THE IMPACT OF 4PS ON CUSTOMER SATISFACTION: A CASE STUDY OF NANNING WALMART SUPERMARKET

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6717195027

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION GRADUATE SCHOOL OF BUSINESS SIAM UNIVERSITY 2025

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This Independent Study Has Been Approved as a Partial Fulfillment of the Requirements for the Degree of Master of Business Administration

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Title: The Impact of 4Ps on Customer Satisfaction : A Case Study of Nanning Walmart Supermarket

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.....16....../........12....../.....2025....

ABSTRACT

From the perspective of marketing management, this study employed and a quantitative method to explore the impact of the 4Ps of Nanning Walmart Supermarket's marketing strategy on customer satisfaction. The specific research objectives were as follows: 1. To examine the impact of product variety richness, quality level, and brand awareness in the product strategy on customer satisfaction. 2. To examine the impact of price rationality, number and intensity of discount activities in the price strategy on customer satisfaction. 3. To examine the impact of store location convenience, shopping environment comfort, and service facility completeness in the channel strategy on customer satisfaction. 4. To examine the impact of promotional activity richness, publicity effects, and membership system attractiveness in the promotion strategy on customer satisfaction.

The research results indicate that Nanning Walmart Supermarket's marketing strategies exert a significant positive impact on customer satisfaction, and the specific suggestions are as follows: 1. Enrich product categories, add characteristic and niche categories according to local needs, control quality, and deepen cooperation with well-known brands; 2. Establish a price monitoring and adjustment mechanism, compare with competitors' prices, optimize discount activities, and increase the discount intensity of people's livelihood commodities; 3. Reasonably plan store layout, improve shopping environment, perfect service facilities, and reduce queuing time; 4. Enrich the promotional activities, strengthen publicity and promotion, optimize the membership system, and enhance the attractiveness of promotion.
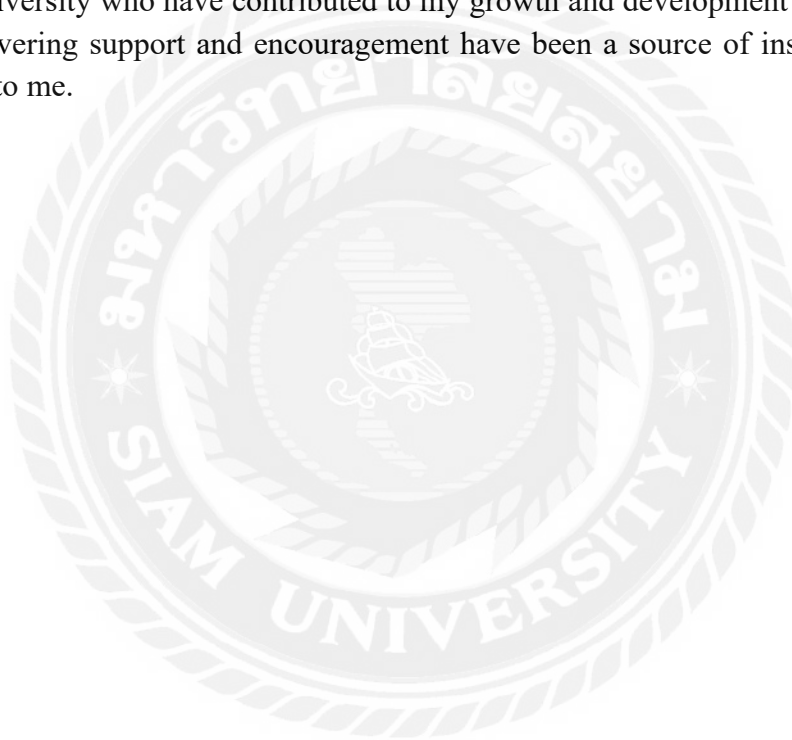
Keywords : marketing strategy, 4Ps theory, customer satisfaction, Nanning Walmart Supermarket

