

THE IMPACT OF SERVICE QUALITY ON CUSTOMER LOYALTY TOWARD FOOD DELIVERY APPLICATIONS SERVICES IN MUEANG CHIANG MAI: THE MEDIATING ROLE OF CUSTOMER SATISFACTION*

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Abstract

This study examines the impact of service quality and customer satisfaction on customer loyalty toward food delivery services in Mueang Chiang Mai. The study uses a quantitative research design and collects data from food delivery users in Mueang Chiang Mai through an online questionnaire. The sample includes customers who have used food delivery services within the past three months. The research instrument measures service quality, customer satisfaction, and customer loyalty using a five-point Likert scale. Content validity is confirmed through the Index of Item–Objective Congruence, and reliability is tested using

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Cronbach's alpha, which shows acceptable values. The data are analysed using hierarchical multiple regression analysis to examine both direct and indirect relationships among variables.

The findings show that service quality has a significant positive effect on customer loyalty and customer satisfaction. Customer satisfaction also has a significant positive effect on customer loyalty. However, the results indicate that customer satisfaction does not significantly mediate the relationship between service quality and customer loyalty. This suggests that service quality directly influences customer loyalty without relying strongly on satisfaction as a mediator. The study highlights the importance of consistent and reliable service performance in building customer loyalty in food delivery services. The findings provide useful insights for food delivery platforms and restaurants in improving service strategies and support future academic research in digital service marketing

Keywords: Service quality; Customer satisfaction; Customer loyalty; Food delivery; Chiang Mai

Introduction

The food delivery service industry has become one of the fastest growing service sectors in Thailand in recent years (Kamkankaew et al., 2025). This growth is strongly driven by changes in consumer lifestyle, urban living, and the wide use of smartphones and mobile applications (Somsap & Kamkankaew & Thanitbenjasith, 2025). According to the Thailand Online Food Delivery Market report, the value of the online food delivery market in Thailand was estimated at more than 34,605 billion THB in 2020, with an annual growth rate of around 10–17 percent (Sirikeratikul, 2020). During the COVID-19 period, food delivery services became a key channel for consumers, as dining at restaurants was restricted. As a result, food delivery platforms such as GrabFood, LINE MAN, and

Foodpanda experienced rapid increases in order volume and active users (True Digital Academy, 2025). This situation shows that food delivery services are no longer optional but have become part of daily life for many urban consumers in Thailand, including those in Mueang Chiang Mai.

In Thailand, consumer adoption of food delivery services is very high, especially among working-age groups. A national survey reported that about 85 percent of respondents had used online delivery services, and Generation Y was the largest user group (Chartchawalitsakul, 2020). In major cities, food delivery orders increased sharply, with some periods recording more than one million orders per day nationwide. Chiang Mai is one of the key provincial cities where food delivery platforms continue to expand their service areas and restaurant networks (Wongpaiboon & Jariangprasert, 2021). The strong competition among platforms has led to heavy use of promotions, free delivery, and discount campaigns. However, scholars argue that price competition alone is not sufficient to retain customers in the long term. When service providers offer similar prices and promotions, customers can easily switch between platforms if they are not satisfied with the service quality (Chartchawalitsakul, 2020).

Service quality is therefore an important factor in building customer satisfaction and customer loyalty in the food delivery business. Previous studies have shown that service quality has a direct and positive effect on customer loyalty, and it also influences loyalty indirectly through customer satisfaction (Su et al., 2022; Baum, Lin & Au, 2023; Mangmee & Kookkaew, 2023). In the context of food delivery services in Thailand, service quality includes delivery speed, order accuracy, application usability, payment security, and customer support. Chartchawalitsakul (2020) and Somsap & Kamkankaew & Thanitbenjasith (2025) found that service quality, especially delivery time suitability, had a significant positive effect on customer loyalty toward food delivery services in Thailand.

When customers perceive that a service is reliable and convenient, they are more likely to feel satisfied and continue using the same platform.

Although many studies have examined food delivery services at the national level or in Bangkok, there is still limited research focusing on specific provincial cities such as Mueang Chiang Mai. Chiang Mai has a unique consumer structure that includes local residents, students, digital workers, and tourists, which may influence service expectations and loyalty behavior. Understanding how service quality and customer satisfaction affect customer loyalty in this area is important for both academic and business perspectives. Therefore, this study aims to examine the impact of service quality and customer satisfaction on customer loyalty toward food delivery services in Mueang Chiang Mai. The findings are expected to provide useful insights for food delivery platforms to improve service quality and develop sustainable customer loyalty in a highly competitive market.

Research Objective

To examine the indirect influence of service quality on customer loyalty toward food delivery services in Mueang Chiang Mai, with customer satisfaction as a mediator variable.

