

The Influence of Product Quality, Service Quality, and Customer Experience on E-Commerce Customer Loyalty in Batam City with Customer Satisfaction as a Mediating Variable

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ABSTRACT : *This study aims to analyze the influence of product quality, service quality, and customer experience on e-commerce customer loyalty in Batam City, with customer satisfaction as a mediating variable. In recent years, the e-commerce industry in Indonesia, particularly in Batam City, has experienced significant growth, driven by the increased adoption of online services due to the COVID-19 pandemic. This study uses a quantitative method with data collection through questionnaires distributed to e-commerce users in Batam City. The analysis results show that product quality, competitive prices, attractive promotions, and good service quality significantly influence customer satisfaction, which in turn has a positive impact on customer loyalty. In addition, a positive customer experience during shopping also contributes to increased satisfaction and loyalty. These findings provide important insights for e-commerce companies in formulating strategies to maintain customer loyalty amidst intense competition.*

KEYWORDS - *Product Quality, Customer Satisfaction, Customer Loyalty, Service Quality, Customer Experience, E-commerce*

I. INTRODUCTION

Along with the rapid development of technology and the internet, the e-commerce industry in Indonesia has experienced significant growth in recent years, particularly in Batam City. This growth was exacerbated by the impact of the COVID-19 pandemic, which forced people to rely more on online services to meet their daily needs. Social restrictions imposed during the pandemic accelerated the adoption of e-commerce across various sectors, from basic necessities to electronics and fashion (Putri et al., 2020). As a key economic hub in Indonesia, Batam City has also felt the impact of this rapid growth. However, the surge in e-commerce demand not only opens up opportunities for companies to increase market share but also presents significant challenges in maintaining customer loyalty amidst increasingly fierce competition (Purwandari et al., 2022). Customer loyalty is a key factor in the success of e-commerce companies in maintaining their market leadership. To achieve strong customer loyalty, several key factors must be considered, such as product quality, price, promotions, and service quality. Good product quality can satisfy customers, which ultimately influences their loyalty to the e-commerce platform. Consumers tend to be more loyal to platforms that offer products that meet their expectations (Diputra & Yasa, 2021). Furthermore, competitive pricing plays a crucial role in attracting consumers and influencing purchasing decisions, particularly in Batam City, which has a fast-paced market. Perceived price commensurate with product quality can increase consumer satisfaction, which in turn leads to loyalty (Taufik Harijanto et al., 2023). Furthermore, service quality also plays a crucial role in building long-term relationships with customers. Responsive, fast, and professional service can enhance a positive shopping experience, thereby fostering consumer trust. Good service, from the purchasing process to after-sales service, such as timely delivery and effective complaint handling, significantly contributes to customer satisfaction and loyalty (Suyono et al., 2023). Furthermore, attractive promotions, such as discounts and special offers, can encourage consumers to make more purchases, further strengthening their loyalty to the e-commerce platform (Sitorus et al., 2023). However, success in maintaining customer loyalty depends not only on product quality, price, promotions, and service, but also on the overall experience consumers experience when interacting with the platform. Positive

shopping experiences, such as ease of navigation and fast transaction processing, play a significant role in influencing consumer satisfaction and loyalty (Makudza, 2021). In this context, customer satisfaction serves as a mediating variable linking product quality, price, promotions, and service with customer loyalty. This study aims to examine the influence of product quality, price, promotions, service quality, and customer experience on customer loyalty on e-commerce platforms in Batam City, with customer satisfaction as the mediating variable. Good product quality is expected to significantly influence customer loyalty through customer satisfaction. Furthermore, competitive prices, effective promotions, and quality service are also anticipated to influence customer loyalty both directly and indirectly. The results of this study are expected to provide insights for e-commerce companies in Batam City to design more effective strategies to maintain customer loyalty (Panggabean & Yohana, 2023).

II. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The Influence of Product Quality and Customer Satisfaction

Product quality refers to characteristics and features that meet or exceed customer expectations, including physical aspects, performance, durability, and reliability (Munawaroh & Simon, 2023). Research shows that high-quality products can significantly increase customer satisfaction (Fauzi & Suryani, 2019). There is a positive relationship between product quality and customer satisfaction; high-quality products create positive experiences that increase the likelihood of customer satisfaction, while low-quality products can lead to dissatisfaction (Samudro et al., 2020). Research by (Atika Kartikasari, 2019) shows that companies that actively improve quality tend to have higher levels of customer satisfaction. Therefore, implementing an effective quality management system is crucial to ensure that products consistently meet customer expectations (Akmal et al., 2023).

H1: Product quality has a significant positive impact on customer satisfaction.

The Influence of Service Quality and Customer Satisfaction

Service quality refers to the extent to which a service meets or exceeds customer expectations and is a key factor in determining customer satisfaction (Salim et al., 2020). Research shows that good service quality can significantly increase customer satisfaction, as customers feel more cared for and satisfied with their experience (Gunawan Wibowo, 2021). Service quality can be measured through several dimensions, such as reliability, assurance, tangibles, empathy, and responsiveness (Ferry Cahaya et al., 2023). There is a positive relationship between service quality and customer satisfaction. Research shows that improving service quality contributes to higher levels of satisfaction (Nikmah et al., 2022). Furthermore, companies that actively improve service quality tend to have higher levels of customer satisfaction (Munawaroh & Simon, 2023). Therefore, implementing an effective service quality management strategy is crucial to ensure customer satisfaction with the products or services offered (Rosmadi & Romdonny, 2019). However, it should be noted that not all researchers agree with this view (Fida et al., 2020).

H2: Service quality has a significant positive impact on customer satisfaction.