ACKNOWLEDGEMENT

DECLARATION

I, Lin XiYue, hereby declare that this Independent Study entitled "The Impact of 4Ps on Customer Satisfaction: A Case Study of Nanning Walmart Supermarket" is an original work and has never been submitted to any academic institution for a degree.
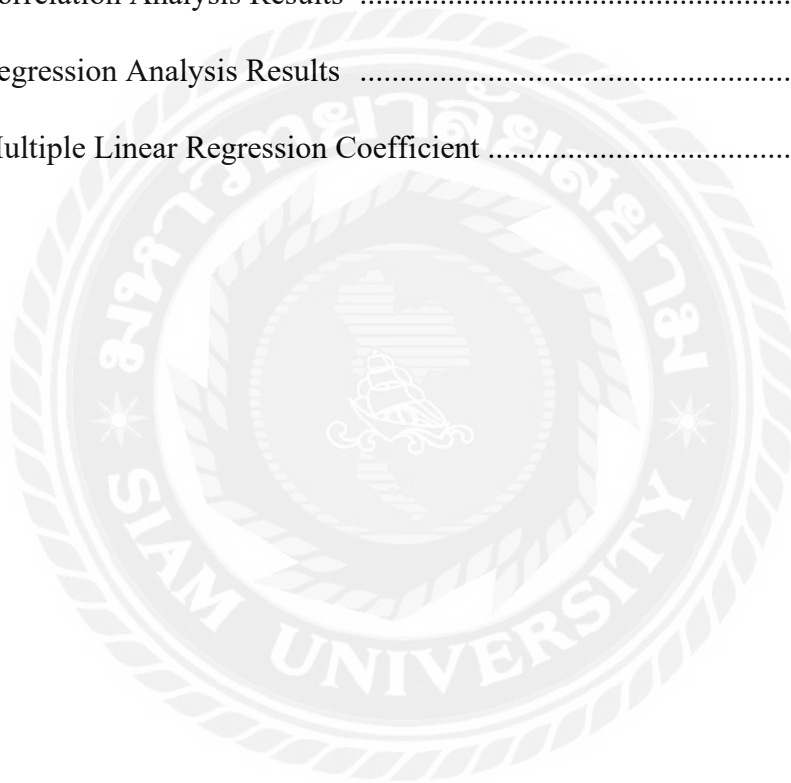
(Lin Xiyue)

Nov 28, 2025

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Chapter 1 Introduction

1.1 Background of the Study

Against the backdrop of increasingly fierce global retail competition and increasingly diversified consumer demands, retail enterprises must attach great importance to the maintenance and improvement of customer satisfaction while pursuing maximum profits. Customer satisfaction serves as the core asset for enterprises to cultivate customer loyalty and build market barriers, while a precise market strategy is the key means to enhance customer satisfaction (Cabigiosu et al., 2022). Consumers no longer rely solely on price as the only basis for purchasing decisions; instead, they pay more attention to comprehensive factors such as product quality, service experience, and shopping environment. The scientific nature of market strategies and the accuracy of marketing tactics directly determine the extent to which consumer needs are met, thereby affecting the enterprise's market competitiveness and sustainable development level. These two elements form a core logical chain of "strategic guidance - tactic implementation - satisfaction improvement" (Hosoya et al., 2020).

As a world-renowned global retail giant, Walmart has opened hundreds of stores across China since entering the Chinese market in 1996. The core of its success lies in the in-depth integration of market strategy and customer satisfaction: relying on a strong supply chain and mature operation model, it has strategically focused on customer satisfaction through initiatives such as "Everyday Low Prices" and "Fresh Food Upgrade", accurately matching consumer demands and ultimately establishing a significant position in the market. As Walmart's important layout in South China, Nanning Walmart operates multiple stores and has accumulated a stable customer base. However, it faces dual competition from the regional strategic advantages of local supermarkets and the convenience strategic impact of e-commerce platforms, highlighting the urgency of optimizing market strategies and consolidating customer satisfaction (Bahl & Chandra, 2018).

While meeting the shopping needs of residents, Nanning Walmart must recognize that the adaptability of market strategies directly determines the level of customer satisfaction, and the improvement of customer satisfaction can in turn enhance market competitiveness. Repeat purchases and word-of-mouth communication from highly satisfied customers serve as important support for enterprises to resist competition. In recent years, consumers' expectations for personalized shopping experiences, stable product quality, and reasonable pricing have continued to rise, consistent with the trend of demand upgrading in the electrical appliance industry. This further requires enterprises to be guided by market strategies to accurately respond to demands (Pitri & Gunarto, 2020). However, in the face of the regional service advantages of local supermarkets and the convenience of e-commerce platforms, the existing market strategy of Nanning Walmart lacks differentiation and accuracy, hindering the improvement of customer satisfaction. How to optimize market strategies to accurately

grasp local demands and thereby enhance satisfaction has become a core challenge (Khayru et al., 2021).

Therefore, this study focuses on Nanning Walmart, with the core objective of exploring the impact mechanism of market strategies on customer satisfaction. It clarifies the guiding role of market strategies and highlights the core value of customer satisfaction. By analyzing the implementation status of market strategies in product, price, channel, and service, as well as customer satisfaction, this study can not only provide direct references for Nanning Walmart to optimize regional market strategies, improve satisfaction, and cope with competition but also enrich the research on the correlation between "market strategy - customer satisfaction - competitiveness" in the retail industry, providing insights for similar enterprises.