Literature review

Customer loyalty

Customer loyalty is widely recognised as a crucial outcome for service firms, especially in competitive and technology-based markets. Customer loyalty refers to a customer's intention to continue using the same service and to maintain a long-term relationship with a service provider (Singh et al., 2023). It is often reflected through repeat purchase behaviour, positive attitudes, and willingness to recommend the service to others (Molinillo et al., 2022). Scholars

explain that loyal customers are valuable because they reduce marketing costs and contribute to stable revenue over time (Khan et al., 2020). In service industries, loyalty does not occur automatically but develops through repeated positive experiences with the service (Jenneboer, Herrando & Constantinides, 2022). Studies in online and digital services also highlight that customer loyalty is more difficult to achieve because customers can easily switch between service providers with low effort (Kamkankaew et al., 2022; Koay, Cheah & Chang, 2022; Limna, & Kraiwanit, 2022)

Previous literature also emphasises that customer loyalty is influenced by several psychological and behavioural factors. Trust, satisfaction, and commitment are frequently identified as the main drivers that strengthen customer loyalty (Magatef et al., 2023). When customers trust a service provider and feel satisfied with past experiences, they are more likely to remain loyal and continue using the same service (Jenneboer, Herrando & Constantinides, 2022). In digital and app-based services, loyalty is strongly related to customers' overall experience and their perception of consistent performance (Kamkankaew et al., 2022). Therefore, customer loyalty in food delivery services can be understood as a long-term outcome that reflects customers' continued usage and positive attitudes toward a specific platform, even in a highly competitive environment.

Service quality

Service quality is a central concept in service marketing and has been widely discussed in academic literature. Service quality refers to customers' overall evaluation of a service based on the comparison between their expectations and their actual service experience (Chowdhury, 2023). Scholars explain that service quality is subjective and is formed through customers' perceptions during service delivery (Su et al., 2000; Thokoa, Naidoo & Herbst, 2022). In service industries, quality is more difficult to control than in product-based businesses because services are intangible and involve direct interaction

between customers and service providers (Shie et al., 2022). Previous studies commonly measure service quality using dimensions such as reliability, responsiveness, assurance, empathy, and tangibles, which together reflect how well a service meets customer needs (Ighomereho et al., 2022; Magasi, Mashenene & Dengenesa, 2022). These dimensions have been applied across many service contexts, including online and technology-based services, to explain how customers judge service performance.

In the context of online food delivery services, service quality has become more complex due to the combination of digital platforms and physical delivery processes. Scholars argue that food delivery service quality includes not only the performance of mobile applications but also delivery speed, order accuracy, food condition, and safety (Somsap & Kamkankaew & Thanitbenjasith, 2025; Norkaew & Kamkankaew, 2025). Kamkankaew, Thongyoy & Phonracharnon (2024) further distinguishes service quality into functional quality, which relates to how the service is delivered, and technical quality, which refers to what customers receive as the final outcome. Recent studies confirm that high service quality in online food delivery has a strong influence on customers' evaluations of the service and their continued use intentions (Hoque et al., 2022). Therefore, service quality in food delivery services can be understood as a multi-dimensional concept that reflects both digital service performance and physical delivery outcomes

Customer satisfaction

Customer satisfaction is one of the most important concepts in service and consumer behavior research. Customer satisfaction refers to a customer's overall evaluation of a service after comparing their expectations with the actual service performance (Eckert, Neunsinger & Osterrieder, 2022). When customers feel that a service meets or exceeds their expectations, satisfaction is formed, which reflects positive emotions and favorable attitudes toward the service provider (Adak, Pradhan & Shukla, 2022). In service industries, satisfaction is considered an outcome of customers' perceptions of service quality, service

value, and prior experiences (Riaz et al., 2022). Previous studies explain that satisfied customers are more likely to continue using a service and to develop trust in the service provider over time (Naini et al., 2022; Ilham et al., 2023; Bannor & Ampsonsah, 2024). In the food delivery context, customer satisfaction is strongly influenced by delivery speed, food condition, order accuracy, and the ease of using mobile applications (Bannor & Ampsonsah, 2024).

In online food delivery services, customer satisfaction has gained increasing attention due to intense competition and low switching costs. Scholars note that customer satisfaction in digital services is shaped by both functional performance and emotional experience during service use (Riaz et al., 2022). When customers experience reliable delivery, clear information, and responsive customer support, they tend to report higher satisfaction levels (Talukder et al., 2022). Empirical studies also confirm that customer satisfaction plays a key role in forming positive post-purchase behavior, such as reuse intention and positive word of mouth (Naini et al., 2022; Cahaya et al., 2023). Therefore, customer satisfaction in food delivery services can be understood as a cumulative evaluation of service experiences, which reflects customers' overall feelings and judgments toward a food delivery platform in daily use.

