

Customer Loyalty in Fast-Food Restaurants: The Mediating Role of Customer Satisfaction in Batam

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Abstract

Purpose: This study aims to examine the direct and indirect effects of selling price, advertising, and location on customer loyalty, with service quality acting as a mediating variable in fast food outlets in Batam City.

Methodology: This study employed a quantitative approach using a survey method. Data were collected from customers who purchased and consumed fast-food products in Batam City. The sampling technique used was purposive sampling, and the data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) to test both direct and indirect relationships among variables.

Results: The findings indicate that selling price significantly affects service quality but does not directly influence customer loyalty, demonstrating a full mediating effect through service quality. Advertising and location have significant direct and indirect effects on customer loyalty, indicating partial mediation. Furthermore, service quality significantly affects customer loyalty and is the most critical determinant of customer retention.

Conclusions: This study confirms that service quality is a key mechanism linking marketing variables to customer loyalty. The effectiveness of pricing, advertising, and location strategies largely depends on their ability to enhance the perceived service quality.

Limitations: This study is limited to fast-food outlets in Batam City and focuses only on selected variables, which may restrict the generalizability of the findings to other regions. Additionally, the cross-sectional design does not capture changes in customer behavior over time.

Contributions: This study contributes to the literature by integrating marketing mix variables with service quality within the Stimulus-Organism-Response (S-O-R) framework, highlighting the mediating role of service quality in shaping customer loyalty. Practically, it provides insights for fast-food businesses to align their marketing strategies with service quality improvements to achieve a sustainable competitive advantage.

Keywords: *Advertising, Customer Loyalty, Location, Selling Price, Service Quality*

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1. Introduction

Globalization, urbanization, hectic work schedules, increasing participation of women in the workforce, and mass media have significantly contributed to the growth of fast-food consumption worldwide ([Arya & Dubey, 2023](#)). Changes in consumer societies, characterized by time constraints, increasing individualism, and greater labor force participation among women, have accelerated the expansion of

fast-food franchises in many urban areas ([Aguilar Quintana, Velarde Mendivil, & Camarena Gómez, 2021](#)). Furthermore, shifts in lifestyle associated with social class dynamics influence fast-food consumption patterns, indicating a potential increase in demand in the future ([Nusrat, 2022](#)). These developments reflect a broader cultural transformation toward convenience, affordability, and changing eating habits, which collectively shape consumer preferences for fast food.

In addition, sensory appeal, taste preferences, and the attractiveness of fast and efficient service in urban environments play significant roles in increasing fast-food consumption, particularly among younger consumers ([Agarwal & Guirat, 2017](#)). Other factors, such as media exposure ([Kant & Elema, 2023](#)), knowledge of healthy eating, and perceptions of different food brands among young consumers [Nair and Das \(2020\)](#), also influence changes in consumer behavior toward fast food. Overall, cultural and lifestyle changes in major cities have significantly affected consumer preferences and fast-food consumption. These changes are especially evident in urban areas, where convenience-oriented dining options have become an integral part of modern lifestyles.

In Indonesia, consumer behavior toward fast food outlets is influenced by various factors. Previous studies have shown that consumers in major Indonesian cities, such as Jakarta, Surabaya, Medan, and Batam, tend to prioritize both price and product quality when purchasing fast-food products, as these elements strongly determine customer satisfaction ([Hongdiyanto, Koesmono, & Rachmawati, 2023](#)). Fast-food businesses have also implemented effective marketing strategies by adapting international marketing approaches to local cultural values and consumer preferences, thereby strengthening their market position and increasing sales ([Hasibuan & Ibrahim, 2023](#)). Moreover, brand equity in the fast-food industry is positively influenced by social media marketing and perceived product quality, indicating the formation of strong and loyal customer bases ([Sari & Dermawan, 2023](#)).

Several factors may influence customer behavior toward fast-food outlets in Batam City, including marketing strategies, perceived service quality, cleanliness standards, customer satisfaction, and location. Research indicates that social media marketing and perceived quality positively affect brand equity in the fast-food industry ([Kant & Elema, 2023](#); [Sari & Dermawan, 2023](#)). In addition, customer satisfaction and the strategic location of fast-food outlets have been identified as important determinants of customer loyalty ([Maulidini, Subiantoro, & Saputra, 2022](#); [Permadhi, Maulina, & Tresna, 2024](#)). These findings suggest that comprehensive business strategies are required to maintain customer commitment and satisfaction in the highly competitive fast food sector. Customers who experience higher satisfaction levels are more likely to repurchase products and maintain long-term relationships with brands. Consequently, brand image and other supporting factors can significantly influence customer loyalty.

