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# Digital Promotion and Customer Loyalty in Platform-Based Service Systems: The Role of Online Satisfaction

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**Abstract.** This study examines digital promotion as a signaling mechanism within digital commerce service systems and analyzes its influence on online customer satisfaction and customer loyalty. Conceptualizing digital promotion as a service-system coordination tool, the research investigates whether promotional activities enhance loyalty directly or operate through online customer satisfaction as an intervening mechanism. Data were collected from 216 consumers of Nuno Chocolate Wafers and analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). The findings reveal that digital promotion does not significantly influence online customer satisfaction, but it has a direct and significant effect on customer loyalty. Online customer satisfaction also significantly influences customer loyalty; however, it does not mediate the relationship between digital promotion and loyalty. These results suggest that within digital service environments, promotional activities function primarily as relational reinforcement signals rather than as satisfaction drivers. The study contributes to service science by clarifying the distinct structural roles of digital communication, experiential evaluation, and loyalty formation within digitally mediated service systems. Managerial implications highlight the need to align promotional strategies with service reliability and operational consistency to sustain long-term loyalty.

**Keywords**: digital promotion; online satisfaction; customer loyalty; digital service systems; service informatics; SEM-PLS

# 1. Introduction

The increasingly modern era requires traders to implement online sales. Online sales media are used to conduct product buying and selling, brand expansion, company development, creating switching costs for competitors, and strengthening gaining power, which are positive targets for customer loyalty (Nurhilalia & Saleh, 2024). Purchasing decisions can result in price competition from brands where most consumers, if there is a price change, tend to choose products with lower prices. Conversely, there are also some consumers who are loyal to brands that will remain preferred despite price changes. This is usually evidenced by low prices when compared to other products. In creating customer loyalty, consideration is taken into account from the digital promotions provided for the product. In addition, the emergence of customer loyalty is characterized by characteristics such as obtaining very high satisfaction when customers purchase products from a company at an economical price, then receiving feedback from customers whether the purchased product shows feelings of happiness or disappointment.

Based on Initial research found various phenomena that provide an overview of Nuno chocolate wafer customers. The way to create customer satisfaction online is to create a feeling of pleasure for customers who consume it, provide quality products, affordable prices according to customer needs, provide fast and accurate information and provide price reductions when making discounts on products, making customers satisfied and making purchases on Nuno chocolate wafers. In addition to choosing a good brand for Nuno chocolate wafers to the public, it is necessary to improve attitudes in customer satisfaction with a product brand, for example, responding to customer complaints quickly.

Customer disloyalty can be an impact caused by customers feeling disappointed with the price and taste of Nuno chocolate wafer products due to lack of stock availability and slow supply of goods to consumers, and not all people know about Nuno chocolate wafer products. Seeing the condition of customer disloyalty, the company can survive in competition with competitors Nuno chocolate wafers must be able to meet the desires and needs of the community by providing digital promotions and services for customers to maintain and increase sales of Nuno chocolate wafers. In addition, Nuno chocolate wafers must also be able to provide something unique to Nuno chocolate wafer products, not only chocolate flavors but also other flavor variants, such as Strawberry Nuno wafers so that customers feel satisfied with the product and do not switch to other products. Based on the background, the researcher tested the Effect of Digital Promotion on Customer Loyalty with Online Customer Satisfaction as an Intervening Variable on Nuno Chocolate Wafers.

# 2. Literature Review

## 2.1 Digital Promotion

Digital promotion is an effort to inform or offer a product or service with the aim of attracting potential consumers to buy or consume it. With digital promotion, producers or distributors expect an increase in sales figures. According to Laksana (2019), digital promotion is a communication between sellers and buyers that comes from accurate information that aims to change the attitudes and behavior of buyers, from those who were previously unfamiliar to those who knew so that they became buyers and still remember the product. Digital promotion is all forms of communication used to inform, persuade, and remind the target market about products produced by organizations, individuals or households. Digital promotion is an activity aimed at influencing consumers so that they can become familiar with the products offered by the company to them and then they become happy and then buy the product. Digital promotion is a marketing mix element that focuses on informing, persuading, and reminding consumers about a company's brands and products. According to Hermiyenti & Wardi (2019), promotion is important in introducing a product and also attracting consumer interest in purchasing the product. Because with digital promotion, consumers will be more familiar with the products produced by the company.

According to Ardisa et al. (2022), digital promotion is all forms of persuasive communication designed to inform customers about products or services and to influence them to purchase those goods or services including publicity, personal selling and advertising. Digital promotion is the application of digital technology that forms online channels to the market (such as websites, email, databases, and social media) to contribute to marketing activities aimed at gaining profits and retaining customers (Chaffey and Ellis-Chadwick, 2019). Digital promotion is a marketing activity that seeks to disseminate information, influence the target market of the company and its products so that they are willing to accept, purchase, and be loyal to the products offered by the company concerned. Digital promotion is a tool or activity used by companies to communicate customer value. Based on the definitions of the experts above, researchers conclude that digital promotion is a way to communicate the benefits of a product or service in order to gain consumer loyalty value and make consumers aware of a product or service. Digital promotion is a marketing activity including branding that uses various web-based media such as blogs, websites, email, AdWords, and the growing social media (Nurbakti et al., 2023).

## 2.2 Online Customer Satisfaction

Recently, it has been widely discussed that online customer satisfaction and dissatisfaction have increased in any business environment. This is because many companies produce similar products, customers have many choices and find it difficult to decide which product to purchase. Customer online satisfaction is determined by the quality of web design, which includes ease of use, information quality, and entertainment experienced when interacting with the platform. Customer satisfaction in the online shopping environment is significantly influenced by dimensions of website design, reliability, responsiveness, and trust in the digital platform (Vasic et al., 2019). According to Jaiswal & Singh (2020), online satisfaction is the result of ease of navigation combined with guaranteed transaction security and quality content relevant to user needs. Online customer satisfaction arises when the digital transaction process provides greater convenience and time savings compared to conventional transactions.

According to Priansa (2017), online customer satisfaction is a feeling of pleasure or disappointment experienced by someone based on a comparison between the reality obtained and the consumer's expectations. If the goods and services purchased by online consumers are in accordance with consumer expectations, the consumer is satisfied, and vice versa. Online customer satisfaction is a customer's comparison between all benefits and all costs incurred to receive a given offer. Total customer costs are a group of costs used in assessing, obtaining and using a product or service. Because online customer satisfaction is highly dependent on customer perceptions and expectations, then as a product supplier it is necessary to understand the factors that influence it. e-Satisfaction or online satisfaction is defined as customer satisfaction related to their previous purchasing experience at a particular electronic commerce (e-commerce) company (Bahari et al., 2021).