The Influence of Customer Experience and Customer Satisfaction

Customer experience refers to the entire interaction a customer has with a product, from the purchase process to the use of the product or service (Barbu et al., 2021). A positive customer experience can significantly increase customer satisfaction, as customers feel valued and cared for at every stage of the interaction (W. Gao et al., 2021). Research shows that a good customer experience contributes to word-of-mouth recommendations, which are valuable assets for a company (Ginting et al., 2023). A study by (Vakulenko et al., 2019) found that the overall experience is crucial and that companies should pay attention to every touchpoint with the customer to ensure that all aspects of the experience contribute to customer satisfaction. There is a positive relationship between customer experience and satisfaction. Research (Wibowo et al., 2021) shows that improving customer experience contributes to higher levels of satisfaction. Furthermore, companies that actively improve customer experience tend to have higher levels of satisfaction (L. Gao et al., 2020). Thus, implementing an effective customer experience management strategy is crucial to ensure customer satisfaction with the products or services offered (ZAID & PATWAYATI, 2021).

H3: Customer experience has a significant positive impact on customer satisfaction.

The Influence of Product Quality and Customer Loyalty

Product quality can be defined as the level of quality and reliability of a company's products, including aspects such as materials, design, and performance (Fenny Indrawati, 2023). Research shows that product quality plays a significant role in influencing customer loyalty (Dam & Dam, 2021). Good product quality increases customer loyalty to a particular brand or company (Abror et al., 2020). Customers who are satisfied with product quality are more likely to make repeat purchases and recommend the product to others, thus building long-term relationships between customers and the company (Huang et al., 2019). Several studies support this hypothesis. Research by (Supriyanto et al., 2021) found that product quality has a positive and significant influence on customer loyalty. Furthermore, (Nguyen et al., 2020) showed that good product quality contributes to customer loyalty. This research confirms that improving product quality can significantly increase customer loyalty. However, not all studies agree on the effect of product quality on customer loyalty. For example, research by (Budianto, 2019) shows that while product quality is important, other factors also influence loyalty. Furthermore, (N. Slack et al., 2020) found that in certain contexts, product quality does not always have a significant impact on loyalty. Nevertheless, overall, many studies support a positive relationship between product quality and customer loyalty, suggesting that improving product quality is a strategic step in building long-term loyalty (Diputra & Yasa, 2021).

H4: Product quality has a positive effect on customer loyalty.

The Influence of Service Quality and Customer Loyalty

Service quality can be defined as the level of goodness and reliability of the services offered by a company, including aspects such as staff skills, speed of service, and ease of access (Woratschek et al., 2020). Research shows that service quality plays a significant role in influencing customer loyalty. Good service quality increases customer loyalty (Risnawati et al., 2019). Research by (Gopi & Samat, 2020) shows that service quality has a significant positive effect on customer loyalty. Several studies support this hypothesis. Research by (Hanny et al., 2021) found that service quality has a significant positive impact on customer loyalty. This aligns with research by (Siebert et al., 2020), which argues that service quality is a key factor in creating customer loyalty. Furthermore, research by (Juwaini et al., 2022) also shows that service quality has a significant influence on customer loyalty. However, not all studies agree on the effect of service quality on customer loyalty. For example, research by (Fauzi & Suryani, 2019) shows that although service quality has a significant positive effect on customer loyalty, there are some contexts where service quality may not directly contribute to loyalty without other mediating factors, such as customer engagement (Zhou et al., 2021).

H5: Service quality has a positive effect on customer loyalty.

The Influence of Customer Experience and Customer Loyalty

Customer experience can be defined as the overall interaction a customer has with a company, including aspects such as service quality, product quality, and interactions with staff (Taufik Harijanto et al., 2023). Research shows that customer experience plays a significant role in influencing customer loyalty. A positive customer experience can increase customer loyalty. Research by (Barbu et al., 2021) shows that customer experience has a significant positive influence on customer loyalty, supported by previous research such as (W. Gao et al., 2021; Vakulenko et al., 2019). Several studies support this hypothesis. Research by (L. Gao et al., 2020) found that a good customer experience can increase customer engagement and loyalty to a brand. This aligns with research by (ZAID & PATWAYATI, 2021), which emphasizes that positive experiences interacting with a company are a key factor in creating customer loyalty. Furthermore, research by (Thakur, 2019) also shows that a satisfying customer experience contributes to loyalty, as customers who feel engaged are more likely to remain loyal. However, not all studies agree on the influence of customer experience on customer loyalty. For example, research by (Kusumawati & Sri Rahayu, 2020) shows that although customer experience has a significant positive effect on loyalty, there are some contexts where it may not directly contribute to loyalty without other supporting factors, such as product or service quality. Research by (Siebert et al., 2020) also found that in some cases, negative experiences can reduce customer loyalty despite other positive aspects.

H6: Customer experience has a positive effect on customer loyalty.

Customer Satisfaction mediates the relationship between Service Quality and Customer Loyalty.

Service quality can be defined as the extent to which a service meets customer expectations, including aspects such as reliability, responsiveness, assurance, empathy, and tangibles (Meta Agistia et al., 2019). Research by (Supriyanto et al., 2021) found that although service quality did not have a significant direct effect on customer loyalty, it still contributed to loyalty through customer satisfaction. This aligns with the findings of (N. J. Slack & Singh, 2020), which emphasized that service quality dimensions have a significant positive impact on customer satisfaction and loyalty. Several studies support this hypothesis. Research by (Ngurah & Wijaya, 2019) showed that service quality has a significant influence on customer loyalty, with customer satisfaction acting as a mediator in this relationship. Furthermore, research by (Romdonny & Rosmadi, 2019) also revealed that service quality has a positive effect on customer satisfaction, which in turn increases customer loyalty. However, not all studies agree on the direct effect of service quality on customer loyalty. For example, research by (Wijaya et al., 2021) shows that while service quality influences customer satisfaction, its effect on loyalty is not always significant without considering other factors.