Previous studies examining customer loyalty in the fast-food sector indicate that various factors such as brand image, customer trust, service quality, experiential marketing, and promotional activities can significantly influence customer loyalty, with customer satisfaction playing an important mediating role ([Imron & Ariyanti, 2023](#); [Salsabiila & Miranti, 2024](#)). Research also shows that brand perception positively affects customer loyalty, and this relationship is strengthened through customer satisfaction. Therefore, both brand image [Rajagukguk and Raymond \(2020\)](#) and customer satisfaction are critical factors in enhancing loyalty in the food and beverage industry ([Permadhi et al., 2024](#)). Furthermore, other studies demonstrate that service quality, customer relationship management, and brand image significantly affect customer loyalty, with customer satisfaction acting as a mediating variable ([Hendriani, 2024](#)). Similarly, [Wijaya and Tjokrosaputro \(2024\)](#) found that experiential marketing and promotional strategies directly influence both customer satisfaction and loyalty.

However, based on previous research, there appears to be limited empirical investigation examining the influence of selling price, advertising, service quality, and location on customer loyalty, with customer satisfaction as an intervening variable, particularly in fast-food outlets in Batam City. Therefore, this study aims to address this research gap by investigating how selling price, advertisement, and location influence service quality and customer loyalty, whether service quality affects customer loyalty, and

whether service quality mediates the relationship between selling price, advertisement, location, and customer loyalty.

Customer loyalty is essential for firms in several sectors, such as retail, publishing, and e-commerce. Research highlights the importance of characteristics such as product quality, customer satisfaction, engagement, and dedication in shaping consumer loyalty ([Makudza, 2021](#); [Monferrer, Moliner, & Estrada, 2019](#)). Improving the quality of service and products, as well as adopting successful sales promotion techniques, can have a beneficial effect on customer loyalty. This, in turn, can result in higher revenue, lower costs for acquiring new customers, and the establishment of enduring customer connections. Gaining a comprehensive grasp of client loyalty and effectively controlling it is crucial for firms to distinguish themselves from rivals, enhance their business plans, and secure lasting success in the current cutthroat market ([Othman, Harun, De Almeida, & Sadq, 2021](#); [Yadete, Kant, & Kero, 2023](#)). Businesses can strengthen their competitive position, retain customers, and achieve sustainable growth in an increasingly dynamic business environment by prioritizing customer loyalty through effective strategies. Based on the research background and questions, this study aims to analyze and highlight the influence of selling price, advertisement, and location on service quality; examine the influence of selling price, advertisement, and location on customer loyalty; analyze the effect of service quality on customer loyalty; and evaluate the mediating role of service quality in the relationship between selling price, advertisement, location, and customer loyalty.

2. Literature Review and Hypotheses Development

2.1 *Selling Price, Service Quality, and Customer Loyalty*

The selling price is a critical component of the marketing mix that reflects the monetary value exchanged by customers for a product or service. Pricing decisions are influenced by production costs, profit objectives, market competition, and perceived customer value ([Moraga-González & Watanabe, 2023](#); [Yuniar & Firmansyah, 2023](#)). From a consumer behavior perspective, price not only represents a financial sacrifice but also signals product quality and service expectation.

In the fast-food industry, price fairness and affordability are essential determinants of customers' perceptions of the quality of service. When customers perceive that the price paid is aligned with the quality of service received, they tend to evaluate the service positively. Conversely, perceived price unfairness may reduce the perceived service quality and negatively affect customer evaluations. Previous studies have indicated that pricing significantly influences customer perceptions and repurchase intentions ([Faruqi, 2023](#)). Furthermore, pricing directly impacts customer loyalty. Competitive and reasonable pricing strategies can enhance perceived value, encourage repeat purchases and strengthen long-term customer relationships. Therefore, price plays a direct role in influencing customer loyalty and an indirect role in shaping perceptions of service quality.

H₁: Selling price has significant effect on service quality

H₂: Selling price has significant effect on customer loyalty

2.2 *Advertising, Service Quality, and Customer Loyalty*

Advertising is an essential marketing communication tool that shapes consumer perceptions, builds brand images, and influences purchasing behavior. Effective advertising enhances brand awareness, communicates product value, and establishes credibility ([Fadila & Meria, 2024](#)). In the digital era, creative and interactive advertising particularly through social media plays a crucial role in influencing customer engagement and loyalty ([Nurlibna, Izdiharjati, Arnanda, Aras, & Mani, 2024](#)). Advertising also influences perceived service quality by shaping customer expectations before consumption. Informative and persuasive advertising can create a positive initial perception of service quality, which affects how customers evaluate their actual service experiences. ([Duan, Chen, & Shokouhifar, 2024](#); [Patel, Mishra, Chishti, & Modi, 2024](#)) highlight that advertising enhances both utilitarian and hedonic value, which are closely related to perceived service quality and customer loyalty.

