

# The Impact of 4Ps Marketing Mix on Customer Satisfaction toward Meituan Application

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## Research Articles

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## Abstract

This research aims to study the level of customer satisfaction on Meituan application based on 4Ps marketing mix and to investigate the impact of 4Ps marketing mix strategy on customer satisfaction of Meituan application. The population are Meituan application customers in Nanning City, Guangxi Province which have infinite numbers. Sample size was determined according to Rosco formula (1969) at 0.05 significance level which resulted in 384. However, this study distributed and collected a total of 500 questionnaires from variety Meituan customers groups such as white-collar workers and students. The data obtained then analyzed using correlations and a multiple regression model. The results show that the overall level of customer satisfaction on Meituan application is moderate. However, customer satisfaction on promotion is at high level. The regression analysis finds that 4Ps marketing mix simultaneously has significant impact on customer satisfaction. Moreover, 4Ps marketing mix; product, price, place, and promotion, individually have significant positive effect on customer satisfaction of Meituan application. Specifically, the study demonstrates that higher product quality and varieties lead to higher customer satisfaction.; secondly, in terms of price, reasonable prices are related to customer satisfaction. Satisfaction is positively correlated; in terms of place, convenience is positively correlated with Meituan customer satisfaction, and users are more inclined to choose the nearest service place; finally, in terms of promotion, timely launch of promotions can effectively improve customer satisfaction.

**Keywords:** Marketing Mix Strategy, Customer satisfaction, Meituan application.

## Introduction

In the current era of globalization and digitization, the rapid advancement of mobile internet technology has brought about significant transformations in the restaurant industry. Against this backdrop, online food delivery platforms have emerged swiftly, becoming a pivotal channel to meet people's daily dining needs (Lissitsa, Kol, & services, 2016). Among these, Meituan Application, as one of the leading online food delivery platforms in China, has gradually established itself as a representative enterprise. However, with the intensifying competition in the food delivery market, customer satisfaction and loyalty have become even more critical. In this context, understanding and enhancing customer satisfaction have become key factors in maintaining a competitive edge in the market.

In the region of Guangxi Province, the food delivery industry is also experiencing robust growth. As one of the major economic centers in southwestern China, Guangxi has witnessed widespread adoption of food delivery services, bringing convenience to people's daily lives. In particular, in Nanning city, the capital and economic hub of Guangxi Province, the food delivery sector has experienced rapid development. With platforms like Meituan playing a significant role, the market competition has become increasingly intense.

Therefore, this research uses empirical analysis, based on the "4P" theory, from the four influencing factors of product, price, place, and promotion, to study the degree of influence of Marketing strategy on customer satisfaction, and tries to explore and study the relationship between Marketing strategy and customer satisfaction (Cai & Cude, 2016).

Marketing strategy has consistently been considered one of the vital factors influencing customer satisfaction. Hence, conducting an in-depth study into how marketing strategy affects customer satisfaction within the Meituan application holds paramount practical importance. In the context of mobile applications and food delivery industries, multiple elements in the 4P marketing mix influence marketing strategy (Sukamto & Lumintan, 2015). The impact of the marketing mix on customer satisfaction is explored (Azhar, Jufrizen, Prayogi, & Sari, 2019). Through descriptive and multiple linear regression methods, it is concluded that marketing mix has a significant impact on customer satisfaction. This research provides guidance for businesses in formulating more effective operational strategies, comprehending user needs and expectations, enhancing user experiences, and driving advancements within the food and beverage industry. Through an examination of how marketing strategy influences customer satisfaction among users of the Meituan application, valuable insights can be

extended to practitioners and researchers within the food and beverage sector. These insights can offer pertinent guidance on enhancing competitiveness and meeting customer demands, thereby encompassing essential practical and theoretical significance.

## Objectives

1. To study the level of customer satisfaction on Meituan application based on 4Ps marketing mix.
2. To analyze the impact of product Marketing strategy on customer satisfaction toward Meituan Application.
3. To analyze the impact of price Marketing strategy on customer satisfaction toward Meituan Application.
4. To analyze the impact of place Marketing strategy on customer satisfaction toward Meituan Application.
5. To analyze the impact of promotion Marketing strategy on customer satisfaction toward Meituan Application.

## Research Hypothesis

This study is based on the 4Ps marketing mix and aims to explore how marketing strategy affects customer satisfaction on Meituan application service. Within this framework, we propose the following research hypotheses:

**Product Hypothesis:** There is a positive impact of product on customer satisfaction. We hypothesize that improving product quality will significantly enhance customer satisfaction.

**Price Hypothesis:** There is positive impact of price on customer satisfaction. Reasonable pricing strategies will have a positive impact on customer satisfaction with Meituan application service. We assume that moderate price reductions or providing valuable coupons and discounts will increase customer satisfaction.