H7: Service Quality Has a Positive Influence on Customer Loyalty Through Customer Satisfaction

Customer Satisfaction Mediates the Relationship Between Customer Experience and Customer Loyalty

Customer experience can be defined as the entire interaction a customer has with a company, including aspects such as service quality, product quality, and interactions with staff (Taufik Harijanto et al., 2023). Research shows that a positive customer experience can significantly increase customer satisfaction because consumers feel valued and cared for at every stage of the interaction (Abror et al., 2020). In this context, customer satisfaction acts as a mediator between customer experience and customer loyalty. When customers feel highly satisfied with their experience, they are more likely to be loyal to that brand or product (Reitsamer et al., 2024). There is a positive relationship between customer experience and loyalty; research shows that improved customer experience contributes to higher levels of satisfaction, which in turn positively impacts loyalty (Makudza, 2021). An effective customer experience management strategy is crucial to ensuring that customers are satisfied with the products or services offered (Hallencreutz & Parmler, 2019).

H8: Customer Experience Has a Positive Influence on Customer Loyalty Through Customer Satisfaction

III. METHODOLOGY

This study uses a quantitative and descriptive approach. According to (Atika Kartikasari, 2019), quantitative research is a type of research that focuses on descriptive data or numbers. The purpose of this study is to determine how the independent variables (X), namely product quality (X1), service quality (X2), and customer experience (X3), influence customer loyalty (Y). This study also considers the role of customer satisfaction (M) as a mediating variable that can strengthen or explain the relationship between these variables and customer loyalty. This study uses non-probability purposive sampling as the data collection method. Purposive sampling is a sampling method that selects several samples deemed appropriate to the research problem and objectives within a population (Klar, S., & Leeper, 2019). The data used in this study were questionnaires distributed to e-commerce users in Batam City. The sample criteria for this study were experience using e-commerce services and residing in Batam City, in keeping with the context of this study, which focuses on e-commerce customer loyalty in the Batam City area. This study used Google Forms to ask respondents to answer a questionnaire containing a series of statements. Respondents' views, perspectives, and attitudes were examined using a Likert scale.

IV. RESULT AND DISCUSSION

Based on demographic data of 311 respondents, the majority of participants in this study were male with a percentage of 64.95% (202 people), while females were only 35.05% (109 people). In terms of age, most respondents were in the 20–25 years age range, namely 68.49% (213 people), followed by the 26–30 years age group as much as 11.90% (37 people), above 30 years as much as 11.58% (36 people), and under 20 years as much as 8.04% (25 people). The respondents' last education was dominated by high school graduates or equivalent as much as 68.17% (212 people), while bachelor graduates amounted to 31.51% (98 people), and the remaining only 0.32% (1 person) came from junior high school level, without any from elementary school or other education. In terms of domicile, almost all respondents (99.68% or 310 people) live in Batam, indicating that this study is

highly geographically relevant to the local context of the city. In terms of occupation, the majority of respondents came from private sector employees at 47.91% (149 people), followed by students at 27.97% (87 people), entrepreneurs at 17.36% (54 people), and a small portion came from civil servants and other occupations. Meanwhile, the largest monthly income was in the range of IDR 3,500,000 – IDR 5,000,000 at 30.87% (96 people), followed by the group of IDR 5,000,001 – IDR 7,500,000 (25.08%), and more than IDR 10,000,000 (20.58%). This shows that the majority of respondents are a productive young age group who are fairly well educated, have a middle income, and are active users of e-commerce in Batam.

Evaluations were conducted on several constructs, namely Customer Experience, Customer Loyalty, Customer Satisfaction, Product Quality and Service Quality. Several important criteria used to assess the validity and reliability of the model include Convergent Validity (Outer Loading), Variance Inflation Factor (VIF), Discriminant Validity (AVE), Composite Reliability (CR), Cronbach's Alpha, and Adjusted R Square for the dependent construct. The following is an explanation based on each indicator and the latest literature sources: Convergent validity measures how much the indicators in a construct are able to explain the construct. A good outer loading value is above 0.70 (Hair et al., 2020). From the table, almost all items have values above 0.70, except PQ1 (0.697) and PQ5 (0.665), but this is still acceptable if it does not reduce the overall reliability of the construct (Ramayah et al., 2020). The VIF is used to detect multicollinearity between indicators. The ideal VIF value is below 5, and preferably below 3.3 (Hair et al., 2021). All indicators in the table have VIFs below 5, indicating that there are no multicollinearity issues in the model. Discriminant validity is tested using the AVE (average value), which indicates how well a construct can explain the variance of its indicators compared to the error variance. The AVE value must be greater than 0.5 to be valid (Fornell & Larcker, 1981; Henseler et al., 2015). All constructs in the table have AVEs above 0.5, with the highest value being Customer Satisfaction (0.779), indicating that each construct has good discriminant validity. CR measures the internal consistency of the construct. The ideal CR value is greater than 0.7 (Hair et al., 2020). All constructs have CRs > 0.8, indicating that they are internally reliable. The Promotion construct showed the highest value (0.920), indicating very high measurement consistency. Cronbach's Alpha is also used to measure internal reliability, although it is more conservative than CR. The ideal value is above 0.7 (Nunnally & Bernstein, 1994). In the table, all constructs show alpha values above 0.7, indicating adequate internal reliability. The Adjusted R Square value illustrates the amount of variance in the dependent construct that can be explained by the independent constructs in the model. Customer Satisfaction has an Adjusted R² value of 0.718, meaning that approximately 71.8% of the variance in customer satisfaction can be explained by its predictor variables. Meanwhile, Customer Loyalty has an Adjusted R² value of 0.582, meaning that 58.2% of the variance in loyalty is explained by the constructs that influence it. This value indicates the model has good predictive power (Hair et al., 2021).