Moreover, advertising directly contributes to customer loyalty by strengthening the brand image and emotional connections with customers. However, the effectiveness of advertising depends on its

credibility and transparency. Misleading advertising may harm customer trust and reduce their loyalty ([Fayyaz & Lodhi, 2015](#)). Therefore, well-designed advertising strategies are essential for improving perceived service quality and customer loyalty.

H₃: Advertising has significant effect on service quality

H₄: Advertising has significant effect on customer loyalty

2.3 Location, Service Quality, and Customer Loyalty

Location is a strategic factor that determines accessibility, convenience, and the overall customer experience. In the fast-food industry, where speed and convenience are critical, location plays a significant role in shaping customer perception and behavior. A strategic location such as proximity to commercial areas, accessibility, and availability of supporting facilities enhances customer convenience and contributes to a positive service experience ([Vijaya, Pitranatri, & Pratiwi, 2025](#)). Location also influences the perceived service quality.

Customers often associate easily accessible and well-designed locations with high service standards. Factors such as parking availability, transportation access, and store layout can significantly enhance the perceived service quality. Empirical studies have shown that location significantly affects purchase decisions, satisfaction, and loyalty ([Khanifah & Budiono, 2022](#)). In addition, location has a direct effect on customer loyalty. Customers are more likely to revisit and remain loyal to fast-food outlets that are conveniently located and easily accessible to them. Research conducted in Indonesia confirms that location significantly influences customer loyalty, both directly and indirectly ([Maulidini et al., 2022](#)).

H₅: Location has significant effect on service quality

H₆: Location has significant effect on customer loyalty

2.4 Service Quality and Customer Loyalty

Service quality is one of the most important determinants of customer loyalty in service-based industries, including the fast-food sector. Based on the Service Quality (SERVQUAL) model, service quality is measured through five key dimensions, such as tangibility, reliability, responsiveness, assurance, and empathy, which together influence customers' perceptions of overall service performance ([Budur & Poturak, 2021](#)). High service quality creates positive customer experiences, enhances trust, and builds stronger emotional relationships between customers and businesses. These positive perceptions encourage repeat purchases, customer satisfaction, and long-term commitment, ultimately strengthening customer loyalty ([Budur & Poturak, 2021](#)).

Empirical studies have consistently demonstrated that service quality has a significant positive effect on customer loyalty across various industries, including fast-food, hospitality, and retail ([Kuswanto, 2024](#); [Lin et al., 2023](#)). In the fast-food industry, service quality encompasses several important aspects such as speed of service, accuracy of orders, staff friendliness, cleanliness, and overall convenience. Maintaining consistently high service standards is crucial for creating customer satisfaction, encouraging repeat purchases, and establishing long-term customer relationships. Therefore, service quality not only has a direct effect on customer loyalty but also serves as a mediating variable that connects marketing factors, such as price, advertising, and location, to customer loyalty development.

H₇: Service quality has significant effect on customer loyalty

2.5 Mediating Role of Service Quality

Service quality plays a crucial mediating role in linking marketing variables, such as selling price, advertising, and location, to customer loyalty. Based on the Stimulus-Organism-Response (S-O-R) framework, external stimuli (price, advertising, and location) influence customers' internal evaluations (perceived service quality), which subsequently shape behavioral responses such as customer loyalty. From a theoretical perspective, service quality represents a customer's overall evaluation of service performance, which is influenced by pre-consumption expectations and post-consumption experience. Marketing stimuli, such as fair pricing, persuasive advertising, and strategic location, can shape these expectations and perceptions, thereby influencing how customers assess service quality. When customers perceive that the value offered aligns with the price paid, the advertising message is credible,

and the location is convenient, they are more likely to form positive perceptions of service quality, which, in turn, strengthens their loyalty.

Empirical studies strongly support the mediating role of service quality. For instance, [Budur and Poturak \(2021\)](#) found that service quality significantly mediates the relationship between marketing factors and customer loyalty in service industries, indicating that improved service perceptions enhance loyalty outcomes. Similarly, [\(Lin et al., 2023\)](#) demonstrated that service quality acts as an intervening variable between perceived value and customer loyalty in the hospitality sector, highlighting its central role in translating customer perceptions into behavioral intentions.