1.2 Questions of the Study

Based on the above facts, the questions raised in this study are as follows:

1.What are the impacts of three dimensions in Nanning Walmart's product strategy—product variety richness, product quality level, and product brand awareness—on customer satisfaction?

2.To what extent do price rationality, and number and intensity of discount activities in Nanning Walmart's price strategy affect customer satisfaction?

3.What are the impacts of store location convenience, shopping environment comfort, and service facility perfection in Nanning Walmart's channel strategy on customer satisfaction?

4.What impacts do promotional activity richness, publicity effects, and membership system attractiveness in Nanning Walmart's promotion strategy have on customer satisfaction?

1.3 Objectives of the Study

This study aims to deeply analyze the implementation of the current marketing strategy of Nanning Walmart Supermarket, explore their impact on customer satisfaction, and identify the key factors affecting customer satisfaction. Through empirical research, it clarifies the relationship between marketing strategies including product, price, channel, and promotion and customer satisfaction, so as to formulate more scientific and reasonable marketing strategies for Nanning Walmart Supermarket and improve customer satisfaction. The expected objectives of the study are as follows:

1.To explore the impact of three specific dimensions in Nanning Walmart's product strategy—product variety richness, product quality level, and product brand awareness—on customer satisfaction.

2.To explore the impact of price rationality, and number and intensity of discount activities in Nanning Walmart's price strategy on customer satisfaction.

3.To explore the impact of store location convenience, shopping environment comfort, and service facility perfection in Nanning Walmart's channel strategy on customer satisfaction.

4.To explore the impact of promotional activity richness, publicity effects, and membership system attractiveness in Nanning Walmart's promotion strategy on customer satisfaction.

1.4 Scope of the Study

This study took Nanning Walmart as the specific research subject, focusing on its three core stores in Nanning: Chaoyang Store, Jiangnan Store, and Qingxiu Wanda Store. The selection of these three stores was based on their different geographical location characteristics (covering the core business district, residential concentrated area, and comprehensive commercial complex respectively) and differentiated customer flow characteristics, which can well represent the overall operation status of Walmart in Nanning. This is consistent with the actual situation mentioned in the research background that "as an important layout of Walmart in South China, Walmart in Nanning operates multiple stores", providing typical sample support for the subsequent exploration of the impact of regional market strategies on customer satisfaction.

The research respondents were set as customers who had consumption behaviors in the above three stores in the past 3 months. To ensure sample diversity, a balanced sampling ratio was set in dimensions such as gender and occupation to avoid the impact of single-group bias on the research results. This served as the basis for ensuring the accuracy of the analysis on the impact mechanism of the four strategic dimensions in the research questions, and also provides a reliable data source for achieving the research objective of "identifying the key factors affecting customer satisfaction".

The research content focused on marketing strategies based on the 4Ps theory, specifically covering four dimensions that are highly consistent with the research questions and research objectives: product strategy (product variety richness, product quality level, product brand awareness), price strategy (price rationality, number and intensity of discount activities), channel strategy (store location convenience, shopping environment comfort, service facility perfection), and promotion strategy (promotional activity richness, publicity effects, membership system attractiveness). At the same time, this study focused on examining customers' perception and evaluation of the above-mentioned marketing strategies, and explore the correlation between these factors and customer satisfaction, directly serving the core research objective of "exploring the impact mechanism of market strategies on customer satisfaction".

1.5 Significance of the Study

1.5.1 Theoretical Significance

This study took Nanning Walmart Supermarket as a case to explore the impact of the 4Ps marketing strategy (Product, Price, Place, and Promotion) on customer satisfaction. It enriches the existing literature system on the correlation between marketing strategies and customer satisfaction in the retail industry, especially filling the gap in empirical research targeting China's regional retail markets (Nanning). By quantitatively analyzing the specific mechanism of action of each dimension of the 4Ps on customer satisfaction, this study deepens the understanding of the relationship between marketing mix elements and customers' psychological perceptions in regional consumption scenarios. It provides a referable analytical framework and theoretical foundation for subsequent research on regional retail enterprises in the fields of marketing and consumer behavior.

1.5.2 Practical Significance

From a practical perspective, the results of this study have important guiding value for Nanning Walmart Supermarket and similar regional retail enterprises. Clarifying the impact degree of each element of the 4Ps marketing strategy on customer satisfaction and the key pain points, such as single promotional forms and insufficient attractiveness of the membership system, helps marketing practitioners more accurately formulate strategies adapted to regional consumption characteristics—optimizing product category structure, dynamically adjusting pricing strategies, improving in-store service facilities, and innovating promotional and publicity models, thereby meeting the diverse needs of target customer groups. This research outcome can directly help Nanning Walmart enhance customer loyalty and market competitiveness, while providing actionable marketing optimization paths for regional retail enterprises facing dual competition from local supermarkets and e-commerce platforms, promoting their sustainable development.