According to Fatihudin & Firmansyah (2019), online customer satisfaction is a benchmark for assessing the extent to which customers/users of a company's products feel happy/satisfied when consuming the product. Online satisfaction is a comprehensive perception of the online shopping experience that includes aspects of privacy, customer service, and site usability (Rehman et al., 2019). Online customer satisfaction is highly dependent on the reliability of the system in delivering products according to orders and the speed of digital complaint handling. According to Tzeng et al. (2021), online satisfaction is a customer's affective evaluation of website functionality that has a direct impact on repurchase intentions. Online satisfaction is influenced by system quality (technical) and service quality (human/admin), where satisfaction is the main bridge to e-loyalty (Fong et al., 2023). Online satisfaction is an emotional response that arises from the ease of the transaction process, the visual clarity of the platform, and the accuracy of the product information received (Rita et al., 2019).

## 2.3 Customer Loyalty

Customer loyalty is the main focus and is used in research as a variable that has a significant relationship with other variables, for this reason, the customer loyalty variable is currently widely studied. The ultimate goal of every company is to have many consumers and have a purchasing routine that then creates loyalty, called customer loyalty. This also becomes the growth of the company and certainly progress for Indonesia in supporting Indonesian products. According to Amar et al. (2021), the definition of customer loyalty is a manifestation of the fundamental human need to belong, support, feel safe, build attachments, and create emotional attachments. According to Morais (in Sangadji and Sopiah, 2013) said that customer loyalty is a customer's commitment to a brand, store, or supplier, based on a very positive attitude and reflected in consistent repeat purchases. Loyalty as a deep commitment to repurchase or re-subscribe to selected products or services consistently in the future (Mercadé-Melé et al., 2018).

According to Utama (2017), loyalty, or what can be said to be loyal, means being loyal to the product purchased. Loyalty is a consumer behavioral response where consumers make repeat purchases and feel satisfied with the products they consume, but where consumers feel loyal does not necessarily mean consumers feel satisfied. According to Zulkanain (2014), the definition of customer loyalty is consumer behavior where consumers make regular purchases over a long period of time for products from the company that produces the product. Tjiptono and Diana (2019), argue that customer loyalty, or what can be said to be customer loyalty, is a combination of two consumers where it is done directly between repeated purchases from the same company and the purchase of the company's products/services at various prices or price tolerances. Loyalty is a deeply held commitment to consistently purchase or support a preferred product or service in the future, thus causing repeated purchases of the same brand (Kotler and Keller, 2016).

Meanwhile, according to Gusty et al. (2025), customer loyalty is a customer's attachment to a brand, store, manufacturer, service provider, or other entity based on favorable attitudes and positive responses, such as repeat purchases. According to Gramer and Brown (Contini et al., 2020), the definition of customer loyalty is the degree to which a consumer exhibits repeat purchasing behavior, a positive attitude, and uses products from a brand in the long term. Based on the above definitions, researchers conclude that customer loyalty is consumer behavior that involves making regular purchases over a long period of time for products from the same company and purchasing the company's products at various prices or price tolerances. Customer loyalty is a customer's commitment to a brand, store, or supplier based on a very positive attitude and reflected in consistent repeat purchases. Customer loyalty is when a customer not only repurchases but also recommends the product to others. He divides the stages of loyalty into several levels, starting from first-time buyers to becoming brand advocates (Hasan & Liana, 2022).

# 3. Methodology

The type of data used in this study is quantitative data. According to Sugiyono (2017), quantitative research is a research method based on statistical data analysis with the aim of testing predetermined hypotheses. The population in this study were those who consumed Nuno chocolate wafers during September, October and November 2024. Therefore, sampling was based on the number of indicators, namely 27 x 8 = 216 people. The sampling technique used was simple random sampling, which means the process of taking samples with the same elements and opportunities then selected as samples (Sugiyono, 2017). The operational research variables that will be used in this study are the independent variable is digital promotion (X). The Mediating Variable in this study is customer satisfaction (Z) and the bound variable or said to be the dependent variable (Y) is online customer loyalty (Y). The data collection technique used a questionnaire and the answers to each indicator item used a Likert scale.

The data analysis method by conducting a validity and reliability test was carried out to see the feasibility of the questionnaire distributed to respondents whether it was appropriate or not. The validity and reliability test of the data was carried out on consumers purchasing Nuno chocolate wafers in Medan

as many as 216 people. In this study, the inferential statistical analysis used was Structural Equation Modeling (SEM) analysis using Smart PLS 4.0. Furthermore, the hypothesis test aims to test the proposed hypothesis based on the research model. The following is the research hypothesis H1: Digital promotions have an effect on Customer Satisfaction, H2: Digital promotions have an effect on online Customer Loyalty, H3: Online Customer Satisfaction has an effect on Customer Loyalty, and H4: Digital promotions have an effect on online Customer Loyalty through online Customer Satisfaction.

# 4. Result and Discussion

## 4.1 Respondents' Answer Analysis

The digital promotion variables include indicators for digital promotional messages, promotional media, digital promotional time, and digital promotional frequency. Answers were obtained from 216 respondents. The answers to the digital promotion variables can be seen in Table 1.

Table 1. Respondents' Answers to Digital Promotion Variables

| No | Questionnaire Items | SS | S | R | TS | STS | Mean | Category |
|---|---|---|---|---|---|---|---|---|
| | | F (%) | F (%) | F (%) | F (%) | F (%) | | |
| 1 | PT. ASW Foods experiences increased sales after implementing digital promotions | 7 (3,24) | 103 (47,69) | 97 (44,91) | 9 (4,17) | 0 (0,00) | 3,649 | Height |
| 2 | PT. ASW Foods provides digital promotions that consumers expect | 11 (5,09) | 101 (46,76) | 93 (43,06) | 11 (5,09) | 0 (0,00) | 3,650 | Height |
| 3 | PT. ASW Foods provides digital promotions across multiple stages | 8 (3,70) | 107 (49,54) | 91 (42,13) | 10 (4,63) | 0 (0,00) | 3,658 | Height |
| 4 | PT. ASW Foods provides digital promotions across multiple stages, not just one product Providing | 9 (4,17) | 104 (48,15) | 94 (43,52) | 9 (4,17) | 0 (0,00) | 3,667 | Height |
| 5 | PT. ASW Foods delivers digital promotions on social media | 18 (8,33) | 102 (47,22) | 90 (41,67) | 6 (2,78) | 0 (0,00) | 3,724 | Height |
| 6 | PT. ASW Foods implements digital promotions across multiple areas | 11 (5,09) | 101 (46,76) | 101 (46,76) | 3 (1,39) | 0 (0,00) | 3,675 | Height |
| 7 | PT. ASW Foods also provides digital promotions in traditional markets | 9 (4,17) | 107 (49,54) | 91 (42,13) | 9 (4,17) | 0 (0,00) | 3,669 | Height |
| 8 | PT. ASW Foods implements digital promotions at the right time (weekends) | 10 (4,63) | 108 (50,00) | 92 (42,59) | 6 (2,78) | 0 (0,00) | 3,679 | Height |
| 9 | PT. ASW Foods provides providing providing | 10 (4,63) | 101 (46,76) | 96 (44,44) | 9 (4,17) | 0 (0,00) | 3,645 | Height |
| 10 | PT. ASW Foods provides digital promotions across multiple regular products | 6 (2,78) | 104 (48,15) | 100 (46,30) | 6 (2,78) | 0 (0,00) | 3,653 | Height |