In addition, [Kuswanto \(2024\)](#) reported that service quality mediates the relationship between marketing strategies and customer loyalty in the fast-food industry in Indonesia, emphasizing that improvements in operational and service aspects are critical in fostering repeat purchase behavior. Furthermore, [\(Hermanto & Ngatimun, 2023\)](#) found that promotional activities and experiential marketing influence customer loyalty indirectly through service quality, suggesting that customers interpret marketing efforts through the lens of service performance. Supporting these findings, [\(Merdekawati, 2023\)](#) showed that service quality dimensions, such as responsiveness, assurance, and reliability, serve as key mechanisms through which various business factors influence customer loyalty in food service businesses.

Similarly, [\(Romadhoni, Amin, & Arnida, 2025\)](#) confirmed that service quality significantly mediates the effect of organizational and marketing factors on customer loyalty, reinforcing its importance as a central construct in customer relationship management. These findings collectively indicate that service quality is not only a direct determinant of customer loyalty but also a critical pathway through which marketing variables exert their influence on customer loyalty. Therefore, in the context of fast-food outlets in Batam City, service quality is expected to mediate the relationship between selling price, advertising, location, and the customer loyalty.

H₈: Service quality mediates the relationship between selling price and customer loyalty

H₉: Service quality mediates the relationship between advertising and customer loyalty

H₁₀: Service quality mediates the relationship between location and customer loyalty

3. Methodology

This study employs a quantitative explanatory research design to investigate the causal relationships between exogenous variables, namely selling price, advertising, service quality, and location, and endogenous variables, specifically customer satisfaction and customer loyalty. An explanatory approach was adopted because it enables hypothesis testing and empirical validation of theoretical relationships within a structured research model. The study was conducted in Batam City, Indonesia, focusing on fast-food outlets located in major commercial and high-traffic areas such as Batam Center, Mega Mall, Batu Aji and Nagoya. These locations were purposively selected because of their strategic importance as economic and commercial hubs, characterized by high consumer density, diverse demographic profiles, and significant purchasing activity, thereby ensuring that the data collected adequately represented urban fast-food consumption behavior.

The population of this study included all consumers who purchased and consumed fast-food products in Batam City. Due to the lack of an exact sampling frame and the continuously changing flow of customers in fast-food outlets, the population was classified as infinite. Therefore, this study applies a non-probability purposive sampling technique to select respondents who meet specific criteria, namely, individuals who have purchased fast-food products, consumed them directly at the restaurant, and made such purchases within the last three months. These criteria were established to ensure that respondents had recent and relevant experiences, which helped reduce recall bias and improve data reliability. A total of 200 respondents were selected for this study, which is considered sufficient for Structural Equation Modeling Partial Least Squares (SEM-PLS) analysis, as it meets the recommended minimum sample size based on the complexity of the research model and the number of measurement indicators used.

Table 1. Respondent characteristics

Respondent characteristics	Category	Number of respondents	Percentage (%)
Gender	Male	73	36.5
	Female	127	63.5
Age	20-25 Years	32	16
	26-30 Years	54	27
	31-35 Years	27	13.5
	36-40 Years	35	17.5
	41-45 Years	26	13
	46-50 Years	17	8.5
	Year 50 Years	9	4.5
	Total	200	100

Table 1 presents the characteristics of the respondents involved in this study, consisting of 200 participants. Based on gender distribution, the majority of respondents were female, accounting for 127 respondents (63.5%), while male respondents represented 73 respondents (36.5%). In terms of age, the largest proportion of respondents was in the 26-30 years category, with 54 respondents (27%), followed by those aged 36-40 years with 35 respondents (17.5%) and 20-25 years with 32 respondents (16%). Meanwhile, respondents aged 31-35 years accounted for 27 respondents (13.5%), 41-45 years accounted for 26 respondents (13%), 46-50 years accounted for 17 respondents (8.5%), and those above 50 years represented the smallest group with 9 respondents (4.5%). These characteristics indicate that the respondents were predominantly female and within the productive age range, particularly between 26 and 40 years old.