Conceptual Framework

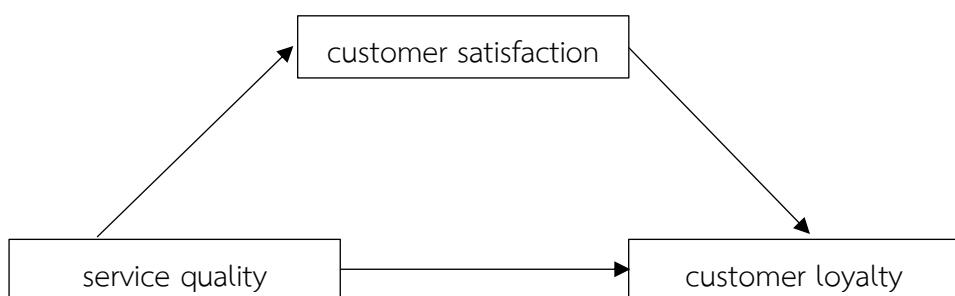


Figure 1 Conceptual Framework

H1 service quality have an influence on customer loyalty toward food delivery services in Mueang Chiang Mai

H2 service quality have an influence on customer satisfaction toward food delivery services in Mueang Chiang Mai

H3 customer satisfaction have an influence on customer loyalty toward food delivery services in Mueang Chiang Mai

H4 service quality have an influence on customer loyalty toward food delivery services in Mueang Chiang Mai, with customer satisfaction as a mediator variable.

Methodology

Population and sample size

The population of this study consists of consumers who have experience using food delivery services in Mueang Chiang Mai. This population includes users of major food delivery platforms who have placed orders through mobile applications within the study area. Because the exact number of food delivery users in Mueang Chiang Mai cannot be clearly identified, this population is considered a large or unknown population. Many scholars suggest that when the population size is unknown or very large, the researcher should define the population based on clear characteristics related to the research objectives, such as usage experience and location (Malhotra, Nunan & Birks, 2020). In this study, the target population is defined as customers who have used food delivery services at least once in the past three months, as they are able to recall their service experience and evaluate service quality, satisfaction, and loyalty more accurately (Hair et al., 2019).

The sample size of this study is determined based on principles commonly used in quantitative research. Cochran (1977) suggests that for large or unknown populations, a sample size of at least 384 respondents is appropriate

to achieve reliable results at a 95 percent confidence level. In addition, Hair et al. (2019) recommends that studies using structural relationship analysis should have an adequate sample size to ensure stable and valid estimates. Therefore, this study selects a sample size that meets these recommendations to ensure statistical accuracy and reliability. The sampling method uses non-probability sampling, specifically convenience sampling, by collecting data from food delivery users in Mueang Chiang Mai who are willing to participate in the survey. This approach is widely used in service and consumer behavior research when access to a complete sampling frame is limited (Sekaran & Bougie, 2016).

Research instrument

The research instrument used in this study is an online structured questionnaire designed to collect data from food delivery service users in Mueang Chiang Mai. The questionnaire is divided into four main sections: demographic information, service quality, customer satisfaction, and customer loyalty. All measurement items for service quality, customer satisfaction, and customer loyalty are adapted from well-established studies to ensure content validity. Content validity is assessed using the Index of Item-Objective Congruence (IOC), with IOC values ranging from 0.700 to 1.000, which indicates that all items are appropriate and clearly reflect the research objectives (Jusoh, Zubairi & Badrasawi, 2018). The questionnaire items are measured using a five-point Likert scale. The reliability of the research instrument is tested using Cronbach's alpha coefficient. The results show that the reliability values range from 0.785 to 0.895, which exceed the acceptable threshold of 0.70 and indicate good internal consistency (Taber, 2018). Therefore, the research instrument is considered valid and reliable for data collection and analysis.

Data collecting

Data collection in this study is conducted using a questionnaire survey distributed to users of food delivery services in Mueang Chiang Mai. The

questionnaire is administered through online platforms, such as social media and messaging applications, to reach respondents who have experience using food delivery applications. Online data collection is suitable for this study because food delivery services are mainly accessed through digital platforms, and respondents are familiar with online communication channels (Sekaran & Bougie, 2016). Before collecting the main data, the questionnaire is reviewed to ensure clarity and relevance of the questions. Respondents are informed about the purpose of the study and assured that their responses are confidential and used only for academic purposes. This data collection method allows the researcher to gather information efficiently from a large number of respondents within a limited time period and supports accurate analysis of service quality, customer satisfaction, and customer loyalty.

Data analysis

Data analysis in this study is conducted using hierarchical multiple regression analysis. This method is suitable for examining both direct and indirect relationships among variables based on the research objectives. In the first step of the analysis, service quality is entered into the regression model to examine its direct influence on customer loyalty toward food delivery services in Mueang Chiang Mai. In the second step, customer satisfaction is added to the model to examine its mediating role in the relationship between service quality and customer loyalty.

Result

Results of the normality test of the data.

The normality of the data was examined using descriptive statistics, including mean, standard deviation, skewness (SK), and kurtosis (KU). The results in Table 1 show that customer loyalty (CUL) has a mean of 4.30 with a skewness value of 1.893 and a kurtosis value of 0.444. Service quality (SEQ) has a mean of

4.56, with skewness and kurtosis values of 0.635 and 0.696, respectively. Customer satisfaction (CUS) reports a mean of 4.27, with skewness of 0.294 and kurtosis of 1.312. Scholars suggest that data can be considered approximately normal when skewness and kurtosis values fall within the acceptable range of ± 2 (Mardia, Kent & Taylor, 2024) or ± 3 (Kline, 2023). Based on these criteria, all variables in this study meet the normality assumption. Therefore, the data are suitable for further analysis using hierarchical multiple regression, as required by the research objectives.