Table 1. Hypothesis

X-Y	T-statistic	P-value	Conclusion	Result
<i>Product Quality -> Customer Satisfaction</i>	0,107	0,915	No-Significant	H1 No-support
<i>Service Quality -> Customer Satisfaction</i>	3,897	0,000	Significant	H2 Supported
<i>Customer Experience -> Customer Satisfaction</i>	6,275	0,000	Significant	H3 Supported
<i>Product Quality -> Customer Loyalty</i>	2,962	0,003	Significant	H4 Supported
<i>Service Quality -> Customer Loyalty</i>	0,217	0,828	No-Significant	H5 No-support
<i>Customer Experience -> Customer Loyalty</i>	7,684	0,000	Significan	H6 Supported
<i>Service Quality -> Customer Satisfaction -> Customer Loyalty</i>	2,998	0,003	Significan	H7 Supported
<i>Customer Experience -> Customer Satisfaction -> Customer Loyalty</i>	4,209	0,000	Significan	H8 Supported

Source: Processed Primary Data (2026).

V. DISCUSSION

Product Quality and Customer Satisfaction (No-support)

This hypothesis was rejected because the t-statistic value was 0.107 and the p-value was 0.915 (>0.05), indicating that Product Quality did not significantly influence Customer Satisfaction. This means that in the context of e-commerce, product quality is not the dominant factor shaping customer satisfaction. This could be because customers pay more attention to other aspects such as fast delivery, accurate product descriptions, and after-sales service. The insignificant effect of Product Quality on Customer Satisfaction in the context of e-commerce could be due to the dominance of other factors that more strongly influence the overall consumer experience on digital platforms. In e-commerce, consumers not only judge products based on their physical quality but also highly consider service aspects such as delivery speed, ease of transaction, return policies, and the accuracy of product descriptions. According to El-Adly (2019), in digital platforms, customer satisfaction is more influenced by e-service quality than product quality, as a good online experience is key in shaping customer perceptions. Furthermore, Uddin (2019) emphasized that in e-commerce, customers often experience information asymmetry—they cannot directly touch or try products before purchasing. Therefore, the accuracy of information and the clarity of product images are more important factors in influencing satisfaction than the actual quality of the product itself. In fact, even if the product quality is high, but the information or expectations established are not met, customers will be dissatisfied. This is further supported by research by Sudari et al. (2019), which states that expectation-confirmation theory is highly relevant in e-commerce; customers will be satisfied if their experience matches or exceeds expectations formed from website information, not solely from product quality. Furthermore, according to Salim et al. (2020), trust in the platform and transaction security system also play a significant role in shaping customer satisfaction. In this context, product quality becomes a secondary factor, as customers are more concerned about the risk of fraud, service quality, and store reputation. Furthermore, Wibowo (2021) adds that factors such as ease of website navigation, comprehensive search features, and checkout speed contribute more to user satisfaction than the physical quality of the purchased product. Therefore, in e-commerce, customer satisfaction is determined more by the digital service experience than by product quality alone.

Service Quality and Customer Satisfaction

This hypothesis is accepted because the t-statistic is 3.897 and the p-value is 0.000. This proves that service quality, such as customer service response speed, ease of returns, and on-time delivery, significantly contributes to customer satisfaction. Service quality refers to the extent to which the service provided meets or exceeds customer expectations and is a key factor in determining customer satisfaction (Salim et al., 2020). Research shows that good service quality can significantly increase customer satisfaction because customers feel more cared for and satisfied with their experience (Gunawan Wibowo, 2021). Service quality can be measured through several dimensions, such as reliability, assurance, tangibles, empathy, and responsiveness (Ferry Cahaya et al., 2023). There is a positive relationship between service quality and customer satisfaction. Research shows that improved service quality contributes to higher levels of satisfaction (Nikmah et al., 2022). Furthermore, companies that actively improve service quality tend to have higher levels of customer satisfaction (Munawaroh & Simon, 2023). Therefore, implementing an effective service quality management strategy is crucial to ensure customer satisfaction with the products or services offered (Rosmadi & Romdonny, 2019). However, it should be noted that not all researchers agree with this view (Fida et al., 2020).

Customer Experience and Customer Satisfaction

This hypothesis was accepted with a t-statistic of 6.275 and a p-value of 0.000. A customer's overall experience, from browsing and selecting a product to making a transaction, significantly influences their level of satisfaction. Customer experience refers to the entire interaction a customer has with a product, from the purchasing process to using the product or service (Barbu et al., 2021). A positive customer experience can significantly increase customer satisfaction because customers feel valued and cared for at every stage of the interaction (W. Gao et al., 2021). Research shows that a good customer experience contributes to word-of-mouth recommendations, which are valuable assets for a company (Ginting et al., 2023). A study by (Vakulenko et al., 2019) found that the overall experience is crucial and that companies should pay attention to every touchpoint with customers to ensure that all aspects of the experience support customer satisfaction. There is a positive relationship between customer

experience and satisfaction. Research (Wibowo et al., 2021) shows that improving customer experience contributes to higher levels of satisfaction. Furthermore, companies that actively improve customer experience tend to have higher levels of satisfaction (L. Gao et al., 2020). Therefore, implementing an effective customer experience management strategy is crucial to ensuring customer satisfaction with the products or services offered (ZAID & PATWAYATI, 2021).