**Place Hypothesis:** There is positive impact of place on customer satisfaction. There is a positive relationship between providing efficient and timely application services and customer satisfaction. We speculate that high-quality application services can enhance customer satisfaction.

**Promotion Hypothesis:** There is positive impact of promotion on customer satisfaction. Positive promotional activities will lead to higher customer satisfaction with Meituan application service. We predict that appealing promotional strategies will positively influence the enhancement of customer satisfaction.

## Research Framework

### 1. Independent Variable

Product: This encompasses the completeness of product functionality, user interface friendliness, service quality, accuracy, and the degree of customer personalization.

Price: This refers to the relative competitiveness of prices, discounts, the convenience of payment methods within the application, and the alignment of prices with the quality of services provided.

Place: This refers to the extent of service coverage, the speed and punctuality of meal delivery, the reliability of delivery and pickup methods, and user preferences and choices regarding delivery channels.

Promotion: This encompasses the attractiveness of promotional activities, the effectiveness of advertising campaigns, the appeal of user reward programs, and the alignment of marketing strategies with user expectations.

### 2. Dependent Variable

Customer satisfaction refers to the outcome demonstrated by customers after comparing the actual results of consuming a product or service with their psychological expectations. This article views customer satisfaction as the result of customers comparing their expectations of the services provided by the Meituan application with the actual services received.

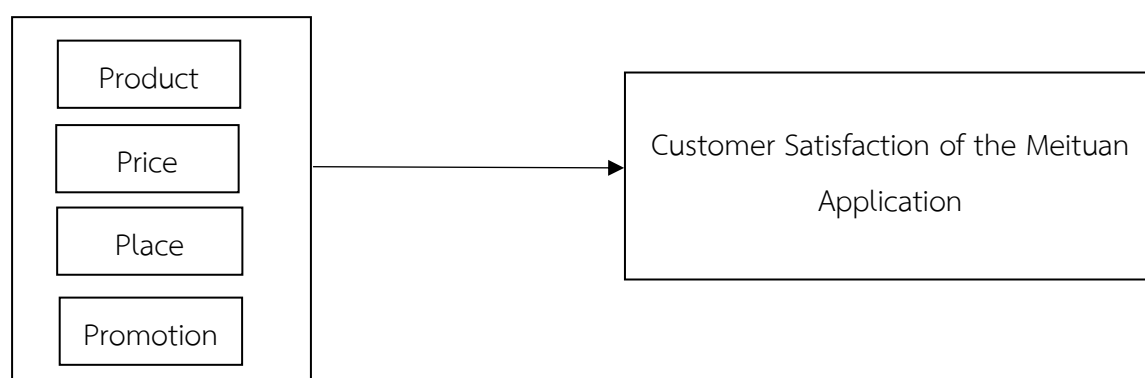


Figure 1 Conceptual Framework

## Research Methodology

### 1. Population and sample

The population are Meituan application customers in Nanning City, Guangxi Province. The sample of this study includes a total of 500 Meituan customers collected from different customer groups.

This research adopted the method of issuing questionnaires online through "Questionnaire Star" to cope with the instability of the total population of the survey. A total of 530 questionnaires were issued, and 500 valid questionnaires, with an effective rate of 94.3%. This study will be analyzed based on these 500 valid questionnaire data.

## **2. Research Tools**

Collection tool type: Questionnaire.

A questionnaire is created through the following steps:

According to the research framework of this article, the researchers used the Google Scholar platform to search relevant academic papers, journal articles and other literature works, and drew on relevant research literature to design the relevant questions in this questionnaire.

Determine the problem and scope of the problem, ensure that it is consistent with the objectives, and conducting research by constructing a questionnaire.

## **3. Data Collection**

The sample of this research are Meituan application customers in Nanning City, Guangxi Province, including customers of different ages, genders, occupations and consumption types. Wait for some questionnaires that are not collected by yourself.

Pay attention to the questionnaire results of the "Questionnaire Star" APP every day and keep abreast of the progress of the survey data. It is expected that the volume of survey data will reach 500 within 10 days.

The completeness of the questionnaire framework will be checked based on the obtained questionnaire data. If there is missing data, further information will be collected to complete it.

Before official launch, pre-test the questionnaire to ensure that the questions are clear, easy to understand, and that useful data can be collected.

The collected data were analyzed using logistic models to study the impact of independent variables on customer satisfaction.

## **4. Data Analysis**

After the questionnaires were returned, the researchers manually checked all questionnaires for accuracy and completeness. The questionnaires were then computer coded and processed. By using off-the-shelf programs, the data are then subjected to statistical analysis. and in interpreting the meaning of all data obtained and presenting the results.

## Result

1. Studying the level of customer satisfaction on Meituan application based on 4Ps marketing mix yields that the overall mean of customer satisfaction is at moderate level and details as shown in Table 1.