Table 1 Results of the normality test of the data

Variable	Mean	S.D.	SK	KU
customer loyalty (CUL)	4.30	0.495	1.893	0.444
service quality (SEQ)	4.56	0.548	0.635	0.696
customer satisfaction (CUS)	4.27	0.427	0.294	1.312

Results of the linear relationship test among variables

The linear relationship among the study variables was examined using correlation analysis, as shown in Table 2. The results indicate that service quality (SEQ) has a strong and positive relationship with customer loyalty (CUL), with a correlation coefficient of 0.785, which is statistically significant at the 0.01 level. Customer satisfaction (CUS) also shows a strong and positive relationship with customer loyalty, with a correlation coefficient of 0.785, significant at the 0.01 level. In addition, service quality and customer satisfaction are positively related, with a correlation coefficient of 0.768 at the 0.01 significance level. Scholars suggest that correlation coefficients below 0.80 indicate strong but acceptable linear relationships without causing multicollinearity problems (Mardia, Kent & Taylor, 2024). This is supported by tolerance values above 0.10 and VIF values below 5, which confirm that multicollinearity is not a concern in this study (Kline,

2023). Therefore, the results confirm that the variables have appropriate linear relationships and are suitable for hierarchical multiple regression analysis.

Table 2 Results of the linear relationship test among variables

	CUL	SEQ	CUS	Tolerance	VFI
CUL	1.000				
SEQ	0.785**	1.000		0.542	1.845
CUS	0.785**	0.768**	1.000	0.545	1.822

Note: ** indicates statistical significance at the 0.01 level.

Hypothesis testing results

Based on the research objectives, this study aims to examine the indirect influence of service quality on customer loyalty toward food delivery services in Mueang Chiang Mai, with customer satisfaction as a mediator variable. The results of this research are presented below.

The first step of the analysis

The results of the first step analysis support Hypothesis 1, which proposes that service quality has an influence on customer loyalty toward food delivery services in Mueang Chiang Mai. The analysis shows that service quality has a positive and significant effect on customer loyalty, with a regression coefficient of $b = 0.306$ and a standardized coefficient of $\beta = 0.553$. The t -value of 4.283 and the significance level of $p < 0.05$ indicate that this relationship is statistically significant. The model also presents a strong correlation value ($R = 0.799$), with an R -square of 0.638 and an adjusted R -square of 0.620, indicating that service quality explains a substantial proportion of the variance in customer loyalty. Therefore, Hypothesis 1 is supported by the empirical results.

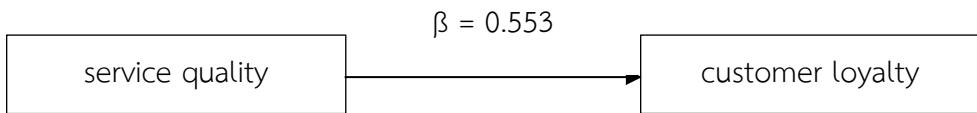


Figure 2 The first step of the analysis

The second step of the analysis

The results of the second step of the regression analysis support Hypothesis 2, which states that service quality has an influence on customer satisfaction toward food delivery services in Mueang Chiang Mai. The findings show that service quality has a positive and significant effect on customer satisfaction, with a regression coefficient of $b = 0.594$ and a standardized coefficient of $\beta = 0.687$. The t-value of 6.87 and the significance level of $p < 0.05$ confirm that this relationship is statistically significant. The model shows a correlation value of $R = 0.687$, with an R-square of 0.472 and an adjusted R-square of 0.459. These results indicate that service quality explains a meaningful proportion of the variance in customer satisfaction. Therefore, Hypothesis 2 is supported by the empirical results.

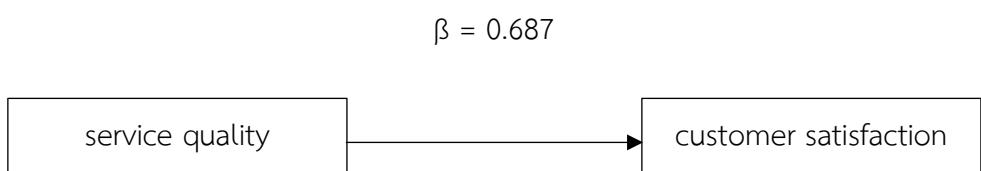


Figure 3 The second step of the analysis

The third step of the analysis

The results of the third step of the regression analysis support Hypothesis 3, which states that customer satisfaction has an influence on customer loyalty toward food delivery services in Mueang Chiang Mai. The findings indicate that

customer satisfaction has a positive and significant effect on customer loyalty, with a regression coefficient of $b = 0.419$ and a standardized coefficient of $\beta = 0.670$. The t-value of 0.67 and the significance level of $p < 0.05$ indicate that the relationship is statistically significant. The model shows a correlation value of $R = 0.671$, with an R-square of 0.449 and an adjusted R-square of 0.436. These results suggest that customer satisfaction explains a substantial proportion of the variance in customer loyalty. Therefore, Hypothesis 3 is supported by the empirical results.