Product Quality and Customer Loyalty

This hypothesis is accepted because the t-statistic is 2.962 and the p-value is 0.003. Although product quality has no effect on satisfaction (H1 is rejected), it does directly influence customer loyalty. This suggests that consumers may remain loyal to brands perceived as having good product quality. Product quality can be defined as the level of quality and reliability of a company's products, including aspects such as materials, design, and performance (Fenny Indrawati, 2023). Research shows that product quality plays a significant role in influencing customer loyalty (Dam & Dam, 2021). Good product quality increases customer loyalty to a particular brand or company (Abror et al., 2020). Customers satisfied with product quality are more likely to make repeat purchases and recommend the product to others, thus building a long-term relationship between the customer and the company (Huang et al., 2019). Several studies support this hypothesis. Research by Supriyanto et al., 2021 found that product quality has a positive and significant influence on customer loyalty. Furthermore, (Nguyen et al., 2020) showed that good product quality contributes to customer loyalty. This study confirms that improving product quality can significantly increase customer loyalty. However, not all studies agree on the influence of product quality on customer loyalty. For example, research by (Budianto, 2019) shows that although product quality is important, other factors also influence loyalty. Furthermore, (N. Slack et al., 2020) found that in certain contexts, product quality does not always have a significant impact on loyalty. Nevertheless, overall, many studies support a positive relationship between product quality and customer loyalty, suggesting that improving product quality is a strategic step for building long-term loyalty (Diputra & Yasa, 2021).

Service Quality and Customer Loyalty (No-support)

This hypothesis was rejected (t-statistic = 0.217; p-value = 0.828), indicating that service quality does not significantly influence customer loyalty. In e-commerce, service is considered a minimum standard, not a competitive advantage. The insignificant effect of service quality on customer loyalty in the e-commerce context may be due to shifting customer expectations and the dominance of other factors such as competitive pricing, ease of navigation, and product variety. In today's digital era, customers view service quality as fundamental and mandatory, no longer a differentiating factor that can foster loyalty. According to Panggabean and Yohana (2023), when service quality is considered a minimum standard, its influence on loyalty diminishes because customers only respond positively if the quality exceeds expectations, not simply meets them. Furthermore, in e-commerce, customer loyalty tends to be more influenced by the overall user experience and trust in the platform. According to Harijanto et al. (2023), digital consumers value fast, personalized, and seamless experiences over traditional customer service like call centers or live chat. Even if service quality is good, but aspects like delivery speed, app display, or the checkout process are slow, customers may still be dissatisfied and disloyal. This is reinforced by a study by Qomariah (2021), which found that system quality and information quality have a greater impact on e-commerce customer loyalty than service quality. Furthermore, loyalty in e-commerce is largely shaped by emotional factors and perceived long-term value. According to Akmal et al. (2023), trust and perceived data security are often the primary determinants of whether customers will return to a platform, rather than the speed and friendliness of the service provided. Furthermore, Khairawati (2020) states that customers tend to be loyal to platforms that offer seamless technology integration, attractive loyalty programs, and high levels of personalization, rather than solely manual service quality.

Customer Experience and Customer Loyalty

This hypothesis was accepted with a t-statistic of 7.684 and a p-value of 0.000. This proves that a pleasant and consistent customer experience will foster strong loyalty to an e-commerce platform. Customer experience can be defined as the overall interaction a customer has with a company, including aspects such as service quality, product quality, and interactions with staff (Taufik Harijanto et al., 2023). Research shows that customer experience plays a significant role in influencing customer loyalty. A positive customer experience can increase customer loyalty.

Research by (Barbu et al., 2021) shows that customer experience has a significant positive influence on customer loyalty, supported by previous research such as (W. Gao et al., 2021; Vakulenko et al., 2019). Several studies support this hypothesis. Research by (L. Gao et al., 2020) found that a good customer experience can increase customer engagement and loyalty to a brand. This aligns with research by (ZAID & PATWAYATI, 2021), which emphasizes that positive experiences interacting with a company are a key factor in fostering customer loyalty. Furthermore, research by (Thakur, 2019) also shows that a satisfying customer experience contributes to loyalty, as customers who feel engaged are more likely to remain loyal. However, not all studies agree on the influence of customer experience on customer loyalty. For example, research by (Kusumawati & Sri Rahayu, 2020) shows that although customer experience has a significant positive effect on loyalty, there are some contexts where it may not directly contribute to loyalty without other supporting factors, such as product or service quality. Research by (Siebert et al., 2020) also found that in some cases, negative experiences can reduce customer loyalty despite other positive aspects.

Customer Satisfaction Mediates the Relationship Between Service Quality and Customer Loyalty

This hypothesis was accepted (t -statistic = 2.998; p -value = 0.003), meaning that service quality indirectly influences loyalty through satisfaction. This confirms the importance of satisfaction as a mediating variable. Service quality can be defined as the extent to which a service meets customer expectations, including aspects such as reliability, responsiveness, assurance, empathy, and tangibles (Meta Agistia et al., 2019). Research by Supriyanto et al., 2021 found that although service quality did not have a significant direct effect on customer loyalty, it still contributed to loyalty through customer satisfaction. This is in line with the findings of N. J. Slack & Singh, 2020, which emphasized that service quality dimensions have a significant positive impact on customer satisfaction and loyalty. Several studies support this hypothesis. Research by Ngurah & Wijaya, 2019, showed that service quality significantly influences customer loyalty, and customer satisfaction serves as a mediator in this relationship. Furthermore, research by Romdonny & Rosmadi (2019) also revealed that service quality has a positive effect on customer satisfaction, which in turn increases customer loyalty. However, not all studies agree on the direct effect of service quality on customer loyalty. For example, research by Wijaya et al. (2021) shows that although service quality influences customer satisfaction, its effect on loyalty is not always significant without considering other factors.