Source: Primary Data (Processed), 2025

Based on Table 1 above, it is known that:

a. Frequency analysis of respondents' responses to the first statement ("PT. ASW Foods experienced an increase in sales after implementing digital promotions") shows an average response of 3.649 (High). This indicates that PT. ASW Foods experienced a significant increase in sales after implementing digital promotions.
b. Frequency analysis of respondents' responses to the second statement ("PT. ASW Foods provides the digital promotions consumers expect") shows an average response of 3.650 (High). This indicates that PT. ASW Foods provides the digital promotions consumers expect.
c. Frequency analysis of respondents' responses to the third statement ("PT. ASW Foods provides more than one stage of digital promotions") shows an average response of 3.658 (High). This

indicates that PT. ASW Foods provides more than one stage of digital promotions.

d. A frequency analysis of respondents' responses to the fourth statement ("PT. ASW Foods provides digital promotions for more than one product") showed an average response of 3.667 (High). This indicates that PT. ASW Foods provides digital promotions for more than one product, a high level of effectiveness.
e. A frequency analysis of respondents' responses to the fifth statement ("PT. ASW Foods provides digital promotions on social media") showed an average response of 3.724 (High). This indicates that PT. ASW Foods provides digital promotions on social media, a high level of effectiveness.
f. A frequency analysis of respondents' responses to the sixth statement ("PT. ASW Foods provides digital promotions in more than one area") showed an average response of 3.675 (High). This indicates that PT. ASW Foods provides digital promotions in more than one area, a high level of effectiveness.
g. A frequency analysis of respondents' responses to the seventh statement ("PT. ASW Foods also provides digital promotions in traditional markets") showed an average response of 3.669 (High). This concludes that PT. ASW Foods also provides promotions in traditional markets, which is high.
h. Frequency analysis of respondents' responses to the eighth statement ("PT. ASW Foods conducts digital promotions at the right time/weekends") shows an average response of 3.679 (High). This concludes that PT. ASW Foods conducts digital promotions at the right time (weekends) is high.
i. Frequency analysis of respondents' responses to the ninth statement ("PT. ASW Foods provides the next digital promotion after the previous promotion is completed") shows an average response of 3.645 (High). This concludes that PT. ASW Foods provides the next digital promotion after the previous promotion is completed is high.
j. Frequency analysis of respondents' responses to the tenth statement ("PT. ASW Foods provides digital promotions not only for regular products") shows an average response of 3.653 (High). This concludes that PT. ASW Foods provides digital promotions not only for regular products, which is high.

Furthermore, the online customer satisfaction variable includes indicators of expectation, performance, comparison, experience, and confirmation. Answers were obtained from 216 respondents. The answers to the online customer satisfaction variable can be seen in Table 2.

Table 2. Respondents' Answers to Online Customer Satisfaction Variables

| No | Questionnaire Items | SS | S | R | TS | STS | Mean | Category |
|---|---|---|---|---|---|---|---|---|
| | | F (%) | F (%) | F (%) | F (%) | F (%) | | |
| 1 | The price of Nuno Chocolate Wafers is according to the taste and portion of food you get. | 10 (4,63) | 97 (44,91) | 101 (46,76) | 8 (3,70) | 0 (0,00) | 3,614 | Height |
| 2 | Nuno Chocolate Wafer packaging is clean, neat and attracts customers' attention. | 9 (4,17) | 97 (44,91) | 100 (46,30) | 10 (4,63) | 0 (0,00) | 3,601 | Height |
| 3 | Friendly, responsive and satisfying service | 5 (2,31) | 107 (49,54) | 102 (47,22) | 2 (0,93) | 0 (0,00) | 3,628 | Height |
| 4 | PT. ASW produces products with ISO standards. | 5 (2,31) | 99 (45,83) | 109 (50,46) | 3 (1,39) | 0 (0,00) | 3,613 | Height |
| 5 | Consumers will not compare the prices of ASW products to competitors' products. | 2 (0,93) | 97 (44,91) | 111 (51,39) | 6 (2,78) | 0 (0,00) | 3,573 | Height |
| 6 | The wafer products produced by PT. ASW Foods are always delicious and leave a lasting impression on the consumer. | 6 (2,78) | 98 (45,37) | 107 (49,54) | 5 (2,31) | 0 (0,00) | 3,607 | Height |
| 7 | Consumers have a positive experience with ASW products | 8 (3,70) | 101 (46,76) | 100 (46,30) | 7 (3,24) | 0 (0,00) | 3,620 | Height |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | PT. ASW Foods always carries out CSR to the surrounding environment. | 6 (2,78) | 99 (45,83) | 107 (49,54) | 4 (1,85) | 0 (0,00) | 3,607 | Height |
| 9 | The actual/physical appearance of Nuno Chocolate Wafers is in accordance with consumer expectations. | 6 (2,78) | 97 (44,91) | 111 (51,39) | 2 (0,93) | 0 (0,00) | 3,493 | Height |
| 10 | Nuno Chocolate Wafers are loved by all levels of society. | 3 (1,39) | 105 (48,61) | 103 (47,69) | 5 (2,31) | 0 (0,00) | 3,504 | Height |

Source: Primary Data (Processed), 2025

Based on Table 2 above, it is known that:

a. Frequency analysis of respondents' responses to the first statement ("The price of Nuno Chocolate Wafers is commensurate with the taste and portion size") showed an average response of 3.614 (High). This indicates that the price of Nuno Chocolate Wafers is commensurate with the taste and portion size.
b. Frequency analysis of respondents' responses to the second statement ("The packaging of Nuno Chocolate Wafers is clean, neat, and attractive to customers") showed an average response of 3.601 (High). This indicates that the packaging of Nuno Chocolate Wafers is clean, neat, and attractive to customers is high.
c. Frequency analysis of respondents' responses to the third statement ("Friendly, prompt, and satisfactory service") showed an average response of 3.628 (High). This indicates that friendly, prompt, and satisfactory service is high.
d. Frequency analysis of respondents' responses to the fourth statement ("PT. ASW produces products according to ISO standards") showed an average response of 3.613 (High). This indicates that PT. ASW produces products to ISO standards, which is high.
e. Frequency analysis of respondents' responses to the fifth statement ("Consumers will not compare ASW product prices with competitors' products") shows an average response of 3.573 (High). This indicates that consumers will not compare ASW product prices with competitors' products, which is high.
f. Frequency analysis of respondents' responses to the sixth statement ("Wafer products produced by PT. ASW Foods are always delicious and leave a lasting impression upon consumption") shows an average response of 3.607 (High). This indicates that wafer products produced by PT. ASW Foods are always delicious and leave a lasting impression upon consumption, which is high.
g. Frequency analysis of respondents' responses to the seventh statement ("Consumers have a positive experience with ASW products") shows an average response of 3.620 (High). This indicates that consumers have a positive experience with ASW products, which is high.
h. A requency analysis of respondents' responses to the eighth statement ("PT. ASW Foods always carries out CSR activities in the surrounding environment") showed an average response of 3.607 (High). This indicates that PT. ASW Foods always carries out CSR activities in the surrounding environment.
i. A frequency analysis of respondents' responses to the ninth statement ("The actual/physical appearance of Nuno Chocolate Wafers meets consumer expectations") showed an average response of 3.493 (High). This indicates that the actual/physical appearance of Nuno Chocolate Wafers meets consumer expectations.
j. A frequency analysis of respondents' responses to the tenth statement ("Nuno Chocolate Wafers are liked by all levels of society") showed an average response of 3.504 (High). This indicates that the popularity of Nuno Chocolate Wafers is high.