$$\beta = 0.670$$



Figure 4 The second step of the analysis

The fourth step of the analysis

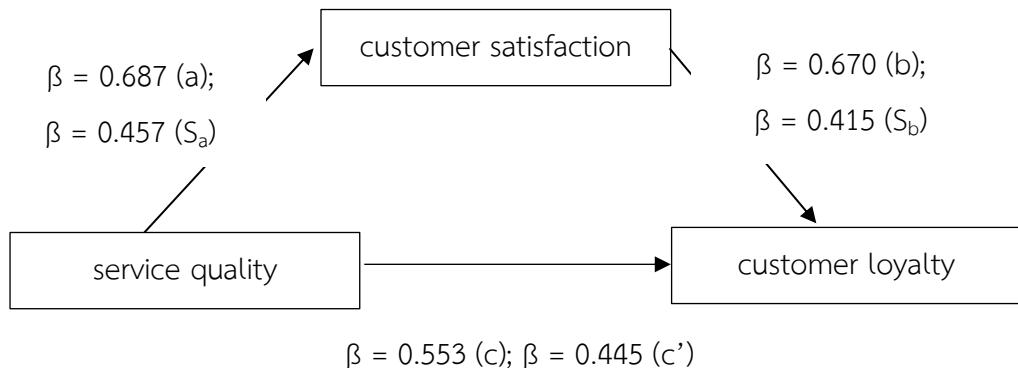


Figure 5 The fourth step of the analysis

The results of the mediation analysis in the fourth step examine Hypothesis 4, which proposes that service quality influences customer loyalty through customer satisfaction. The findings show that service quality has a

significant positive effect on customer satisfaction ($\beta = 0.687$, path a) and customer satisfaction has a significant positive effect on customer loyalty ($\beta = 0.670$, path b). In addition, service quality has a significant direct effect on customer loyalty before the mediator is included ($\beta = 0.553$, path c). After customer satisfaction is added to the model, the direct effect of service quality on customer loyalty decreases to $\beta = 0.445$ (path c'). This reduction indicates that customer satisfaction may play a role in explaining the relationship between service quality and customer loyalty, as suggested by Baron and Kenny (1986).

However, the Sobel test results show that the indirect effect of service quality on customer loyalty through customer satisfaction is not statistically significant. The Sobel test value is 1.100, with a p-value of 0.271, which is higher than the 0.05 significance level. Similar results are found for the Aroian and Goodman tests, which also report p-values greater than 0.05. Scholars suggest that when the Sobel test is not significant, the mediating effect cannot be confirmed (Sobel, 1982 cited in Abu-Bader & Jones, 2021). Therefore, although service quality and customer satisfaction both have significant direct effects on customer loyalty, customer satisfaction does not significantly mediate the relationship between service quality and customer loyalty. As a result, Hypothesis 4 is not supported.

Table 3 Results of Hypothesis Testing

Hypothesis	Hypothesis Testing
H1 service quality have an influence on customer loyalty toward food delivery services in Mueang Chiang Mai	Accepted
H2 service quality have an influence on customer satisfaction toward food delivery services in Mueang Chiang Mai	Accepted

H3 customer satisfaction have an influence on customer loyalty toward food delivery services in Mueang Chiang Mai	Accepted
H4 service quality have an influence on customer loyalty toward food delivery services in Mueang Chiang Mai, with customer satisfaction as a mediator variable.	Unaccepted

Discussion

The findings of this study confirm that service quality has a significant influence on customer loyalty toward food delivery services in Mueang Chiang Mai, which supports Hypothesis 1. This result is consistent with prior studies that explain customer loyalty as a long-term outcome of positive service experiences (Su et al., 2022; Thokoa, Naidoo & Herbst, 2022; Baum, Lin & Au, 2023; Norkaew & Kamkankaew, 2025). In the food delivery context, high service quality such as fast delivery, accurate orders, and reliable application performance helps customers develop trust and positive attitudes toward the platform. When customers perceive that a service performs well and meets their expectations, they are more likely to continue using the same service and recommend it to others. This finding also supports earlier research in digital services, which suggests that service quality plays a key role in retaining customers in markets where switching costs are low (Magasi, Mashenene & Dengenesa, 2022; Shie et al., 2022; Chowdhury, 2023).