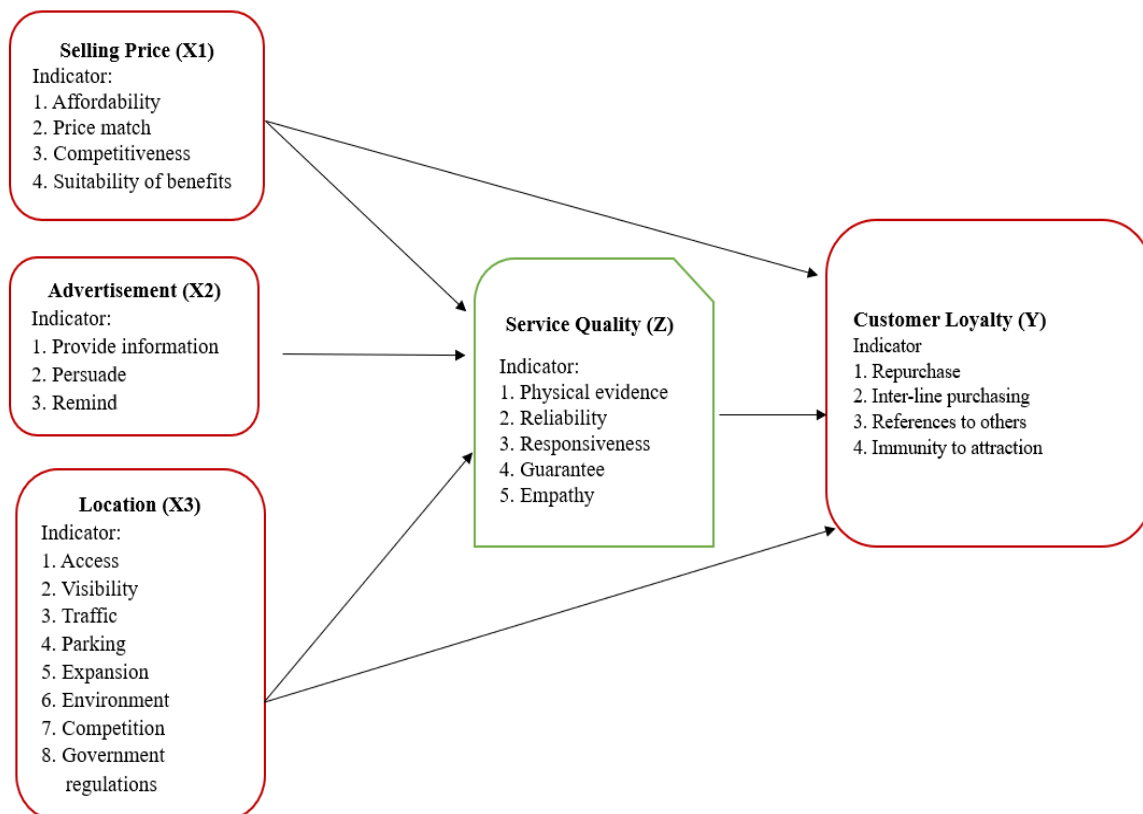


Figure 1. Research design

Figure 1 shows the data collection was conducted over three months using a multi-method approach to enhance the robustness of the findings through methodological triangulation. Primary data were obtained through structured questionnaires distributed to respondents, employing a five-point Likert

scale to measure perceptions related to selling price, advertising effectiveness, service quality, business location, customer satisfaction, and customer loyalty. In addition to questionnaires, observational techniques were used to systematically assess customer behavior, service delivery processes, and the overall physical environment of fast-food outlets. Documentation methods were also applied to gather supporting data related to operational conditions, marketing activities, and other relevant contextual information of the companies. Furthermore, semi-structured interviews were conducted with selected customers to obtain preliminary insights and validate the constructs used in the questionnaire, thereby strengthening the content validity of the measurement instruments.

All variables in this study were modeled as reflective constructs, meaning that the observed indicators were considered representations of the underlying latent variables. The measurement instruments were adapted from previous well-established studies in marketing and consumer behavior to ensure construct validity and consistency with the theoretical framework. Data analysis was performed using the Structural Equation Modeling-Partial Least Squares (SEM-PLS) method with the support of SmartPLS software. This approach was selected because it is highly suitable for predictive and exploratory research, capable of handling complex relationships among variables, robust against non-normal data distribution, and appropriate for studies involving relatively moderate sample sizes.

The outer model was evaluated to examine the validity and reliability of each construct. Convergent validity was tested using indicator loading values and Average Variance Extracted (AVE). Indicator loadings greater than 0.70 and AVE values above 0.50 indicate that the measurement items can effectively explain the latent variables. Discriminant validity was assessed using the Fornell-Larker criterion and the Heterotrait-Monotrait (HTMT) ratio to confirm that each construct was conceptually and statistically different from the others. In addition, construct reliability was measured using Composite Reliability and Cronbach's alpha, where values exceeding 0.70 reflect satisfactory internal consistency among the indicators ([Ghozali, 2008](#)).