1.6 Definition of Key Terms

4Ps Marketing Strategy

Product: The attributes of commodities provided by Nanning Walmart, including product category coverage, quality standards and brand influence. The product category coverage includes daily necessities and characteristic products.

Price: The pricing level and discount activity setting of commodities at Nanning Walmart. The pricing level refers to its rationality compared with similar channels, and the discount activity setting involves the quantity and preferential intensity of such activities.

Place: The convenience of Nanning Walmart's store location, in-store shopping environment and configuration of service facilities. The convenience of store location is reflected in transportation and geographical location; the in-store shopping

environment includes cleanliness and comfort; the service facility configuration covers cash registers and rest areas.

Promotion: The promotional activities carried out by Nanning Walmart, publicity reach effects and membership system benefits. The promotional activities include discounts and full reductions; the publicity reach effects are realized through social media and in-store posters; the membership system benefits cover exclusive discounts and points rules.

Customer satisfaction (CS)

A multidimensional psychological state reflecting a customer's evaluation of the congruence between their pre-purchase expectations of a product/service and the actual post-consumption experience. It encompasses cognitive (performance assessment) and affective (emotional response) components, directly influencing loyalty, repurchase intent, and word-of-mouth.

Chapter 2 Literature Review

2.1 Introduction

This chapter systematically sorts out the relevant literature on the 4Ps marketing theory, customer satisfaction, and the relationship between the 4Ps marketing strategy and customer satisfaction, aiming to lay a solid theoretical foundation for this study. First, it combs the origin and development of the 4Ps marketing theory, and clarifies the core connotation of each element of 4Ps in the retail industry context. Then, it summarizes the definition, measurement methods, and influencing factors of customer satisfaction, focusing on the application of Kano Model in customer satisfaction research. Next, it reviews the existing research results on the relationship between the 4Ps marketing strategy and customer satisfaction, and points out the research gaps. Finally, it combs the current status of retail industry marketing and customer satisfaction research, and constructs a conceptual framework of this study based on the above literature review.

2.2 4Ps Marketing Theory

2.2.1 Origin and Development of 4Ps Theory

The 4Ps theory was first proposed by American marketing scholar Jerry McCarthy in his book Basic Marketing in 1960, summarizing marketing strategies into four core elements: Product, Price, Place, and Promotion. This theory laid the foundation of modern marketing mix theory, providing a clear framework for enterprises to formulate marketing strategies.

Subsequently, Philip Kotler further confirmed and expanded this theory in Marketing Management: Analysis, Planning, and Control. He proposed that the dual purposes of marketing are to attract new customers through excellent value and create satisfaction to retain and develop customers (Kotler, n.d.). He also emphasized that enterprises should design and adjust 4Ps elements according to market changes and customer needs under the guidance of marketing strategies.

With the evolution of the market environment, for example, the rise of customer demand-oriented concepts, the 4Ps theory has been continuously supplemented and expanded. In 1990, American marketing scholar Robert Lauterborn proposed the 4C theory, shifting the core idea from product-centered to customer demand-centered, focusing on Consumers' needs and wants, Cost to satisfy needs, Convenience to buy, and Communication with consumers (Lauterborn, 1990). However, the 4Ps theory still has irreplaceable value in guiding the specific implementation of marketing strategies, especially in the retail industry where product and channel management are crucial.

Entering the era of big data marketing, Koen Pauwels proposed the new 4Ps theory—People, Process, Performance, Prediction—in Demonstrating the Value of Marketing, emphasizing understanding the market and customer needs in a timely

manner for precise marketing (Pauwels, n.d.). But the classic 4Ps theory is still widely used in empirical research because of its simplicity, clarity, and strong operability. It can be seen that the 4Ps theory has continuously integrated new elements in its development to adapt to market changes, but its core framework of product, price, channel, and promotion is still the basis for enterprise marketing practice.

2.2.2 Core Connotation of Each Element of 4Ps in the Retail Industry

In the retail industry context, the core connotation of each element of 4Ps has specific manifestations:

Product Strategy: Focuses on the products and services created and provided by retail enterprises to meet consumer needs, emphasizing product differentiation, innovation, and brand building. For supermarkets, product strategy mainly includes product variety richness whether it covers daily necessities, fresh food, snacks, etc., product quality such as fresh food freshness, product safety, and brand awareness whether it cooperates with well-known brands or has private brands. Enterprises need to continuously enrich product categories, improve product quality, and enhance brand awareness to meet consumers' diversified needs and enhance market competitiveness.