The results also show that service quality has a strong and significant influence on customer satisfaction, which supports Hypothesis 2. This finding aligns with service marketing theory, which explains that customer satisfaction is formed through customers' evaluations of service quality (Koay, Cheah & Chang, 2022; Baum, Lin & Au, 2023; Hoque et al., 2023). In food delivery services,

customers evaluate both digital and physical aspects of service quality, such as application usability, delivery time, food condition, and safety. When these elements perform well, customers feel satisfied with the service experience. This result is consistent with recent studies in online food delivery, which confirm that service quality is a key driver of satisfaction in app-based services (Somsap, Kamkankaew & Thanitbenjasith, 2025).

In addition, the findings support Hypothesis 3 by showing that customer satisfaction has a significant influence on customer loyalty toward food delivery services in Mueang Chiang Mai. This result supports earlier research that identifies satisfaction as a key predictor of loyalty in service industries (Adak, Pradhan & Shukla, 2022; Limna & Kraiwant, 2022; Ilham et al., 2023). When customers feel satisfied with their past experiences, they are more likely to reuse the service, show positive attitudes, and develop loyalty over time. In the highly competitive food delivery market, satisfied customers are less likely to switch to other platforms, even when many alternatives are available. This finding is also consistent with recent studies that highlight the importance of customer satisfaction in shaping reuse intention and positive word of mouth in digital services (Riaz et al., 2022; Talukder et al., 2022; Bannor & Ampsonah, 2024).

The results of this study show that Hypothesis 4 is not supported, as customer satisfaction does not significantly mediate the relationship between service quality and customer loyalty toward food delivery services in Mueang Chiang Mai. Although service quality has a strong and significant influence on customer satisfaction, and customer satisfaction also has a significant influence on customer loyalty, the indirect effect tested by the Sobel test is not statistically significant. This finding suggests that service quality affects customer loyalty mainly through a direct path rather than through customer satisfaction. This result differs from some prior studies that suggest satisfaction often plays a mediating role between service quality and loyalty (Thokoa, Naidoo & Herbst, 2022; Baum,

Lin & Au, 2023; Chowdhury, 2023). In this context, customers may form loyalty based on direct service performance, such as delivery speed and order accuracy, without relying strongly on their overall satisfaction evaluation. This finding can be explained by the highly competitive nature of food delivery services and the low switching cost in digital platforms. Previous studies note that in online and app-based services, customers can easily change service providers even when they feel satisfied, because many platforms offer similar functions and promotions (Eckert, Neunsinger & Osterrieder, 2022; Riaz et al., 2022; Bannor & Amponsah, 2024; Norkaew & Kamkankaew, 2025). As a result, service quality may directly shape loyalty behavior through repeated use and convenience, rather than indirectly through satisfaction alone. This suggests that food delivery providers in Mueang Chiang Mai should focus not only on improving customer satisfaction but also on maintaining consistent and reliable service quality to strengthen customer loyalty in a competitive market (Magasi, Mashenene & Dengenesa, 2022; Chowdhury, 2023; Somsap, Kamkankaew & Thanitbenjasith, 2025).

Recommendation

Recommendation for food delivery applications

Based on the findings of this study, food delivery applications in Mueang Chiang Mai should place strong emphasis on improving service quality as a core strategy for building customer loyalty. Service providers should focus on key service elements such as fast and reliable delivery, accurate order fulfillment, and stable application performance. Improving coordination between restaurants and delivery riders can help reduce delays and errors, which directly affect customers' decisions to continue using the service. In addition, food delivery platforms should ensure that their applications are easy to use, provide clear order information, and support smooth payment processes. Consistent service

quality can help customers develop trust and positive attitudes toward the platform, which encourages repeat use and long-term loyalty.

Food delivery applications should also continue to enhance customer satisfaction by improving the overall service experience. This includes maintaining food quality during delivery, ensuring food safety, and providing responsive customer support when problems occur. Although customer satisfaction does not play a strong mediating role, it still has a direct influence on customer loyalty. Therefore, service providers should regularly collect customer feedback and use it to improve service processes. In a highly competitive market with low switching costs, maintaining stable and reliable service quality is essential. By focusing on both service performance and customer experience, food delivery applications in Mueang Chiang Mai can strengthen customer loyalty and remain competitive in the long term.

Recommendation for shops on food delivery applications

Based on the findings of this study, shops operating on food delivery applications in Mueang Chiang Mai should focus on improving service quality at the shop level to strengthen customer loyalty. Shops should pay close attention to order accuracy, food preparation time, and food quality before handing orders to delivery riders. Clear menus, correct pricing, and accurate order details can help reduce mistakes and customer complaints. Shops should also ensure that food is packed properly to maintain freshness, temperature, and safety during delivery. Consistent service performance can help customers build trust in the shop and increase the chance of repeat orders through food delivery platforms.

Shops should also focus on increasing customer satisfaction by improving overall customer experience. This includes responding quickly to special requests, maintaining hygiene standards, and providing consistent food quality across orders. Shops can use customer reviews and ratings on food delivery applications as feedback to improve their service and food quality. Although

customer satisfaction does not strongly mediate the relationship between service quality and loyalty, it still has a direct effect on repeat purchase behavior. In a competitive food delivery market with many similar shops, maintaining stable service quality and positive customer experiences can help shops retain customers and remain competitive over time.