Furthermore, the customer loyalty variable includes indicators such as making routine purchases, making purchases from all distributors, recommending the product to other customers, and not

switching to other products/competitors. Answers were obtained from 216 respondents. The answers to the customer loyalty variable can be seen in Table 3.

Table 3. Respondents' Answers to Customer Loyalty Variables

| No | Questionnaire Items | SS | S | R | TS | STS | Mean | Category |
|---|---|---|---|---|---|---|---|---|
| | | F (%) | F (%) | F (%) | F (%) | F (%) | | |
| 1 | Besides buying Nuno Chocolate Wafers, I also bought other ASW products. | 1 (0,46) | 111 (51,39) | 103 (47,69) | 1 (0,46) | 0 (0,00) | 3,628 | Height |
| 2 | In a week, I buy Nuno Chocolate Wafers five times | 0 (0,00) | 103 (47,69) | 112 (51,85) | 1 (0,46) | 0 (0,00) | 3,617 | Height |
| 3 | Consumers will buy Nuno Chocolate Wafers at all distributors | 1 (0,46) | 102 (47,22) | 111 (51,39) | 2 (0,93) | 0 (0,00) | 3,613 | Height |
| 4 | Besides buying Nuno Chocolate Wafers, I also bought other ASW products at the Traditional Market. | 2 (0,93) | 104 (48,15) | 107 (49,54) | 3 (1,39) | 0 (0,00) | 3,474 | Height |
| 5 | Consumers recommend others to buy Nuno Chocolate Wafers | 2 (0,93) | 103 (47,69) | 109 (50,46) | 2 (0,93) | 0 (0,00) | 3,497 | Height |
| 6 | Besides recommending Nuno Chocolate Wafers, I also recommend other PT. ASW Foods products to others. | 0 (0,00) | 52 (24,07) | 141 (65,28) | 23 (10,65) | 0 (0,00) | 3,130 | Enough |
| 7 | Consumers recommend ASW products to their families | 0 (0,00) | 51 (23,61) | 150 (69,44) | 15 (6,94) | 0 (0,00) | 3,154 | Enough |
| 8 | Consumers rarely switch to other Wafers | 1 (0,46) | 63 (29,37) | 136 (62,96) | 16 (7,41) | 0 (0,00) | 3,166 | Enough |
| 9 | Every time consumers want to consume wafers, they will buy PT. ASW Foods products. | 1 (0,46) | 52 (24,07) | 138 (63,89) | 25 (11,57) | 0 (0,00) | 3,153 | Enough |
| 10 | Nuno Chocolate Wafers are always consumed by consumers | 0 (0,00) | 56 (25,93) | 140 (64,81) | 20 (9,26) | 0 (0,00) | 3,166 | Enough |

Source: Primary Data (Processed), 2025

Based on Table 3 above, it is known that:

a. Frequency analysis of respondents' responses to the first statement ("In addition to buying Nuno Chocolate Wafers, I also buy other ASW products") shows an average response of 3.628 (High). This indicates that in addition to buying Nuno Chocolate Wafers, I also buy other ASW products, which is high.
b. Frequency analysis of respondents' responses to the second statement ("In a week, I buy Nuno Chocolate Wafers five times") shows an average response of 3.617 (High). This indicates that in a week, I buy Nuno Chocolate Wafers five times, which is high.
c. Frequency analysis of respondents' responses to the third statement ("Consumers will buy Nuno Chocolate Wafers from all distributors") shows an average response of 3.613 (High). This indicates that consumers will buy Nuno Chocolate Wafers from all distributors, which is high.
d. A frequency analysis of respondents' responses to the fourth statement ("In addition to buying Nuno Chocolate Wafers, I also buy other ASW products at the Traditional Market") showed an average response of 3.474 (High). This indicates that in addition to buying Nuno Chocolate Wafers, I also buy other ASW products at the Traditional Market, a high level.
e. A frequency analysis of respondents' responses to the fifth statement ("Consumers recommend others to buy Nuno Chocolate Wafers") showed an average response of 3.497 (High). This indicates that consumers recommend others to buy Nuno Chocolate Wafers.
f. A frequency analysis of respondents' responses to the sixth statement ("In addition to recommending Nuno Chocolate Wafers, I also recommend other PT. ASW Foods products to

others") showed an average response of 3.140 (Fair). This indicates that in addition to recommending Nuno Chocolate Wafers, I also recommend other PT. ASW Foods products to others, a moderate level.

g. A frequency analysis of respondents' responses to the seventh statement ("Consumers recommend ASW products to their families") showed an average response of 3.154 (Sufficient). This indicates that consumers recommend ASW products to their families.
h. A frequency analysis of respondents' responses to the eighth statement ("Consumers rarely switch to other wafers") showed an average response of 3.166 (Sufficient). This indicates that consumers rarely switch to other wafers, which is sufficient.
i. A frequency analysis of respondents' responses to the ninth statement ("Every time they want to consume wafers, consumers will buy PT. ASW Foods products") showed an average response of 3.153 (Sufficient). This indicates that every time they want to consume wafers, consumers will buy PT. ASW Foods products, which is sufficient.
j. A frequency analysis of respondents' responses to the tenth statement ("Consumers always consume Nuno Chocolate Wafers") showed an average response of 3.166 (Sufficient). This indicates that consumers always consume Nuno Chocolate Wafers, which is sufficient.