Price Strategy: Involves setting product sales prices to maximize profits, including various methods such as cost-plus pricing calculating prices based on product costs plus a certain profit margin, competition-oriented pricing referring to competitors' prices to set their own prices, and demand-oriented pricing adjusting prices according to consumer demand intensity. For supermarkets, price strategy also includes discount activities such as seasonal discounts, full reduction activities and preferential treatment such as member prices. Enterprises need to comprehensively consider factors such as costs, market demand, and competitors' prices, set reasonable prices, and attract consumers through flexible discount activities.

Channel Strategy: Focuses on the process of retail enterprises effectively delivering products to consumers, including distribution channels such as supply chain management, retail channels such as store location selection, online sales platforms, and in-store environment such as shopping environment comfort, service facilities perfection. The goal is to improve product accessibility and consumer convenience. For physical supermarkets, channel strategy mainly includes store location convenience whether it is close to residential areas, with convenient transportation, in-store layout whether the shelf layout is reasonable, easy to find products, and service facilities such as rest areas, baby care rooms, self-checkout counters.

Promotion Strategy: Refers to various communication and incentive measures taken by retail enterprises to promote product sales, including advertising such as TV ads, social media promotion, promotional activities such as limited-time discounts, buy-one-get-one-free, public relations activities such as charity donations to enhance brand image, and sales promotion such as in-store sales staff promotion. For supermarkets, promotion strategy also includes membership systems such as member points, exclusive benefits and publicity effects whether consumers can timely know about promotional activities. Enterprises need to attract consumers to purchase products by

enriching the forms of promotional activities, strengthening publicity and promotion, and optimizing the membership system.

2.3 Customer Satisfaction

2.3.1 Connotation of Customer Satisfaction

Customer satisfaction is a feeling of happiness or disappointment formed by users after comparing the perceived effect of a product or service with their expectations. The traditional view holds that satisfaction is one-dimensional, that is, users will be satisfied when products or services provide more functions and services, and dissatisfied otherwise. For example, if a customer's perceived quality of a product purchased in a supermarket is higher than expected, they will be satisfied; otherwise, they will be dissatisfied.

However, with the deepening of research, it is found that satisfaction has a two-dimensional model. This model is derived from Herzberg's two-factor theory, which was originally proposed by Herzberg et al. to study the relationship between employee satisfaction and productivity of accountants and engineers. It divides employee satisfaction into motivating factors and hygiene factors. Applying this theory to customer satisfaction research, motivating factors refer to factors that can improve customer satisfaction when present but do not cause dissatisfaction when absent. An example of such factors is unexpected small gifts in supermarkets. Hygiene factors refer to factors that do not improve customer satisfaction when present but cause dissatisfaction when absent. An example of such factors is unhygienic supermarket toilets. This indicates that satisfaction and dissatisfaction do not coexist in a single continuum but are independent of each other, which provides a new perspective for enterprises to improve customer satisfaction.

2.3.2 Measurement Methods and Classic Kano Model of Customer Satisfaction

The common measurement methods of customer satisfaction include questionnaire survey, interview and observation. Questionnaire survey uses Likert scale, semantic differential scale and other tools. Interview helps gain an in-depth understanding of the reasons behind customer satisfaction. Observation infers satisfaction by observing customer shopping behavior. Among them, the questionnaire survey method is the most widely used in empirical research because of its high efficiency and easy quantification. For example, this study uses a 5-point Likert scale to measure customer satisfaction, with "very dissatisfied" scored as 1 and "very satisfied" scored as 5.

The Kano Model is a classic theory in customer satisfaction research. It was constructed by Kano et al. (1984) based on the two-dimensional model. The model divides the factors affecting customer satisfaction into five types:

Attractive factors are unexpected by users. Not meeting this demand will not reduce user satisfaction, but meeting it will greatly improve satisfaction. An example is supermarkets providing free home delivery service for large purchases.

Expected factors, also known as one-dimensional factors, refer to demands where meeting them will improve user satisfaction and not meeting them will reduce it. An example is the richness of product varieties in supermarkets.

Must-be factors are those where optimizing this demand will not improve user satisfaction, but not meeting it will greatly reduce it. An example is the quality and safety of supermarket products.

Indifferent factors are those where user satisfaction remains unchanged whether they are provided or not, and users do not care about them. An example is the style of background music in supermarkets.

Reverse factors are those where providing them will instead reduce user satisfaction. An example is frequent and annoying sales promotions in supermarkets.