**Table 1** Shows the mean and standard deviation of Meituan APP customer satisfaction variables (total)

	$\bar{X}$	S.D.	MIN	MAX	Mean Interpretation Criteria
X1: Product	3.446	0.786	1	5	moderate level
X2: Price	3.433	0.831	1	5	moderate level
X3: Place	3.435	0.769	1	5	moderate level
X4: Promotion	3.502	0.669	1	5	high level
Y: Meituan APP customer satisfaction	3.392	0.703	1	5	moderate level
Total	3.44	0.75	1	5	moderate level

From Table 1, the overall survey results of Meituan APP customer satisfaction (total).

The level in almost all aspects is at moderate level and the overall level is moderate level. ( $\bar{X}$  = 3.44). In terms of mean values from highest to lowest, promotion "X4" has the highest mean value ( $\bar{X}$  = 3.502) followed by the mean value of product "X1" is ( $\bar{X}$  = 3.446), place "X3" with a mean value of ( $\bar{X}$  = 3.435), and the mean value of the price "X2" is ( $\bar{X}$  = 3.43) subsequently. Finally, the observable variable "Y" reports the lowest mean ( $\bar{X}$  = 3.39).

6.2 Analyzing the impact of 4Ps marketing mix strategies on customer satisfaction toward Meituan application, results as shown in Table 2 and 3.

Results of the correlation revealed that the 4Ps marketing mix individually has significant relationship with customer satisfaction as show in Table 2.

**Table 2** Correlation coefficient analysis results of factors influencing 4P marketing mix on Meituan APP customer satisfaction.

Factor	Y	Product	Price	Place	Promotion
Y	1				
Product	0.803**	1			
Price	0.783**	0.820**	1		
Place	0.758**	0.723**	0.761**	1	
Promotion	0.914**	0.918**	0.915**	0.874**	1

**Table 3** The results of the analysis of the regression coefficient

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
	-0.069	0.022		-3.064	0.002
Product (X1)	0.253	0.010	0.283	25.045	0.000
Price (X2)	0.253	0.010	0.299	25.627	0.000
Place (X3)	0.239	0.011	0.262	22.331	0.000
Promotion (X4)	0.257	0.011	0.245	24.409	0.000

R<sup>2</sup> = 0.986, \*P < 0.05

From Table 3, The results of the analysis of the regression coefficient X affect Y. It can be seen that the model formula is:  $Y = -0.069 + 0.253 \cdot X_1 + 0.253 \cdot X_2 + 0.239 \cdot X_3 + 0.257 \cdot X_4$

The R-squared value of the obtained model was 0.986. That is, 4Ps marketing mix; product, price, place, and promotion, can explain 98.6% of the Meituan APPLICATION customer satisfaction.

When performing F-test on the model, it was found that the model passed the F-test (F=7031.423,  $p = 0.000 < 0.05$ ), indicating that the satisfaction of at least one of the factors product, price, place, and promotion will have an impact on customer satisfaction. In addition, a multicollinearity test was performed on the model and it was found that all variance inflation factor values in the model were less than 5, indicating that there was no collinearity problem; While the D-W value was close to the number 2, indicating that there was no autocorrelation in the model and no correlation between the sample data. It shows that the model is better.

The regression coefficient value of product (x1) is 0.253 (t=25.045,  $p = 0.000 < 0.01$ ), indicating that the product has a significant positive impact on Meituan application customer satisfaction (Y).

The regression coefficient value of price (x2) is 0.253 (t=25.627,  $p = 0.000 < 0.01$ ), indicating that price will have a significant positive impact on Meituan application customer satisfaction (Y).

The regression coefficient value of place (x3) is 0.239 (t=22.331, p=0.000<0.01), indicating that place will have a significant positive impact on Meituan application customer satisfaction (Y).

The regression coefficient value of promotion (x4) is 0.257 (t=24.409, p=0.000<0.01), indicating that promotion will have a significant positive impact on Meituan application customer satisfaction (Y).

The summary analysis shows that product, price, place, and promotion all have a significant positive impact on Meituan application customer satisfaction.

## Conclusion and Discussion

### 1. Conclusion

1.1 To study the level of customer satisfaction on Meituan application based on 4Ps marketing mix.

According to our survey results, the overall mean of customer satisfaction is at moderate level. Promotion has the highest mean followed by product, place, and price consecutively.

1.2 To analyze the impact of marketing mix strategy on customer satisfaction of the Meituan Application.

Product variable discovery: we found that product quality and variety have a significant positive impact on Meituan application customer satisfaction. Customers are more inclined to choose products with good quality and variety. Therefore, providing high-quality, diversified products would help improve customer satisfaction. We hypothesize that improving product quality would significantly enhance customer satisfaction.

Product variety and features have a significant impact on customer satisfaction. High-quality products that meet customer needs and expectations would increase customer satisfaction.