## 4.2 Descriptive Statistical Analysis

Based on the collected data, respondents' answers were summarized as a data analysis tool. The results of the descriptive statistics research for the research variables are presented in Table 4 below:

Table 4. Descriptive Statistical Data

| Variables | N | Mean | Median | Min | Max | Std Dev |
|---|---|---|---|---|---|---|
| Digital Promotion (X) | 216 | 3,66 | 3,76 | 2,58 | 4,81 | 0,56 |
| Online Customer Satisfaction (Z) | 216 | 3,59 | 3,61 | 2,59 | 4,83 | 0,50 |
| Customer Loyalty (Y) | 216 | 3,36 | 3,39 | 2,35 | 4,39 | 0,38 |

Processed data source: 2025

The results in Table 4 above indicate that the N value, or the number of data points to be studied, was 216 samples. Digital promotion had a mean of 3.67. The maximum value was 4.81 for 166 respondents, and the minimum value was 2.58 for 161 respondents, with a standard deviation of 0.56. This means that the maximum average increase in the digital promotion variable was +0.56, while the maximum average decrease was -0.56. The mean value of 3.67, which is higher than the standard deviation of 0.56, indicates that the mean can be used as a representation of the overall data.

Online Customer Satisfaction has a mean or average value of 3.59. The maximum value of 4.83 is found in respondents 55 and the minimum value of 2.59 is found in respondents 175 with a standard deviation of 0.50 which means that the maximum increase in the average of the online customer satisfaction variable is +0.50, while the maximum decrease in the average of the online customer satisfaction variable is -0.50. With an average value of 3.59 which is higher than the standard deviation of 0.50, it shows that the average value can be used as a representation of the entire data.

Customer Loyalty has a mean or average value of 3.36. The maximum value of 4.39 is found in respondent 181 and the minimum value of 2.35 is found in respondent 111 with a standard deviation of 0.38 which means that the maximum increase in the average customer loyalty variable is +0.38, while the maximum decrease in the average customer loyalty variable is -0.38. With an average value of 3.36 which is higher than the standard deviation of 0.38, it shows that the average value can be used as a representation of the entire data.

## 4.3 Inferential Statistical Analysis

To analyze the data, Smart Partial Least Square (Smart PLS) and manual calculations were used for simultaneous testing (f-test). The SEM-PLS testing stage was carried out in two steps. The first step is to examine the validity and reliability of the measuring instrument as manifested by the collected data,

and the next stage is data analysis in accordance with the proposed hypothesis. Briefly, the evaluation in Smart PLS consists of evaluating the outer model (measurement model) and evaluating the inner model (structural model). If the indicators of each dimension are reliable, the research can be said to be accepted. An acceptable loading factor value is greater than 0.70.

## 4.4 Validity and Reliability Testing (Outer Model)

### *4.4.1. Convergent validity*

Convergent validity aims to determine the extent to which the values generated by each indicator are positively correlated with other indicators. Convergent validity is related to the principle that the measures (manifest variables) of a construct should be highly correlated. The convergent validity of a measurement model with reflective indicators is assessed based on the correlation between item scores or component scores and latent variable scores or construct scores estimated using the PLS program. The requirement for passing the factor loading test is greater than 0.7 (Ghozali, 2021). The following table shows the factor loading values of 61 statement items calculated from the SEM PLS model:

Table 5. Outer Loading Factor

| | Digital Promotion | Online Customer Satisfaction | Customer Loyalty |
|---|---|---|---|
| Digital Promotion_1 | 0,922 | | |
| Digital Promotion_2 | 0,898 | | |
| Digital Promotion_3 | 0,921 | | |
| Digital Promotion_4 | 0,906 | | |
| Digital Promotion_5 | 0,859 | | |
| Digital Promotion_6 | 0,912 | | |
| Digital Promotion_7 | 0,921 | | |
| Digital Promotion_8 | 0,905 | | |
| Digital Promotion_9 | 0,926 | | |
| Digital Promotion_10 | 0,924 | | |
| Customer Satisfaction_ 1 | | 0,885 | |
| Online Customer Satisfaction_ 2 | | 0,894 | |
| Online Customer Satisfaction_ 3 | | 0,905 | |
| Online Customer Satisfaction_ 4 | | 0,903 | |
| Online Customer Satisfaction_ 5 | | 0,890 | |
| Online Customer Satisfaction_ 6 | | 0,897 | |
| Online Customer Satisfaction_ 7 | | 0,885 | |
| Online Customer Satisfaction_ 8 | | 0,910 | |
| Online Customer Satisfaction_ 9 | | 0,919 | |
| Online Customer Satisfaction_ 10 | | 0,929 | |
| Customer Loyalty_1 | | | 0,781 |
| Customer Loyalty _2 | | | 0,735 |
| Customer Loyalty _3 | | | 0,758 |
| Customer Loyalty _4 | | | 0,818 |
| Customer Loyalty _5 | | | 0,837 |
| Customer Loyalty _6 | | | 0,882 |
| Customer Loyalty _7 | | | 0,903 |
| Customer Loyalty _8 | | | 0,869 |
| Customer Loyalty _9 | | | 0,867 |
| Customer Loyalty _10 | | | 0,881 |

Source: Data processing with SmartPLS, 2025

The analysis results in Table 5 show that 10 statements from the Digital Promotion variable, 10 statements from the Online Customer Satisfaction variable, and 10 statements from the Customer Loyalty variable yield valid loading factor values > 0.70, thus all indicators can be concluded as valid (having significant validity). After passing the convergent validity test, the next step is to examine the Average Variance Extracted (AVE) value. The Average Variance Extracted (AVE) value is considered to have passed the test if the Average Variance Extracted (AVE) value is greater than 0.5 (Ghozali, 2021). The SmartPLS output shows the Average Variance Extracted (AVE) value as follows:

Table 6. Average Variance Extracted (AVE)

| | Cronbach's alpha | Average variance extracted (AVE) |
|---|---|---|
| Digital Promotion | 0,977 | 0,827 |
| Online Customer Satisfaction | 0,974 | 0,813 |
| Customer Loyalty | 0,951 | 0,697 |

Source: Data processing with SmartPLS, 2025

The AVE analysis results in Table 6 show that all indicators have AVE values above 0.50. The Digital Promotion variable has a value of 0.827, the Online Customer Satisfaction variable has a value of 0.813, and the Customer Loyalty variable has a value of 0.697. Therefore, it can be concluded that the convergent validity of all indicators has met the requirements and the indicators are valid.

Table 7. Heterotraid-Homototraid (HTMT)

| | Digital Promotion | Online Customer Satisfaction | Customer satisfaction |
|---|---|---|---|
| Digital Promotion | | 0,061 | 0,142 |
| Online Customer Satisfaction | | | |
| Customer Loyalty | | 0,946 | |

Source: Data processing with SmartPLS, 2025

Table 7 from SmartPLS shows that the Heterotraid-Homototraid (HTMT) value for one pair of variables failed the discriminant test because the value was >0.9, namely Online Customer Satisfaction - Customer Loyalty (0.946). Meanwhile, the other variables passed the discriminant test because they showed values below 0.90. Thus, the discriminant validity test was successful, and all indicators were declared valid.