The Kano Model does not directly measure user satisfaction, but helps enterprises find entry points to improve satisfaction by distinguishing different user needs. It is often used to classify influencing indicators and identify key factors. Through standardized questionnaire surveys, the attributes of each factor are classified, and the better-worse coefficient is calculated. This coefficient is the difference between the proportion of users who think "providing this factor is better" and "not providing this factor is worse". Priority implementation projects are determined according to the coefficient value, guiding enterprises to reasonably allocate resources to improve customer satisfaction.

2.4 Relationship between 4Ps Marketing Strategy and Customer Satisfaction

Numerous studies have shown that 4Ps marketing strategies are closely related to customer satisfaction, and each element of 4Ps has a significant impact on customer satisfaction:

2.4.1 Impact of Product Strategy on Customer Satisfaction

Product strategy is the core factor affecting customer satisfaction in the retail industry. Some studies point out that product variety richness, quality level, and brand awareness in product strategy have a significant positive impact on customer satisfaction. For example, Cheng and Li (2020) conducted a study on Chinese supermarket customers and found that the more types of fresh food a supermarket provides (indicating richer variety), the higher the freshness of fresh food (reflecting better quality), and the more well-known brands it cooperates with, the higher the customer satisfaction. This is because rich product varieties can meet the diversified needs of customers, such as daily shopping and gift-giving needs, high product quality can ensure the safety and effectiveness of customer consumption, and well-known brands can reduce customers' purchase risks, such as worrying about product quality problems.

In addition, product innovation, such as launching private brand products with unique characteristics, can also improve customer satisfaction. For example, Walmart's private brand "Great Value" has won the favor of many customers with its high cost

performance, which has significantly improved customer satisfaction with Walmart's product strategy.

2.4.2 Impact of Price Strategy on Customer Satisfaction

Price is an important factor affecting customers' purchase decisions and satisfaction. Existing research shows that price rationality and the number and intensity of discount activities in price strategy have a significant positive impact on customer satisfaction. Reasonable prices mean that the product price is consistent with its value and the customer's payment ability. For instance, the price of daily necessities is lower than or equal to that of similar supermarkets, allowing customers to feel they have obtained "cost-effective" products and thus improving satisfaction.

Flexible discount activities can further enhance customer satisfaction. For example, supermarkets launch "Double 11" discount activities and full reduction promotions such as "100 yuan off when spending 20 yuan". These initiatives can stimulate customers' purchase desire and make them feel they have gained additional benefits. However, some studies also point out that excessive discount activities may make customers doubt the rationality of the products' original prices, thereby reducing satisfaction. Therefore, the design of discount activities needs to be reasonable and transparent.

2.4.3 Impact of Channel Strategy on Customer Satisfaction

Channel strategy affects customer satisfaction by influencing the shopping experience. The convenience of store location, the comfort of the shopping environment, and the perfection of service facilities in channel strategy are positively correlated with customer satisfaction. A convenient store location, such as being close to residential areas with convenient bus and subway connections, can reduce customers' travel time and cost, making it easier for them to shop and thus improving satisfaction.

A comfortable shopping environment, such as a clean and tidy store with appropriate temperature and lighting, can make customers feel happy during their shopping and reduce the fatigue caused by long shopping periods. Perfect service facilities, such as sufficient self-checkout counters to reduce queuing time, rest areas for the elderly and children, and baby care rooms, can meet customers' additional needs during shopping, further enhancing their shopping experience and satisfaction. For example, a study on supermarket channel strategy found that supermarkets with more self-checkout counters and shorter queuing time have significantly higher customer satisfaction than those with fewer self-checkout counters and longer queuing time.

2.4.4 Impact of Promotion Strategy on Customer Satisfaction

Promotion strategy affects customer satisfaction by attracting customers' attention and improving purchase experience. The richness of promotional activities, publicity effects, and the attractiveness of membership systems in promotion strategy have a significant positive impact on customer satisfaction. Diverse promotional activities, such as theme activities like "food festivals" and interactive activities like "supermarket

treasure hunting", can increase the fun of shopping, making customers more willing to participate in shopping and improving satisfaction.

Effective publicity, such as timely promotion of promotional activities through WeChat official accounts and in-store posters, can ensure that customers know about the activities in time, avoiding the situation where customers miss the activities and feel regretful. An attractive membership system, such as member points that can be exchanged for gifts and exclusive discounts for members, can enhance customers' sense of identity and loyalty, making them more satisfied with the supermarket. For example, a study on supermarket membership systems found that customers with membership cards have higher satisfaction with the supermarket than non-members, and the higher the attractiveness of membership benefits, the higher the satisfaction.