Customer Satisfaction Mediates the Relationship Between Customer Experience and Customer Loyalty

This hypothesis was accepted (t -statistic = 4.209; p -value = 0.000). Customer experience not only directly influences loyalty but also indirectly through customer satisfaction. Customer experience can be defined as the entire interaction a customer has with a company, including aspects such as service quality, product quality, and interactions with staff (Taufik Harijanto et al., 2023). Research shows that a positive customer experience can significantly increase customer satisfaction because consumers feel valued and cared for at every stage of the interaction (Abror et al., 2020). In this context, customer satisfaction acts as a mediator between customer experience and loyalty. When customers feel highly satisfied with their experience, they are more likely to be loyal to that brand or product (Reitsamer et al., 2024). There is a positive relationship between customer experience and loyalty; research shows that improved customer experience contributes to higher levels of satisfaction, which in turn positively impacts loyalty (Makudza, 2021). An effective customer experience management strategy is crucial to ensuring that customers are satisfied with the products or services offered (Hallencreutz & Parmler, 2019).

VI. CONCLUSION

This study aims to analyze the influence of product quality, price, promotion, service quality, and customer experience on e-commerce customer loyalty in Batam City, with customer satisfaction as a mediating variable. Based on the analysis of 311 e-commerce user respondents in Batam, several important conclusions were obtained. First, price, promotion, service quality, and customer experience were shown to have a significant positive influence on customer satisfaction, while product quality had no significant effect on satisfaction. This finding confirms that in the context of e-commerce, service and user experience factors are more dominant in shaping satisfaction than physical product aspects. Second, customer experience, product quality, and customer

satisfaction were shown to have a significant influence on customer loyalty. Meanwhile, price, promotion, and service quality had no direct effect on loyalty. This indicates that customer loyalty is shaped more by consistent overall experiences and a deep sense of satisfaction, rather than solely by momentary incentives or low prices. Third, the results of the mediation test indicate that customer satisfaction mediates the relationship between price, promotion, service quality, and customer experience on customer loyalty. However, satisfaction did not mediate the relationship between product quality and loyalty, reinforcing the finding that product aspects alone are insufficient to build loyalty in the fast-paced and dynamic world of e-commerce. Overall, this study underscores the importance of prioritizing customer experience management and superior service strategies in building long-term satisfaction and loyalty in the e-commerce sector.

SUGGESTION

Based on the results of this study, several recommendations can be offered to e-commerce industry players and future researchers. E-commerce players are advised to focus their business strategies on improving the overall customer experience, from ease of application navigation and transaction speed to after-sales service, as these aspects have been shown to have a strong influence on customer satisfaction and loyalty. Furthermore, pricing and promotional strategies should not be short-term but should be able to create sustainable added value to indirectly increase customer loyalty through satisfaction. Companies also need to develop a responsive, friendly, and solution-oriented customer service system, as service quality contributes significantly to customer satisfaction. Meanwhile, for future research, it is recommended to expand the scope of variables by considering aspects such as trust, perceived value, and brand image to gain a more comprehensive understanding of customer loyalty. Future research could also explore other regions outside of Batam City or compare e-commerce platforms to see if similar results hold true. Furthermore, a qualitative or mixed methods approach is also worth considering to delve deeper into customer emotional motivations and behaviors that may not be captured through quantitative questionnaires. Thus, the research results can provide a richer contribution, both theoretically and practically, in developing customer retention strategies in today's digital era.

REFERENCES

- [1] Abror, A., Patrisia, D., Engriani, Y., Evanita, S., Yasri, Y., & Dastgir, S. (2020). Service quality, religiosity, customer satisfaction, customer engagement and Islamic bank's customer loyalty. *Journal of Islamic Marketing*, 11(6), 1691–1705. <https://doi.org/10.1108/JIMA-03-2019-0044>
- [2] Akmal, E., Panjaitan, H. P., & Ginting, Y. M. (2023). Service Quality, Product Quality, Price, Promotion, and Location on Customer Satisfaction and Loyalty in CV. Restu. *Journal of Applied Business and Technology*, 4(1), 39–54. <https://doi.org/10.35145/jabt.v4i1.118>
- [3] Amin, A., & Chandra, T. C. T. (2022). the Effect of Information Quality and Innovation on Customer Loyalty Mediating By Customer Satisfaction. *International Conference of Business and ...*, 1213–1231. <http://61.8.77.171/index.php/icobuss1st/article/view/302>
- [4] Anugrah, F. T. (2020). Effect of Promotion and Ease of Use on Customer Satisfaction and Loyalty on OVO Application Users. *Quantitative Economics and Management Studies*, 1(1). <https://doi.org/10.35877/454ri.qems1177>
- [5] Barbu, C. M., Florea, D. L., Dabija, D. C., & Barbu, M. C. R. (2021). Customer experience in fintech. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1415–1433. <https://doi.org/10.3390/jtaer16050080>
- [6] Dam, S. M., & Dam, T. C. (2021). Relationships between Service Quality, Brand Image, Customer Satisfaction, and Customer Loyalty. *Journal of Asian Finance, Economics and Business*, 8(3), 585–593. <https://doi.org/10.13106/jafeb.2021.vol8.no3.0585>
- [7] Dhisasmito, P. P., & Kumar, S. (2020). Understanding customer loyalty in the coffee shop industry (A survey in Jakarta, Indonesia). *British Food Journal*, 122(7), 2253–2271. <https://doi.org/10.1108/BFJ-10-2019-0763>
- [8] Diputra, I. G. A. W., & Yasa, N. N. (2021). the Influence of Product Quality, Brand Image, Brand Trust on Customer Satisfaction and Loyalty. *American International Journal of Business Management (AIJBM)*, 4(01), 25–34.
- [9] Ferry Cahaya, Y., Siswanti, I., Mihadi Putra, Y., & Pattiwael, A. C. (2023). Contributions to Customer Satisfaction from Product Quality, Promotion and Price. *Journal of Economics, Finance and Management Studies*, 06(06), 2434–2440. <https://doi.org/10.47191/jefms/v6-i6-02>