### *4.4.2 Composite Reliability and Cronbach's Alpha*

In addition to assessing convergent validity and discriminant validity, the outer model can also be assessed by examining the reliability of variables or latent variables, which is measured by examining the composite reliability value of the indicator block that measures the variable. The requirement to pass the composite reliability and Cronbach's alpha tests is to see test results with a minimum value of 0.7 or above (Ghozali, 2021). The PLS output results for the composite reliability and Cronbach's alpha values can be seen in the following table:

Table 8. Composite Reliability and Cronbach's Alpha

| | Cronbach's alpha | Composite reliability (rho_a) | Composite reliability (rho_c) | Average variance extracted (AVE) |
|---|---|---|---|---|
| Digital Promotion | 0,977 | 0,984 | 0,980 | 0,827 |
| Online Customer Satisfaction | 0,974 | 0,975 | 0,978 | 0,813 |
| Customer Loyalty | 0,951 | 0,953 | 0,958 | 0,697 |

Source: Data processing with SmartPLS, 2025

Table 8 shows the following Composite Reliability and Cronbach's Alpha results:

a. The Digital Promotion variable has a Cronbach's alpha value of 0.977 and a composite reliability (*rho_c*) of 0.980.

b. The Online Customer Satisfaction variable has a Cronbach's alpha value of 0.974 and a composite reliability (*rho_c*) of 0.978.
c. The Customer Loyalty variable has a Cronbach's alpha value of 0.951 and a composite reliability *(rho_c*) of 0.958.

From the description above, it can be concluded that all variables have Cronbach's alpha and composite reliability values above 0.7, indicating that all variables are reliable. According to Wold (in Ghozali, 2021), PLS is a powerful analytical method and is often referred to as soft modeling because it eliminates the assumptions of OLS (Ordinary Least Squares) regression, such as the data being normally distributed multivariately and the absence of multicollinearity problems between exogenous variables. In this case, the Outer Model, namely Validity and Reliability, has passed the test, so the research can proceed directly to the evaluation of the structural model (Inner Model).

Table 9. Summary of Measurement Model Results

| Variables | Indicator | Loading Factor | Composite Reliability | AVE | Discriminant Validity |
|---|---|---|---|---|---|
| Digital Promotion | Digital Promotion 1 | 0,922 | 0,980 | 0,827 | Fulfil |
| | Digital Promotion 2 | 0,898 | | | |
| | Digital Promotion 3 | 0,921 | | | |
| | Digital Promotion 4 | 0,906 | | | |
| | Digital Promotion 5 | 0,859 | | | |
| | Digital Promotion 6 | 0,912 | | | |
| | Digital Promotion 7 | 0,921 | | | |
| | Digital Promotion 8 | 0,905 | | | |
| | Digital Promotion 9 | 0,926 | | | |
| | Digital Promotion 10 | 0,924 | | | |
| Customer satisfaction | Online Customer Satisfaction 1 | 0,885 | 0,978 | 0,813 | Fulfil |
| | Online Customer Satisfaction 2 | 0,894 | | | |
| | Online Customer Satisfaction 3 | 0,905 | | | |
| | Online Customer Satisfaction 4 | 0,903 | | | |
| | Online Customer Satisfaction 5 | 0,890 | | | |
| | Online Customer Satisfaction 6 | 0,897 | | | |
| | Online Customer Satisfaction 7 | 0,885 | | | |
| | Online Customer Satisfaction 8 | 0,910 | | | |
| | Online Customer Satisfaction 9 | 0,919 | | | |
| | Online Customer Satisfaction 10 | 0,929 | | | |
| Customer Loyalty | Customer Loyalty 1 | 0,781 | 0,958 | 0,697 | Fulfil |
| | Customer Loyalty 2 | 0,735 | | | |
| | Customer Loyalty 3 | 0,758 | | | |
| | Customer Loyalty 4 | 0,818 | | | |
| | Customer Loyalty 5 | 0,837 | | | |
| | Customer Loyalty 6 | 0,882 | | | |
| | Customer Loyalty 7 | 0,903 | | | |
| | Customer Loyalty 8 | 0,869 | | | |
| | Customer Loyalty 9 | 0,867 | | | |
| | Customer Loyalty 10 | 0,881 | | | |

Source: Data processing with SmartPLS, 2025

## 4.5 Structural Model Testing (Inner Model)

After the measurement evaluation is fulfilled, an evaluation of the structural model is carried out by looking at R-square, F-square, $Q^2$ predictive relevance and see the significance of the influence by looking at the Path Coefficients, the significance value of the t statistics and *P* Values as well as the results of the significance of the indirect influence.

### *4.5.1 R Square value*

According to (Santosa, 2018), the value $R^2$ ranges from 0 to 1 with values approaching 1 indicating greater prediction accuracy. $R^2$ values of 0.75, 0.50, and 0.25 indicate strong, moderate, and weak models, respectively, according to Hair et al., while according to Chin, the $R^2$ values are $R^2$ 0.67, 0.33 and 0.29, it can be concluded that the model is strong, moderate, and weak (Ghozali, 2021). Testing the structural model by looking at the R-square, the SmartPLS output results using SEM-PLS are as follows:

Table 10. R-square

| | R-square | R-square adjusted |
|---|---|---|
| Online Customer Satisfaction | 0,934 | 0,933 |
| Customer Loyalty | 0,933 | 0,931 |

Source: Data processing with SmartPLS, 2025

Results of the R-square analysis show:

1. The R-square value for the Online Customer Satisfaction variable is 0.934. This result indicates that 93.4% of the Online Customer Satisfaction variable is influenced by digital promotions. Meanwhile, 6.6% is influenced by other variables not examined.
2. The R-square value for the Customer Loyalty variable is 0.933. This result indicates that 93.3% of the Customer Loyalty variable is influenced by digital promotions. Meanwhile, 6.7% is influenced by other variables not examined.

### *4.5.2 Influence Size $f^2$*

The aim is to determine the size of the influence $f^2$ is to determine the magnitude of the influence of an exogenous variable on the related endogenous variable. According to Cohen in (Santosa, 2018), the value $f^2$ 0.02, 0.15, 0.35 shows weak, medium and large models. The following are the results of the calculation of the influence size $f^2$ through SEM-PLS:

Table 11. F-square

| | Digital Promotion | Online Customer Satisfaction | Customer Loyalty |
|---|---|---|---|
| Digital Promotion | | 0,000 | 0,081 |
| Online Customer Satisfaction | | | 0,166 |
| Customer Loyalty | | | |

Source: Data processing with SmartPLS, 2025

The results of the F-Square analysis from SEM-PLS show that:

1. The Digital Promotion variable (X) has a very weak effect on the Online Customer Satisfaction variable (Z) of 0.000 because the value is <0.02, and a weak effect on the Customer Loyalty variable (Y) of 0.081 because the value is <0.15.
2. The Online Customer Satisfaction variable (Z) has a medium effect on the Customer Loyalty variable (Y) of 0.166 because the value is <0.35.