In addition, some studies emphasize that all elements of 4Ps need to cooperate synergistically, and any imbalance may damage the overall effect and affect customer satisfaction. For example, if a supermarket has high-quality products (reflecting a good product strategy) but sets excessively high prices (indicating a poor price strategy), or has perfect service facilities (representing a good channel strategy) but lacks effective promotional activities (showing a poor promotion strategy), it may not achieve high customer satisfaction. Therefore, enterprises need to formulate a coordinated 4Ps marketing strategy to maximize customer satisfaction.

2.5 Research Status of Retail Marketing and Customer Satisfaction

In recent years, with the intensification of retail industry competition and the upgrading of consumer demand, the research on retail industry marketing and customer satisfaction has been further deepened, showing the following characteristics:

First, the research subject is gradually shifting from national chain enterprises to regional retail enterprises. Early research mostly focused on large national chain supermarkets such as China Resources Vanguard and Carrefour, while recent studies have begun to pay attention to regional retail enterprises such as local supermarkets in second- and third-tier cities. This is because regional retail enterprises are more familiar with local consumer needs and have unique advantages in regional competition, and their marketing strategies and customer satisfaction have more research value for regional retail development.

Second, the research method is mainly quantitative research, and the combination of multiple methods is gradually increasing. Most studies use questionnaire surveys to collect data, and use statistical methods such as reliability and validity analysis, correlation analysis, and regression analysis to verify the relationship between marketing strategies and customer satisfaction. At the same time, some studies also combine qualitative research methods such as interviews and case studies to deeply explore the reasons for the impact of marketing strategies on customer satisfaction, making the research results more comprehensive and in-depth.

Third, the research content pays more attention to the impact of new retail models on marketing strategies and customer satisfaction. With the development of e-

commerce and big data technology, new retail models such as "online + offline" integration have emerged. Studies have found that the integration of online channels such as online ordering and offline pickup can improve the convenience of channel strategy, and the use of big data to analyze customer needs can make product strategy and promotion strategy more precise, thus improving customer satisfaction. For example, a study on the new retail model of supermarkets found that supermarkets that launch online shopping platforms have higher customer satisfaction than traditional physical supermarkets, especially in terms of shopping convenience.

However, there are still some research gaps in the current research: on the one hand, the research on the application of the 4Ps marketing theory in regional retail enterprises such as Nanning Walmart is insufficient, and there is a lack of targeted analysis of regional consumption characteristics; on the other hand, the research on the impact weights of each element of 4Ps on customer satisfaction in the retail industry is not uniform, and the differences in the impact of 4Ps elements on customer satisfaction in different regions and different customer groups need to be further explored. This study aims to fill these gaps through empirical research on Nanning Walmart.

2.6 Conceptual Framework

Based on the above literature review, this study constructed a conceptual framework to explore the impact of Nanning Walmart's 4Ps marketing strategies on customer satisfaction, as shown in Figure 2.1.

In this framework, the independent variables are the four elements of Nanning Wal-Mart's 4Ps marketing strategy, including:

Product Strategy: Measured by three dimensions: product variety richness, product quality level, and product brand awareness.

Price Strategy: Measured by two dimensions: price rationality, and number and intensity of discount activities.

Channel Strategy: Measured by three dimensions: store location convenience, shopping environment comfort, and service facility perfection.

Promotion Strategy: Measured by three dimensions: promotional activity richness, publicity effects, and membership system attractiveness.

The dependent variable is customer satisfaction, which includes overall customer satisfaction and satisfaction with each 4Ps dimension.

The study assumed that each element of the 4Ps marketing strategy had a significant positive impact on customer satisfaction, and the specific impact degree is verified through empirical research. At the same time, the study also considered the differences in the impact of 4Ps elements on customer satisfaction among different customer groups (classified by gender, age, occupation), which is analyzed in the findings and discussion part.

Figure 2.1 Research Framework of 4Ps Impact on Customer Satisfaction
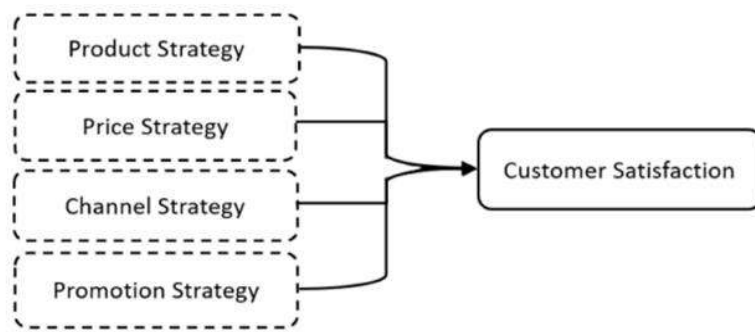
Chapter 3 Research Methodology

