app, the higher the customer loyalty. Customers are more likely to make repeat purchases, recommend the app to others, and continue using Alfagift if the app provides fast, secure, easy-to-use, and reliable services. This study is consistent with that (Nasution & Adiwijaya, 2024). The results of this study reinforce the concept that e-service quality is a key factor in building long-term relationships with customers. The managerial implication is that Alfagift needs to continue improving the quality of its app system, enhancing service speed, reducing system disruptions, and improving customer service quality to further strengthen user loyalty

This shows that perceived value has a positive and significant effect on customer loyalty. This finding indicates that customers who feel they receive greater benefits than the costs, time, or effort they expend are more likely to become loyal. A high perceived value can be created through competitive pricing, attractive promotions, loyalty programs, and other benefits that customers experience while using the Alfagift app. These results support the study by Citra and Sunaryanto (2026) but differ from the study by Noviyani and Viwattanakulvanid (2025), in which perceived value was found to have no effect on customer loyalty. Theoretically, these results reinforce customer value theory, which explains that the perception of benefits is one of the foundations of loyalty formation (Handriano, 2020). From a practical standpoint, Alfagift needs to maintain its promotional strategies and loyalty programs, as well as provide consistent benefits, so that customers continue to choose to use the app

The results indicate that customer satisfaction has a positive and significant effect on customer loyalty. This suggests that customers who are satisfied with Alfagift's services are more likely to make repeat purchases, recommend the app to others, and continue using it in the long term. This study aligns with (Tedjokusumo & Murhadi, 2023). Theoretically, the results of this study reinforce the Expectation Confirmation Theory, which explains that customer satisfaction arises when service performance meets or exceeds customer expectations, thereby fostering loyalty (Ningsih & Hurnis, 2023). From a managerial perspective, companies need to consistently maintain service quality to keep customer satisfaction levels high so that customer loyalty can be sustained

The results of the mediation analysis show that customer satisfaction does not mediate the relationship between the digital customer experience and customer loyalty. Furthermore, customer satisfaction does not mediate the relationship between perceived value and customer loyalty. This indicates that neither the digital experience nor the perceived value experienced by customers is strong enough to generate satisfaction, which ultimately enhances loyalty. However, H_9 confirmed a significant relationship between e-service quality and customer loyalty. This study demonstrates that e-service quality not only directly enhances loyalty but also increases customer satisfaction. Theoretically, this finding reinforces the role of customer satisfaction as a mediating variable in customer loyalty models, particularly in the context of digital retail services (Kunadi & Wuisan, 2021). From a managerial perspective, these results suggest that strategies to enhance customer loyalty should focus on improving the quality of electronic services, such as enhancing app stability, improving transaction security, expediting service processes, and providing a more reliable user experience, thereby increasing satisfaction while maintaining customer loyalty (Rezeki et al., 2023).

5. CONCLUSIONS

5.1 Conclusion

This study analyzes how digital customer experience, e-service quality, and perceived value influence customer loyalty, with customer satisfaction acting as a mediator, specifically regarding the Alfagift app in Lamongan. The study concludes that e-service quality is the most significant factor in enhancing customer satisfaction and loyalty among users of the Alfagift app in Lamongan Regency. The results show that e-service quality has a positive and significant effect on both customer satisfaction and customer loyalty, whereas perceived value has a positive and significant effect only on customer loyalty, but not on customer satisfaction. Meanwhile, digital customer experience does not significantly affect customer satisfaction or loyalty, indicating that users' digital experiences have not yet been able to directly enhance satisfaction and loyalty. This study also demonstrates that customer satisfaction has a positive and significant effect on customer loyalty and mediates the relationship between e-service quality and customer loyalty, but does not mediate the relationship between digital customer experience and perceived value and customer loyalty. Therefore, efforts to increase Alfagift's customer loyalty should focus on enhancing the quality of electronic services through a stable, user-friendly, fast, secure, responsive app that meets customer expectations, thereby increasing satisfaction while strengthening user loyalty.

5.2 Research Limitations

This study had several limitations. First, the study was conducted exclusively at Alfamart retail stores, which limits the generalizability of the findings to other retail stores in the country. Second, the study relied on a questionnaire survey, meaning that data were collected solely from respondents at a single point in time; therefore, this study does not fully capture digital customer experience, e-service quality, and perceived value in terms of their impact on customer satisfaction and loyalty over time.

5.3 Suggestions and Directions for Future Research

Future research should include a comparison with other retail stores, both state-owned and private. Such a comparative study can provide insights into customer experience, customers' perceptions of value, and how they perceive the digital quality they encounter in the modern era. Future researchers are encouraged to continue monitoring developments over time regarding customer satisfaction and loyalty, even by using different and comprehensive models.

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AUTHOR CONTRIBUTIONS

All authors contributed to the study's development and completion. RAHH contributed to the conceptualization, research design, data collection, data analysis, interpretation of results, and preparation of the initial manuscript draft. MNF contributed to the supervision, validation of the research methodology, critical review, and improvement of the manuscript. IWK contributed to data processing, literature review, manuscript refinement, and the visualization of research findings. All authors have read and approved the final version of the manuscript and have agreed to be accountable for all aspects of the study.

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