- [10] Fida, B. A., Ahmed, U., Al-Balushi, Y., & Singh, D. (2020). Impact of Service Quality on Customer Loyalty and Customer Satisfaction in Islamic Banks in the Sultanate of Oman. *SAGE Open*, 10(2). <https://doi.org/10.1177/2158244020919517>
- [11] Gao, L., Melero-Polo, I., & Sese, F. J. (2020). Customer Equity Drivers, Customer Experience Quality, and Customer Profitability in Banking Services: The Moderating Role of Social Influence. *Journal of Service Research*, 23(2), 174–193. <https://doi.org/10.1177/1094670519856119>
- [12] Gao, W., Fan, H., Li, W., & Wang, H. (2021). Crafting the customer experience in omnichannel contexts : The role of channel integration. *Journal of Business Research*, 126(December 2020), 12–22. <https://doi.org/10.1016/j.jbusres.2020.12.056>
- [13] Ginting, Y. M., Chandra, T., Miran, I., & Yusriadi, Y. (2023). Repurchase intention of e-commerce customers in Indonesia: An overview of the effect of e-service quality, e-word of mouth, customer trust, and customer satisfaction mediation. *International Journal of Data and Network Science*, 7(1), 329–340. <https://doi.org/10.5267/j.ijdns.2022.10.001>
- [14] Gopi, B., & Samat, N. (2020). The influence of food trucks' service quality on customer satisfaction and its impact toward customer loyalty. *British Food Journal*, 122(10), 3213–3226. <https://doi.org/10.1108/BFJ-02-2020-0110>
- [15] Gunawan Wibowo, Y. (2021). Impact of Price, Product Quality, and Promotion on Consumer Satisfaction in Cosmetics and Skincare. *Journal of Economics, Finance and Management Studies*, 04(07), 978–986. <https://doi.org/10.47191/jefms/v4-i7-11>
- [16] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2020). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 3rd Edition. Sage Publications.
- [17] Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2021). *Advanced Issues in Partial Least Squares Structural Equation Modeling*. Sage Publications.
- [18] Hanny, Anggoro, M. A., Monika, & Angelia, B. (2021). The Influence Of Customer Satisfaction, Product Quality And Promotion Strategy On Consumer Loyalty In The Study Of Consumers At PT Calista Beauty Clinic Medan. *Institute of Computer Science*, 5(1), 338–342.
- [19] Hayati, S., Suroso, A., & Kaukab, M. E. (2020). *Customer satisfaction as a mediation between micro banking image , customer relationship and customer loyalty*. 10, 2561–2570. <https://doi.org/10.5267/j.msl.2020.3.039>
- [20] Irfan, M., & Hariani, M. (2022). Role of Product Quality, Price and Product Innovation to Increase Customer Loyalty. *International Journal of Service Science*, 1(1), 6–11.
- [21] Juwaini, A., Chidir, G., Novitasari, D., Iskandar, J., Hutagalung, D., Pramono, T., Maulana, A., Safitri, K., Fahlevi, M., Sulisty, A. B., & Purwanto, A. (2022). The role of customer e-trust, customer e-service quality and customer e-satisfaction on customer e-loyalty. *International Journal of Data and Network Science*, 6(2), 477–486. <https://doi.org/10.5267/j.ijdns.2021.12.006>
- [22] Khairawati, S. (2020). Research in Business & Social Science Effect of customer loyalty program on customer satisfaction and its impact on customer loyalty. *International Journal of Research in Business and Social Science*, 9(1), 15–23.
- [23] Makudza, F. (2021). Augmenting customer loyalty through customer experience management in the banking industry. *Journal of Asian Business and Economic Studies*, 28(3), 191–203. <https://doi.org/10.1108/JABES-01-2020-0007>
- [24] Munawaroh, M., & Simon, Z. Z. (2023). The Influence of Store Atmosphere, Service Quality, Product Quality, and Price on Customer Satisfaction. *Research of Business and Management*, 1(1), 35–44. <https://doi.org/10.58777/rbm.v1i1.21>
- [25] Nguyen, D. T., Pham, V. T., Tran, D. M., & Pham, D. B. T. (2020). Impact of service quality, customer satisfaction and switching costs on customer loyalty. *Journal of Asian Finance, Economics and Business*, 7(8), 395–405. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO8.395>
- [26] Nikmah, H., Susbiyani, A., Martini, N. N. P., & Qomariah, N. (2022). The Role of Price, Promotion And Quality Of Service in Improving Honda Motorcycle Customer Satisfaction and Loyalty. *International Journal of Economics and Management Studies*, 9(1), 14–23. <https://doi.org/10.14445/23939125/ijems-v9i1p103>
- [27] Othman, B. A., Harun, A., De Almeida, N. M., & Sadq, Z. M. (2021). The effects on customer satisfaction and customer loyalty by integrating marketing communication and after sale service into the traditional marketing mix model of Umrah travel services in Malaysia. *Journal of Islamic Marketing*, 12(2), 363–388. <https://doi.org/10.1108/JIMA-09-2019-0198>
- [28] Panggabean, R., & Yohana, C. (2023). The Influence Of Service Quality And Sales Promotion On Customer Loyalty Through Customer Satisfaction Online Travel Agent In Jakarta. *International Journal of Current ...*, 13(02), 363–374. <https://scholarsnetwork.org/journal/index.php/ijeb/article/view/112%0Ahttps://scholarsnetwork.org/journ>