### *4.5.3 $Q^2$ predictive relevance (Predictive Sample Reuse)*

$Q^2$ predictive relevance (Predictive Sample Reuse*)* to measure how well the observed values are generated and also the parameter estimates. $Q^2 > 0$ shows that the model has predictive relevance. Conversely, if the value $Q^2 \leq 0$ shows that the model lacks predictive relevance. The following are the calculation results $Q^2$ with blindfolding of SEM-PLS:

Table 12. $Q^2$ predictive relevance

| | SSO | SSE | $Q^2$ (=1-SSE/SSO) |
|---|---|---|---|
| Digital Promotion | 2160,000 | 2160,000 | 0,000 |
| Online Customer Satisfaction | 2160,000 | 533,003 | 0,753 |
| Customer Loyalty | 2160,000 | 777,112 | 0,640 |

Source: Data processing with SmartPLS, 2025

The calculation results show that the $Q^2$ value for the online Customer Satisfaction variable is 0.753 and the Customer Loyalty variable is 0.640. The blindfolding $Q^2$ value is greater than zero, thus concluding that this study has a good observation value because the $Q^2$-square values are >0 (zero), namely 0.687, 0.753, and 0.640 (Ghozali, 2021).

### *4.5.4 Hypothesis Testing*

Hypothesis testing essentially shows the extent of the direct and indirect influence of an exogenous variable on an endogenous variable. This analysis is performed by comparing the T-table value with the T-statistics value generated from bootstrapping results in PLS. The hypothesis is accepted if the T-statistics value is higher than the T-table (1.96) with a significance level of 5% or seeing P-*value* $\alpha$=5%, p-val=0,05% (Ghozali, 2021) and the calculation of f (simultaneous) of variable X on variable Y directly or indirectly. If the calculated F value is greater than the F table value, then the resulting effect is significant. Testing the direct effect using SmartPLS, namely using path coefficients with bootstrapping, obtained the following path analysis results:

Table 13. Path Coefficients and Specific Indirect Effects

| | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics (\|O/STDEV\|) | P values | Conclusion |
|---|---|---|---|---|---|---|
| Digital Promotion -> Online Customer Satisfaction | -0,008 | -0,008 | 0,028 | 0,288 | 0,773 | Rejected |
| Digital Promotion -> Customer Loyalty | 0,111 | 0,112 | 0,025 | 4,421 | 0,000 | Accepted |
| Online Customer Satisfaction -> Customer Loyalty | 0,412 | 0,412 | 0,070 | 5,861 | 0,000 | Accepted |
| Digital Promotion -> Online Customer Satisfaction -> Customer Loyalty | -0,003 | -0,003 | 0,012 | 0,282 | 0,778 | Rejected |

Source: Data processing with SmartPLS, 2025

Hypothesis testing in SmartPLS also examines the P-values. If the P-value is <0.05, it is accepted. Conclusions from the path coefficients based on the values in Table 13 include:

1. The effect of the Digital Promotion variable on the Online Customer Satisfaction variable. T-statistic = 0.288 <1.96 and P-value 0.773 >0.05, indicating that the Digital Promotion variable (X) has no significant effect on the Online Customer Satisfaction variable (Z), therefore the hypothesis is rejected.
2. The effect of the Digital Promotion variable on the Customer Loyalty variable. T-statistic = 4.421 >1.96 and P-value 0.000 <0.05, indicating that the Promotion variable (X) has a significant effect on the Customer Loyalty variable (Y), therefore the hypothesis is accepted.
3. The effect of the Online Customer Satisfaction variable on the Customer Loyalty variable. T-statistics = 5.861 > 1.96 and P-values 0.000 < 0.05, meaning that the online Customer Satisfaction variable (Z) has a significant effect on the Customer Loyalty variable (Y), so the hypothesis is accepted.
4. The effect of the digital promotion variable on the Customer Loyalty variable through the online Customer Satisfaction variable. T-statistics = 0.282 < 1.96 and P-values 0.778 > 0.05, meaning that the digital promotion variable (X) has no significant effect on the Customer Loyalty variable (Y) through the online Customer Satisfaction variable (Z), so the hypothesis is rejected.

## 5. Discussion

The results of this study indicate that digital promotion does not have a significant effect on online customer satisfaction, with a T-statistic test result of 0.288 (<1.96) and a P-value of 0.773 (>0.05). Thus,

the H1 hypothesis is rejected. This indicates that digital promotion is one of the main components in the marketing mix that aims to introduce products, attract consumer attention and encourage online purchasing decisions. In the marketing context, promotions can take the form of advertising, discounts, direct prizes, sponsorships, social media promotions, or loyalty programs. Although digital promotion has a strategic role in expanding market reach and increasing sales volume, several studies have shown that promotion does not always have a significant impact on online customer satisfaction. Tjiptono (2020) stated that digital promotion only creates initial interest, while satisfaction is formed from the match between expectations and perceptions of the product's real benefits.

Thus, intensive digital promotions without being balanced with good quality and service will not be enough to build online customer satisfaction (Hanly et al., 2025). In many cases, consumers are more critical of digital promotions that are deemed excessive or misleading, so digital promotions can actually trigger disappointment if expectations are not met. Research by Jermsittiparsert et al. (2020) shows that promotions have no significant impact on online customer satisfaction if the service or product quality is still low. This is reinforced by the findings of Pratama and Setiawan (2021), who stated that customers tend to focus their assessments on post-purchase experiences and service reliability rather than on the digital promotions they received previously.

In accordance with the results of the hypothesis test which shows that digital promotions do not have a significant effect on online customer satisfaction, it can be concluded that consumer perceptions of the digital promotion of Nuno chocolate wafers are not yet strong enough to create a sense of satisfaction. This indicates that even though the company has carried out various digital promotional activities, consumers do not necessarily feel satisfied simply because of the digital promotional offers or programs provided. Online customer satisfaction is more influenced by other factors such as product quality, taste, brand reliability, and the overall consumption experience. Thus, digital promotions need to be integrated with improving product and service quality to be able to provide real value and contribute to online customer satisfaction in a sustainable manner.

Furthermore, the results of this study indicate that digital promotion has a significant effect on customer loyalty, with the T-statistics test result of 4.421 (> 1.96) and P-values of 0.000 (< 0.05). Thus, the H2 hypothesis is accepted. Promotion is one of the main instruments in the marketing mix (4P) which functions to convey information, influence attitudes, and encourage consumer purchasing decisions. In relation to customer loyalty, digital promotion has an important role in forming long-term relationships between customers and companies. When a digital promotion strategy is well designed through discounts, loyalty programs, bundling, giving gifts, and social media campaigns, customers are not only encouraged to make initial purchases, but also feel appreciated and cared for, which ultimately strengthens emotional attachment and loyalty to the brand.