The structural model (inner model) was then analyzed to evaluate the magnitude and significance of the relationships among variables. This stage involved examining the coefficient of determination (R^2) to assess the model's explanatory capacity, effect size (f^2) to identify the relative contribution of each exogenous construct, and predictive relevance (Q^2) via the blindfolding procedure to evaluate the model's predictive accuracy. Hypothesis testing employed a bootstrapping technique with 5,000 subsamples to obtain robust standard error and confidence interval. Statistical significance was determined using a t-value above 1.96 and a p-value below 0.05, indicating significance at the 5% level. Furthermore, both direct and indirect effects were evaluated to investigate the mediating role of customer satisfaction in shaping customer loyalty ([Ghozali, 2008](#)).

The ethical principles were rigorously upheld throughout the study. Participation was entirely voluntary, and informed consent was obtained before data collection. The anonymity and confidentiality of all respondents were safeguarded, and the information obtained was utilized exclusively for academic purposes. By applying this systematic methodological framework, this study seeks to generate robust and credible empirical insights into the factors influencing customer loyalty in fast-food outlets in Batam City.

4. Results and Discussions

4.1 Result

We examined the measurement model, also known as the outer model, for validity and reliability. By analyzing the convergent validity of the indicators that comprise the latent construct, we evaluated the external model using reflective indicators. Convergent validity is demonstrated by the correlation between the construct score and item score or indicator. On an individual level, indicators were considered reliable if the correlation value was greater than 0.50. Given that the total value of the research variable indicator is more than 0.05, it is clear from the test results that the outer loading does not need to be changed, as can be seen in Table 2.

Table 2. Outer loading

Indicator	Coefficient Alpha	Standardized Loading
Selling price	0.942	0.844
		0.824
		0.882
		0.721
		0.844
		0.843
		0.817
		0.834
		0.869
		0.830
Advertising	0.909	0.887
		0.890
		0.873
		0.862
		0.869
		0.903
		0.838
Service quality	0.829	0.801
		0.884
		0.892
		0.905
		0.887
		0.875
		0.836
		0.829
Location	0.955	0.825
		0.823
		0.919
		0.904
Customer loyalty	0.800	0.879
		0.844
		0.861
		0.889
		0.835
		0.794
		0.813
		0.733
		0.740

Table 2 shows a loading factor of > 0.5 , which indicates that the above indicators are valid based on the external test results. We also assessed convergent validity by considering the extracted Average Variance (AVE). We declare the validity of the AVE if it exceeds 0.5. All variables in Table 3 show $AVE > 0.5$, thereby meeting the convergent validity test requirement.

Table 3. Average Variance Extracted (AVE)

Indicator	Average Variance Extracted (AVE)
Selling price	0.663
Advertising	0.637
Service quality	0.509
Location	0.762
Customer loyalty	0.614

Table 3 displays the results of the Heterotrait-Monotrait Ratio (HTMT), which was applied to evaluate discriminant validity among the constructs examined in this study. Based on the commonly accepted threshold, discriminant validity is considered satisfactory when HTMT values remain below 0.90. (Henseler, Ringle, & Sarstedt, 2015). This demonstrates that each construct is statistically and conceptually different from the other constructs in the model.

Table 4. Heterotrait-Monotrait (HTMT) ratio

Indicator	Selling Price	Advertising	Service Quality	Location	Customer Loyalty
Selling price					
Advertising	0.793				
Service quality	0.621	0.816			
Location	0.801	0.821	0.704		
Customer loyalty	0.599	0.691	0.741	0.836	

Table 4 shows the results show that all HTMT values among the constructs were below 0.90, confirming that discriminant validity was achieved. Specifically, the HTMT value between the selling price and advertising was 0.793, while the relationship between the selling price and service quality was 0.621, both of which indicate adequate discriminant validity. Furthermore, the HTMT values between selling price and location (0.801) and between selling price and customer loyalty (0.599) also remain below the threshold, suggesting that these constructs are sufficiently distinct from one another. Similarly, the HTMT value between advertising and service quality was 0.816, and between advertising and location was 0.821, indicating acceptable levels of discriminant validity. The relationship between service quality and location shows an HTMT value of 0.704, while the HTMT value between service quality and customer loyalty is 0.741, both of which are within the acceptable range. Finally, the HTMT value between location and customer loyalty was 0.836, which, although relatively higher than other pairs, still remained below the critical threshold of 0.90.