Recommendation for academia and future research

Based on the findings of this study, future research should further explore the relationship between service quality, customer satisfaction, and customer loyalty in different service contexts and locations. Since customer satisfaction was not found to be a significant mediator, future studies may include additional mediating or moderating variables, such as trust, perceived value, price fairness, or promotional strategies, to better explain customer loyalty in food delivery services. Researchers may also apply different research methods, such as structural equation modeling or qualitative approaches, to gain deeper understanding of customer behavior. In addition, future studies should consider comparing results across different cities or regions to identify contextual differences. These approaches can help expand academic knowledge and provide a more comprehensive explanation of customer loyalty in digital and service-based markets.

References

Abu-Bader, S., & Jones, T. V. (2021). Statistical mediation analysis using the sobel test and hayes SPSS process macro. *International Journal of Quantitative and Qualitative Research Methods*.

Adak, A., Pradhan, B., & Shukla, N. (2022). Sentiment analysis of customer reviews of food delivery services using deep learning and explainable artificial intelligence: Systematic review. *Foods*, 11(10), Article 1500.

Bannor, R. K., & Ampsonah, J. (2024). The emergence of food delivery in Africa: A systematic review. *Sustainable Technology and Entrepreneurship*, 3, Article 100062.

Baum, T., Lin, P., & Au, W. C. W. (2023). Service quality of online food delivery mobile application: an examination of the spillover effects of mobile app satisfaction. *International journal of contemporary hospitality management*, 36(3), 906-926.

Cahaya, Y. F., Siswanti, I., Putra, Y. M., & Pattiwael, A. C. (2023). Contributions to customer satisfaction from product quality, promotion and price. *Journal of Economics, Finance and Management Studies*, 6(6), 2434–2440.

Chartchawalitsakul, P. (2020). The service quality affecting customer loyalty toward food delivery service in Thailand. Master's independent study, Chulalongkorn University.

Chowdhury, R. (2023). Impact of perceived convenience, service quality and security on consumers' behavioural intention towards online food delivery services: The role of attitude as mediator. *SN Business & Economics*, 3, Article 29.

Cochran, W. G. (1977). Sampling techniques. John Wiley & Sons.

Eckert, C., Neunsinger, C., & Osterrieder, K. (2022). Managing customer satisfaction: Digital applications for insurance companies. *The Geneva Papers on Risk and Insurance—Issues and Practice*, 47, 569–602.

Hoque, U. S., Akhter, N., Absar, N., Khandaker, M. U., & Al-Mamun, A. (2023). Assessing service quality using SERVQUAL model: An empirical study on some private universities in Bangladesh. *Trends in Higher Education*, 2, 255–269.

Ighomereho, O. S., Ojo, A. A., Omoyele, O. S., & Olabode, O. S. (2022). From service quality to e-service quality: Measurement, dimensions and model. *Journal of Management Information and Decision Sciences*, 25(1), 1–15.

Ilham, I., Widjaja, W., Sutaguna, I. N. T., Rukmana, A. Y., & Yusuf, M. (2023). Digital marketing's effect on purchase decisions through customer satisfaction. *CEMERLANG: Jurnal Manajemen dan Ekonomi Bisnis*, 3(2), 185–202.

Jenneboer, L., Herrando, C., & Constantinides, E. (2022). The impact of chatbots on customer loyalty: A systematic literature review. *Journal of Theoretical and Applied Electronic Commerce Research*, 17(1), 212–229.

Jusoh, Z., Zubairi, A. M., & Badrasawi, K. J. (2018). Validity evidence using expert judgment: A study of using item congruence involving expert judgements for evidence for validity of a reading test. *Al-Shajarah: Journal of the International Institute of Islamic Thought and Civilisation (ISTAC)*, 307-320.

Kamkankaew, P., Sribenjachot, S., Wongmahatlek, J., Phattarowas, V., & Khumwongpin, S. (2022). Reconsidering the mystery of digital marketing strategy in the technological environment: Opportunities and challenges in digital consumer behavior. *International Journal of Sociologies and Anthropologies Science Reviews*, 2(4), 43-60.

Kamkankaew, P., Thanitbenjasith, P., Sribenjachot, S., Phattarowas, V., Thanin, P., & Khumwongpin, S. (2025). The Future of Digital Marketing: What Lies Ahead?. *International Journal of Sociologies and Anthropologies Science Reviews*, 5(2), 1-28.

Kamkankaew, P., Thongyoy, P., & Phonracharnon, Y. (2024). From Clicks to Satisfaction: A Study on How Customer-Based Brand Equity Shapes Customer Satisfaction in Online Food Delivery Realm for Generation Z in Lampang Province, Thailand. *International Journal of Sociologies and Anthropologies Science Reviews*, 4(2), 109-124.

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

Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford publications.