Price variable discovery: Price level has significant impact on customer satisfaction. Therefore, appropriate pricing strategies can increase customers' recognition of product value, thereby increasing their satisfaction. We assume that moderate price reductions or providing valuable coupons and discounts would increase customer satisfaction. Prices that are too high or too low can lead to dissatisfaction. Therefore, when formulating price strategies, it is necessary to take into account customer value perceptions while ensuring profit maximization.



Place variable discovery: There is a positive relationship between place and customer satisfaction toward Meituan application. Thus, convenient and efficient purchase channels and delivery services and accessible place would make customers more likely to use and recommend the platform.

Promotion variable discovery: Promotional activities also have a positive impact on Meituan application customer satisfaction. Thus, effective promotional activities such as discounts, gift, coupons, and other forms can attract more users and improve their overall satisfaction on using Meituan application.

Customer satisfaction variable discovery: In this 4Ps marketing mix model; product, price, place, and promotion, as independent variables, all have an important and positive impact on customer satisfaction. Therefore, it is necessary to consider these factors when making marketing strategic decisions and ensure that they meet customer needs and expectations, thereby improving customer satisfaction.

To sum up, among the above 4Ps marketing mix, promotion is considered to be the factors that has the highest effect on customer satisfaction on the Meituan application, followed by place and promotion and price. Therefore, in the process of improving customer satisfaction, we recommend that Meituan application should improve promotion activities, product quality, diversity, reasonable pricing, and convenient locations to increase customer satisfaction.

## **2. Discussion**

Product hypothesis: This study found that product quality has a significant positive impact on customer satisfaction, which is consistent with the research conclusion of Raja JZ, et al. (2013), that customer satisfaction is achieved by integrating high-quality products and services.

Price Hypothesis: This study found that reasonable prices have a positive impact on customer satisfaction, which is consistent with the research conclusion found by Razak I, et al. (2016), that price has a positive impact on customer satisfaction.

Place Hypothesis: This study found that a suitable place has a positive impact on customer satisfaction, which is consistent with the research conclusion found by Vakulenko Y, et al. (2022), that a good geographical place will increase customer satisfaction.

Promotion Hypothesis: This study found that promotion has a significant positive impact on customer satisfaction, which is consistent with the research conclusion of the positive impact of brand image and promotion on customer satisfaction found by Prabowo AJ, et al. (2020).

## Recommendations

### 1. Implications

This article studies the impact of 4Ps marketing mix; product, price, place, and promotion, on customer satisfaction toward Meituan application. The following are suggestions for the development of Meituan application:

Products: Meituan application should continuously optimize the products it provides. By analyzing customer demand and behavioral data, more diversified and personalized products can be launched to meet the needs of different user groups.

Price: Price strategy is one of the important factors to attract users and increase customer satisfaction. Meituan application can adopt differentiated pricing strategies, set reasonable prices based on different products, services and target users, and provide highly transparent and competitive preferential policies.

Place: Place is also one of the key factors affecting user satisfaction and experience. Meituan application should focus on expanding its coverage, providing services in more cities or regions, and ensuring that there are sufficient and reliable merchant resources in every place.

Promotion: Promotional activities can effectively attract and retain users. Meituan application can increase user participation and improve their recognition of the platform and its service quality by regularly holding various promotional activities, limited-time discounts or reward programs.

In summary, by optimizing products, formulating reasonable price strategies, expanding place coverage and strengthening promotional activities, Meituan application can improve customer satisfaction and further consolidate its competitiveness in the market.

### 2. Future Research

The future research directions of Meituan application may include the following aspects:

Marketing strategy: In addition to factors such as product, price, place and promotion, further study the impact of Meituan application's performance in marketing

strategy on customer satisfaction. This includes inspections of on-time delivery rates of orders, food quality, delivery staff attitude, etc.

Mobile user experience: With the popularity of mobile devices, users have higher and higher requirements for application usage experience. Study how to improve the interface design, interaction methods and overall fluency of the Meituan application to enhance user satisfaction during use.

User personalized recommendations: By mining user behavior data and preferences, we will conduct in-depth research on how to use machine learning and data analysis technology to achieve more accurate and personalized recommendation services on the Meituan application and improve user satisfaction with recommended products or merchants.

Social interaction function: Combined with social network elements, study how to introduce social interaction function into Meituan application so that users can share reviews, view friends' comments, and communicate with other users. This will help enhance user engagement and loyalty.

Data security and privacy protection: Study how to strengthen the security and privacy protection of user data and establish a more complete data management mechanism to enhance user trust and satisfaction in Meituan application.

To sum up, future research directions should include marketing strategy, mobile user experience, personalized recommendations, social interaction functions, data security and privacy protection, etc. These studies will help further improve Meituan application customer satisfaction and promote its competitiveness in the market.

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