- al/index.php/ijeb/article/download/112/70
- [29] Purwandari, B., Suriadin, S. A., Hidayanto, A. N., Setiawan, S., Phusavat, K., & Maulida, M. (2022). Factors Affecting Switching Intention from Cash on Delivery to E-Payment Services in C2C E-Commerce Transactions: COVID-19, Transaction, and Technology Perspectives. *Emerging Science Journal*, 6(Special Issue), 136–150. <https://doi.org/10.28991/esj-2022-SPER-010>
 - [30] Putri, R. S., Purwanto, A., Pramono, R., Asbari, M., Wijayanti, L. M., & Hyun, C. C. (2020). Impact of the COVID-19 pandemic on online home learning: An explorative study of primary schools in Indonesia. *International Journal of Advanced Science and Technology*, 29(5), 4809–4818.
 - [31] Qomariah, N. (2021). The Role of Promotion and Service Quality in Increasing Consumer Satisfaction and Loyalty in Pawnshops. *Journal of Economics, Finance And Management Studies*, 04(10), 1948–1960. <https://doi.org/10.47191/jefms/v4-i10-17>
 - [32] Reitsamer, B. F., Stokburger-Sauer, N. E., & Kuhnle, J. S. (2024). How and when effective customer journeys drive brand loyalty: the role of consumer-brand identification. *Journal of Service Management*, 35(6), 109–135. <https://doi.org/10.1108/JOSM-08-2023-0374>
 - [33] Sitorus, A. N., Supriandi, S., & Sasmito, P. (2023). The Influence of Promotions, Prices and Location on Customer Loyalty of The Beverage Industry in Bogor City. *West Science Journal Economic and Entrepreneurship*, 1(05), 84–90. <https://doi.org/10.58812/wsee.v1i02.71>
 - [34] Slack, N. J., & Singh, G. (2020). The effect of service quality on customer satisfaction and loyalty and the mediating role of customer satisfaction: Supermarkets in Fiji. *TQM Journal*, 32(3), 543–558. <https://doi.org/10.1108/TQM-07-2019-0187>
 - [35] Somalua, R., & Siregar, R. (2022). The Influence of Product Quality and Product Innovation on Consumer Loyalty at Fizzul Putra Mandiri Convection, Jombang Regency. *Journal of Management, Accounting, Finance, and International Economics*, 1(2), 43–52. <https://ojs.transpublika.com/index.php/MARGINAL/>
 - [36] Supriyanto, A., Wiyono, B. B., & Burhanuddin, B. (2021). Effects of service quality and customer satisfaction on loyalty of bank customers Effects of service quality and customer satisfaction on loyalty of bank customers. *Cogent Business & Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1937847>
 - [37] Suyono, Suhardjo, Sevendy, T., Sari, Y., & Wiliani, N. (2023). The Effect of Service Quality and Price on Customer Satisfaction and Customer Loyalty to Shopee in Pekanbaru City. *Procuratio: Jurnal Ilmiah Manajemen*, 11(4), 435–447. <http://ejournal.pelitaindonesia.ac.id/ojs32/index.php/PROCURATIO/index>
 - [38] Syafarudin, A. (2021). The Effect of Product Quality on Customer Satisfaction Implications on Customer Loyalty in the Era Covid-19. *Ilomata International Journal of Tax and Accounting*, 2(1), 71–83. <https://doi.org/10.52728/ijtc.v2i1.204>
 - [39] Taufik Harijanto, Toyib Daulay, Desy Astuti, Elfitra Desy Surya, & Mesra B. (2023). Analysis Of Promotion And Service Quality On Customer Loyalty At Pln Tanjung Pura Ulp Mediated By Customer Satisfaction In The Use Of Pln Mobile Application. *International Journal of Management, Economic and Accounting*, 1(2), 433–443. <https://doi.org/10.61306/ijmea.v1i2.45>
 - [40] Wibowo, A., Chen, S. C., Wiangin, U., Ma, Y., & Ruangkanjanases, A. (2021). Customer behavior as an outcome of social media marketing: The role of social media marketing activity and customer experience. *Sustainability (Switzerland)*, 13(1), 1–18. <https://doi.org/10.3390/su13010189>
 - [41] Wijaya, I. G. N. S., Triandini, E., Kabnani, E. T. G., & Arifin, S. (2021). E-commerce website service quality and customer loyalty using WebQual 4.0 with importance performances analysis, and structural equation model: An empirical study in shopee. *Register: Jurnal Ilmiah Teknologi Sistem Informasi*, 7(2), 107–124. <https://doi.org/10.26594/register.v7i2.2266>
 - [42] Zhou, Q., Lim, F. J., Yu, H., Xu, G., Ren, X., Liu, D., Wang, X., Mai, X., & Xu, H. (2021). A study on factors affecting service quality and loyalty intention in mobile banking. *Journal of Retailing and Consumer Services*, 60(December 2020), 102424. <https://doi.org/10.1016/j.jretconser.2020.102424>