Table 5. Cronbach's alpha dan composite reliability

Indicator	Cronbach's Alpha	Composite Reliability
Selling price	0.942	0.951
Advertising	0.909	0.930
Service quality	0.829	0.791
Location	0.955	0.962
Customer loyalty	0.800	0.866

Table 5 presents the results of the reliability assessment using Cronbach's Alpha and Composite Reliability (CR) for each construct included in this study. In the SEM approach, a construct is considered reliable when both Cronbach's Alpha and CR values are greater than 0.70, indicating satisfactory internal consistency among the indicators. The selling price construct shows a Cronbach's alpha value of 0.942 and a Composite Reliability of 0.951, which reflects a very strong level of consistency across its measurement items. These findings confirm that the indicators used to measure the selling price are highly reliable in representing the intended latent variable. Similarly, the advertising construct also demonstrated strong reliability, with a Cronbach's alpha of 0.909 and a CR value of 0.930, indicating that its indicators consistently and accurately represented the construct.

These findings indicate that the indicators used to measure advertising are stable and consistently capture the respondents' perceptions. The service quality construct recorded a Cronbach's alpha of 0.829 and a Composite Reliability of 0.791. Although its Composite Reliability is relatively lower than that of other constructs, it remains above the acceptable threshold of 0.70, confirming that the construct maintains adequate internal consistency. The location variable demonstrated the highest level of reliability among all constructs, with a Cronbach's alpha of 0.955 and a Composite Reliability of 0.962. These results reflect a strong internal consistency, indicating that the measurement items for location are highly coherent and dependable. Meanwhile, the customer loyalty construct reports a Cronbach's

alpha of 0.800 and a Composite Reliability of 0.866, both exceeding the recommended benchmark. This suggests that the indicators used to measure customer loyalty are sufficiently consistent and reliable.

Furthermore, this study employs a one-tailed test to assess acceptance or rejection and to disseminate a well-oriented hypothesis. If the t-statistic is 1.65 times greater than the t-table and the p-value is less than 0.05, we accept the hypothesis in a one-tailed test ([Huda, Manek, Taolin, & Aziz, 2025](#)). According to direct testing, six variables were accepted with a p-value < 0.05. This indicates a significant relationship between the three variables, as shown in Table 6.

Table 6. Hypotheses testing without the intervening variable

Hypotheses	p-value	Decision
H_1 : The selling price significantly affects service quality	0.002	Accepted
H_2 : The selling price significantly affects customer loyalty	0.448	Rejected
H_3 : Advertising has a significant effect on service quality	0.000	Accepted
H_4 : Advertising has a significant effect on customer loyalty	0.000	Accepted
H_5 : Location has a significant effect on service quality	0.000	Accepted
H_6 : Location has a significant effect on customer loyalty	0.000	Accepted
H_7 : Service quality has a significant effect on customer loyalty	0.003	Accepted

Table 7. Intervening test results

Hypotheses	p-value	Decision
H_8 : Service quality mediates the relationship between selling price and customer loyalty	0.006	Accepted
H_9 : Service quality mediates the relationship between advertising and customer loyalty	0.046	Accepted
H_{10} : Service quality mediates the relationship between location and customer loyalty	0.004	Accepted

Table 7 shows the two variables accepted with a p-value of less than 0.05. This indicates a significant relationship among the three variables.

4.2 Discussion

The findings of this study provide a deeper understanding of how selling price, advertising, and location influence customer loyalty through direct relationships and indirect effects mediated by service quality. Overall, the results emphasize that service quality is a central and strategic mediating variable that plays an important role in converting key marketing factors into stronger customer loyalty within the fast-food industry.

First, the findings indicate that selling price has a significant influence on service quality (H_1 accepted) but does not have a significant direct effect on customer loyalty (H_2 rejected). Nevertheless, the mediation test confirmed that service quality significantly mediated the relationship between selling price and customer loyalty (H_8 accepted). This demonstrates a full mediation effect, meaning that the selling price affects customer loyalty only when it contributes to improved service quality. From a theoretical perspective, this result supports the perceived value theory, which explains that customers assess price based on the balance between the cost paid and the benefits received. In this context, customers do not necessarily develop loyalty simply because prices are low or competitive; instead, loyalty is formed when the price is considered reasonable and aligned with the quality of the service experienced. This result is consistent with previous studies ([Faruqi, 2023](#); [Yunitasari & Lestariningsih, 2016](#)), which emphasize that price affects loyalty indirectly through perceived value and service experience.

Second, the results show that advertising significantly influences both service quality (H_3 accepted) and customer loyalty (H_4 accepted). Furthermore, service quality significantly mediated the relationship between advertising and customer loyalty (H_9 accepted). This indicates a partial mediation effect,

wherein advertising affects customer loyalty directly and indirectly through service quality. From a theoretical perspective, this finding is consistent with the Stimulus-Organism-Response (S-O-R) framework, in which advertising serves as an external stimulus that influences internal customer evaluations, such as perceptions of service quality, and ultimately shapes behavioral responses in the form of loyalty. Effective advertising increases brand awareness and emotional attachment and creates customer expectations regarding service performance. When these expectations are successfully fulfilled, customers perceive higher service quality, which further strengthens loyalty. This finding is supported by previous research. ([Duan et al., 2024](#); [Fadila & Meria, 2024](#)), which highlights the dual role of advertising in influencing both perceptions and behavioral outcomes.