Theoretically, the influence of digital promotions on customer loyalty can be explained through a relationship marketing approach, which emphasizes the importance of building and maintaining long-term relationships with customers through valuable interactions and communications. One form of such communication is digital promotions. Consistent, personalized, and relevant digital promotions can build positive brand perceptions, strengthen trust, and increase the likelihood of customer loyalty online. According to Kotler and Keller (2016), effective digital promotions not only increase short-term sales but also build lasting relationships that form the basis of customer loyalty. Meanwhile, Tjiptono (2020) states that promotions function as psychological and functional incentives that can strengthen customer attachment to a brand.

In accordance with the results of the hypothesis test which shows that digital promotion has a significant effect on customer loyalty, it can be concluded that consumer perception of the digital promotion of Nuno chocolate wafers has been proven to be able to increase customer loyalty. This is reflected in the high enthusiasm of consumers in participating in various digital promotional activities organized by PT. ASW, such as the Car Free Day (CFD) event and the "Gerebek Pasar" program. Active

consumer participation in these activities shows that the company's digital promotions have succeeded in creating positive experiences, strengthening interactions between brands and customers, and fostering emotional attachment to the product. Thus, a digital promotional strategy that is designed creatively, consistently, and relevant to consumer preferences plays an important role in building customer loyalty and strengthening the position of the Nuno chocolate wafer brand in the market in a sustainable manner.

The results of the study further show that online customer satisfaction has a significant effect on customer loyalty, with the results of the T-statistics test value of 5.861 (> 1.96) and P-values of 0.000 (< 0.05). Thus, the hypothesis H3 is accepted. Online customer satisfaction is a key factor in building and maintaining customer loyalty. In general, online customer satisfaction is defined as the emotional reaction of consumers that arises after comparing pre-purchase expectations with their perceptions of the actual performance of the product or service received. When customers feel satisfied, they tend to develop trust, emotional commitment and a desire to continue a long-term relationship with the company.

Theoretically, the relationship between customer satisfaction and loyalty is explained in the Customer Satisfaction-Loyalty Theory model, which states that satisfaction is an important prerequisite for creating loyalty. Online customer satisfaction forms the basis of trust and positive perceptions of a brand, which then encourages emotional attachment and loyal behavior. According to Kotler and Keller (2016), customers who are satisfied with a product or service will tend to be more loyal than customers who are only "quite satisfied" or "so-so." This is also reinforced by Tjiptono (2020), who states that satisfaction not only functions as the end result of marketing activities but also as a determining factor for customer retention and future loyalty. From an empirical perspective, many studies have proven that online customer satisfaction has a significant and positive influence on customer loyalty. For example, research by Caruana (2002) states that online customer satisfaction is a key determinant in building loyalty in the service sector, especially because services rely heavily on customers' subjective perceptions and experiences through online media. A recent study by Amin et al. (2021) also found that satisfied customers showed higher repurchase intentions, and were more likely to recommend the brand to others.

In accordance with the results of the hypothesis test which shows that Online customer satisfaction has a significant effect on customer loyalty, it can be concluded that consumer perceptions of satisfaction with Nuno chocolate wafer products are proven to be able to increase customer loyalty. This is reflected in the behavior of consumers who continue to choose and repurchase Nuno chocolate wafers even though there are competing products with similar characteristics. This finding indicates that consumers are satisfied with the product quality, taste, and value provided by Nuno chocolate wafers, thus fostering a sense of trust and emotional commitment to the brand. Thus, customer satisfaction is a fundamental factor in building and maintaining long-term loyalty. Efforts to maintain satisfaction through improving product quality, service consistency, and positive consumption experiences will strengthen customer loyalty and PT. ASW's competitive position in an increasingly dynamic market.

Furthermore, the results of the study also show that the indirect effect of digital promotion on customer loyalty through online customer satisfaction is not significant, with the results of the T-statistics test value of 0.282 (<1.96) and P-values of 0.778 (>0.05). Thus, the hypothesis H4 is rejected. Digital promotion is a marketing communication strategy designed to attract customer attention, increase interest in products and encourage online purchasing decisions. However, in the context of the relationship between digital promotion and customer loyalty through customer satisfaction. The results of this study indicate that the effect is not significant. This means that although the digital promotions offered by the company are considered attractive, they are not enough to create online customer satisfaction that has an impact on loyalty.

Theoretically, Customer Satisfaction Theory and the Relationship Marketing approach position satisfaction as the bridge between marketing elements, including digital promotions, and customer loyalty. However, this theory also emphasizes that satisfaction only develops if the digital promotions provided truly deliver value, relevance, and a positive overall experience. Kotler and Keller (2016) state that digital promotions that are manipulative or inconsistent with the actual product quality can actually decrease online customer satisfaction.

In accordance with the results of the hypothesis test which showed that digital promotions did not significantly influence customer loyalty through online customer satisfaction, it can be concluded that consumer perception of the digital promotion of Nuno chocolate wafers is not a major factor in shaping satisfaction that leads to customer loyalty. This finding indicates that consumers do not rely heavily on digital promotional programs in determining repurchase decisions, but rather consider the overall aspects of digital promotions (Tarigan, 2025). In other words, although the digital promotions carried out by PT. ASW are able to attract consumers' attention in the short term, this is not enough to create deep satisfaction that can foster sustainable loyalty. This condition reflects that consumers of Nuno chocolate wafers prioritize the functional and emotional value obtained from the product experience rather than merely temporary digital promotional incentives. Therefore, the company needs to focus its marketing strategy on improving product quality and consistent customer experience, so that every digital promotional activity is not only transactional, but also able to strengthen customer satisfaction and loyalty in the long term.

# 6. Conclusion

This study analyzed the structural relationships between digital promotion, online customer satisfaction, and customer loyalty within a digital commerce service system. The empirical results demonstrate that digital promotion does not significantly influence online customer satisfaction, yet it directly and positively influences customer loyalty. Online customer satisfaction also significantly contributes to loyalty formation, but it does not serve as a mediating mechanism between digital promotion and loyalty. These findings indicate that promotional communication and experiential evaluation operate through partially independent pathways within digital service systems.

From a service science perspective, digital promotion functions as a signaling mechanism that reinforces relational commitment rather than as a direct determinant of satisfaction. Customer loyalty in this context appears to be influenced more strongly by perceived engagement and relational continuity than by short-term satisfaction outcomes. This suggests that digital commerce platforms must treat promotional activities as part of a broader service coordination process rather than as isolated marketing tools.

The findings provide implications for digital service management. Organizations should ensure that promotional strategies are integrated with consistent service performance, product reliability, and transparent communication. Loyalty formation in digital environments requires alignment between promotional signaling, experiential fulfillment, and operational execution.

Despite its contributions, this study is limited by its cross-sectional design and reliance on self-reported data from a single product context. Future research may incorporate longitudinal behavioral data, platform analytics, and multi-brand comparisons to better understand how digital promotion interacts with logistics performance and service analytics in shaping sustained customer loyalty.

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