Koay, K. Y., Cheah, C. W., & Chang, Y. X. (2022). A model of online food delivery service quality, customer satisfaction and customer loyalty: a combination of PLS-SEM and NCA approaches. *British Food Journal*, 124(12), 4516-4532.

Limna, P., & Kraiwanit, T. (2022). Service quality and its effect on customer satisfaction and customer loyalty: A qualitative study of Muang Thai Insurance Company in Krabi, Thailand. *Journal for Strategy and Enterprise Competitiveness*, 1(2), 1-16.

Magasi, C., Mashenene, R. G., & Degenesa, D. M. (2022). Service quality and students' satisfaction in Tanzania's higher education: A re-examination of SERVQUAL model. *International Review of Management and Marketing*, 12(3), 18-25.

Magatef, S., Al-Okaily, M., Ashour, L., & Abuhussein, T. (2023). The impact of electronic customer relationship management strategies on customer loyalty: A mediated model. *Journal of Open Innovation: Technology, Market, and Complexity*, 9, Article 100149.

Malhotra, N. K., Nunan, D., & Birks, D. F. (2020). *Marketing research*. Pearson UK.

Mangmee, N., & Kookkaew, P. (2023). Service quality and customer relationship management to customer loyalty on credit products of Kasikorn Bank in Suphanburi, Thailand. *Asian Administration & Management Review*, 6(1).

Mardia, K. V., Kent, J. T., & Taylor, C. C. (2024). *Multivariate analysis*. John Wiley & Sons.

Molinillo, S., Aguilar-Illescas, R., Anaya-Sánchez, R., & Carvajal-Trujillo, E. (2022). The customer retail app experience: Implications for customer loyalty. *Journal of Retailing and Consumer Services*, 65, Article 102842.

Naini, N. F., Santoso, S., Andriani, T. S., Claudia, U., & Nurfadillah. (2022). The effect of product quality, service quality, customer satisfaction on customer loyalty. *Journal of Consumer Sciences*, 7(1), 34–50.

Norkaew, S & Kamkankaew, P. (2025). The Influence Of Service Quality On The Satisfaction Of Service Recipients At Li District Revenue Office, Lamphun Province. *Journal of Interdisciplinary Social Development*, 3(6), 593-609.

Riaz, H., Davidaviciene, V., Ahmed, H., & Meidute-Kavaliauskiene, I. (2022). Optimizing customer repurchase intention through cognitive and affective experience: An insight of food delivery applications. *Sustainability*, 14(19), Article 12936.

Riaz, H., Davidaviciene, V., Ahmed, H., & Meidute-Kavaliauskiene, I. (2022). Optimizing customer repurchase intention through cognitive and affective experience: An insight of food delivery applications. *Sustainability*, 14(19), Article 12936.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. john wiley & sons.

Shie, A.-J., Huang, Y.-F., Li, G.-Y., Lyu, W.-Y., Yang, M., Dai, Y.-Y., Su, Z.-H., & Wu, Y. J. (2022). Exploring the relationship between hospital service quality, patient trust, and loyalty from a service encounter perspective in elderly with chronic diseases. *Frontiers in Public Health*, 10, Article 876266.

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

Sirikeratikul, S. (2020, May 29). Thailand online food delivery market (Report No. TH2020-0077). U.S. Department of Agriculture, Foreign Agricultural Service.

Somsap, A., Kamkankaew, P & Thanitbenjasith, P. (2025). The Influence Of Perceived Product Value, Satisfaction, Sales Promotion, And Service Value Orientation On Repurchase Intention Among Food Delivery Users

Via Grab Food And Line Man Applications In Mueang District, Roi Et Province. *Modern Academic Development and Promotion Journal*, 3(2), 1221-1247.

Su, D. N., Nguyen-Phuoc, D. Q., Duong, T. H., Dinh, M. T. T., Luu, T. T., & Johnson, L. (2022). How does quality of mobile food delivery services influence customer loyalty? Grönroos's service quality perspective. *International Journal of Contemporary Hospitality Management*, 34(11), 4178–4205.

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in science education*, 48(6), 1273-1296.

Talukder, A. A. T., Mahmud, M. A. I., Sultana, A., Pranto, T. H., Haque, A. B., & Rahman, R. M. (2022). A customer satisfaction centric food delivery system based on blockchain and smart contract. *Journal of Information and Telecommunication*, 6(4), 501–524.

Thokoa, R. L., Naidoo, V., & Herbst, T. H. H. (2022). A review of service quality: Case of the National Treasury of South Africa. *Africa's Public Service Delivery and Performance Review*, 10(1), Article a567.

True Digital Academy. (2025, May 2). Food delivery fierce competition: Who is the market leader in Thailand now?. Retrieved May 18, 2025, from <https://www.truedigitalacademy.com/>

Wongpaiboon, S., & Jariangprasert, N. (2021). Consumer behavior of Generation Y in Mueang Chiang Mai district towards using food delivery services via mobile applications. *Chiang Mai University Journal of Business Administration*, 7(3), 359–366.