Third, the results indicate that location has a significant effect on both service quality (H_5 accepted) and customer loyalty (H_6 accepted). Furthermore, service quality significantly mediated the relationship between location and customer loyalty (H_{10} accepted), indicating another case of partial mediation. This finding highlights that location influences customer loyalty directly and indirectly through service quality. A strategic and accessible location enhances customer convenience and contributes to a positive service experience, which is interpreted as high-quality service. This improved perception subsequently strengthens customer loyalty. These findings are consistent with previous research ([Khanifah & Budiono, 2022](#); [Maulidini et al., 2022](#)), which emphasizes the importance of location in shaping customer experience and loyalty. Fourth, this study confirms that service quality has a significant direct effect on customer loyalty (H_7 accepted), reinforcing its role as a key determinant of customer retention. This finding is strongly supported by the SERVQUAL model, which posits that high service quality leads to positive customer experiences, trust and long-term relationships. Empirical studies ([Budur & Poturak, 2021](#); [Kuswanto, 2024](#); [Lin et al., 2023](#)) consistently demonstrate that service quality is one of the most influential factors affecting customer loyalty across service industries.

Taken together, these findings highlight that while marketing variables such as price, advertising, and location are important, their effectiveness in driving customer loyalty largely depends on how they influence perceptions of service quality. Among the variables, the selling price operates entirely through service quality (full mediation), whereas advertising and location exert both direct and indirect effects (partial mediation). This indicates that service quality functions as a core mechanism that integrates marketing strategies into meaningful customer experiences, ultimately leading to loyalty. From a theoretical standpoint, this study strengthens the application of the Stimulus Organism Response (S-O-R) framework, where selling price, advertising, and location serve as stimuli, service quality acts as the organism (internal evaluation), and customer loyalty represents the behavioral response of the customer. Additionally, the findings support the relevance of service quality theory (SERVQUAL) in explaining customer behavior in the fast-food context.

From a managerial perspective, the results suggest that fast-food businesses in Batam City should prioritize service quality enhancement as a strategic focus. Although competitive pricing, effective advertising, and strategic location remain important, these factors must be aligned with high service standards to build customer loyalty effectively. Managers should ensure that pricing strategies reflect service value, advertising accurately represents service performance, and location decisions enhance customer convenience and experience.

5. Conclusions

5.1 Conclusion

This study examines the effects of selling price, advertising, and location on customer loyalty, with service quality as a mediating variable in fast-food outlets in Batam. The findings reveal that selling price influences customer loyalty only indirectly, through service quality, indicating a full mediation effect. In contrast, advertising and location have both direct and indirect effects on customer loyalty, with service quality as a partial mediator. Furthermore, service quality is identified as the most critical determinant of customer loyalty, highlighting its central role in translating marketing strategies into customer retention strategies. These results support the Stimulus-Organism-Response (S-O-R) framework and reinforce the importance of aligning marketing efforts with actual service performance.

5.2 Research Limitations

Although this study provides valuable insights, it has several limitations. First, the research was conducted only in fast-food outlets located in Batam City, which may limit the broader applicability of the findings to different geographical areas and business sectors. Second, this study examined only a specific set of variables, including selling price, advertising, location, service quality, and customer loyalty, while excluding other important factors that may also influence customer behavior, such as customer satisfaction, perceived value, trust, and brand image.

5.3 Suggestions and Directions for Future Research

Future studies should develop a broader research model by including additional variables, such as customer satisfaction or perceived value as sequential mediating variables, and trust and brand image as moderating factors to achieve a more comprehensive explanation of customer loyalty development. Furthermore, comparative research involving different cities, cultural settings, or various types of food service businesses, such as fine-dining and fast-food restaurants, would strengthen the external validity of the results. Longitudinal research is also recommended to observe changes in customer behavior over time and provide deeper insights into the long-term dynamics of customer loyalty.

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Author Contributions

MGI was responsible for concept development, research design, data interpretation, preparation of the manuscript draft, final review, and approval of the manuscript for publication. AER handled the data collection, data processing, literature review, and manuscript revision. RR provided supervision, validated the research results, critically reviewed the manuscript, and reviewed and approved the final version of the manuscript. All authors have carefully reviewed and approved the final version of the manuscript and accept full responsibility for the accuracy and integrity of all aspects of this study.

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