3.1 Research Design

This study adopted a rigorous quantitative research design to systematically explore the impact of Nanning Walmart's 4Ps marketing strategy, encompassing product, price, channel, and promotion dimensions, on customer satisfaction. The quantitative research method was deliberately selected due to its inherent advantages: it enables the collection of large volumes of standardized, structured data through well-designed questionnaire surveys, and leverages systematic statistical analysis techniques to empirically verify the relationship between key variables, specifically, the components of the 4Ps marketing strategy and overall customer satisfaction, with a high degree of objectivity, reliability, and replicability. These characteristics are particularly valuable for this study, as they help minimize subjective biases and ensure that the research findings can be validated or extended in subsequent studies.

The core idea guiding the research design unfolds in three sequential and interconnected stages. First, drawing on the theoretical foundations of the classic 4Ps marketing theory (McCarthy, 1960) and established customer satisfaction frameworks (e.g., Kano., 1984), a comprehensive questionnaire was developed to measure both the four core elements of Nanning Walmart's 4Ps marketing strategy (each operationalized through specific indicators such as product variety richness, price rationality, store location convenience, and promotional activity richness) and the overall customer satisfaction level. Second, the questionnaire was strategically distributed to targeted respondents, specifically, customers who had engaged in shopping activities at Nanning Walmart's three core stores (Chaoyang Store, Jiangnan Store, and Qingxiu Wanda Store) within the past 3 months, with the aim of collecting representative data that reflected the actual shopping experiences and perceptions of the supermarket's key customer base. Finally, the collected raw data were processed and analyzed using SPSS 26.0, a widely recognized statistical software package. A series of analytical procedures were conducted, including reliability and validity analysis (to ensure the questionnaire's measurement quality), descriptive statistical analysis (to summarize the demographic characteristics of respondents and the distribution of key variables), correlation analysis (to examine the strength and direction of relationships between the 4Ps dimensions and customer satisfaction), and regression analysis (to quantify the extent of impact of each 4Ps element on customer satisfaction). Through these systematic analytical steps, the study sought to rigorously verify the proposed research hypotheses and ultimately achieve its core research objectives.

3.2 Population and Sample

3.2.1 Population

The population of this study was customers who had consumption behaviors in Nanning Walmart's Chaoyang Store, Jiangnan Store, and Qingxiu Wanda Store in the past 3 months. The scope of the population was limited to these three stores because they are Nanning Walmart's core stores, covering different geographical locations and customer groups, and can better represent the overall customer base of Nanning Walmart.

3.2.2 Sample Size and Sampling Method

Sample Size: Referring to the sample size calculation method of quantitative research (generally, the sample size should be 5-10 times the number of questionnaire items), this study's questionnaire has 25 items (including 3 items of basic information, 16 items of 4Ps marketing strategy, and 6 items of customer satisfaction). Therefore, the minimum sample size was 125. Considering the possible invalid questionnaires, this study planned to distribute 555 questionnaires, aiming to obtain more than 500 valid questionnaires to ensure the reliability of statistical analysis results.

Sampling Method: This study adopted stratified random sampling to ensure sample diversity. The specific stratification criteria were:

Gender: Divided into male and female, with the sampling ratio of 1:1 to avoid gender bias.

Age: Divided into three groups: 18-30 years old, 31-50 years old, and over 50 years old, with the sampling ratio of approximately 3:4:3 to match the age distribution of Nanning Walmart's actual customer groups (31-50 years old are the main consumer groups).

Occupation: Divided into four groups: students, office workers, retirees, and other occupations, with the sampling ratio of approximately 2:5:2:1 to avoid over-representation of office workers.

The specific sampling process was: 3 surveyors were selected for each store (a total of 9 surveyors), and they were trained uniformly (including explaining the purpose of the survey, questionnaire content, and filling rules), and then the surveyors distributed questionnaires to customers who met the stratification criteria in the store during peak shopping hours (such as 10:00-12:00, 15:00-18:00 on weekends and working days). Each customer was invited to fill in the questionnaire voluntarily, and the surveyors answered the customers' questions in time during the filling process.

3.3 Hypothesis (for Quantitative Research)

Based on the 4Ps marketing theory, customer satisfaction theory, and the conceptual framework of this study, the following four core research hypotheses were proposed:

H1: Product strategy has a significant positive impact on customer satisfaction. Specifically, the richer the product variety, the better the product quality, and the higher the product brand awareness, the higher the customer satisfaction.

H2: Price strategy has a significant positive impact on customer satisfaction. Specifically, the more reasonable the product price, and the more and stronger the discount activities, the higher the customer satisfaction.

H3: Channel strategy has a significant positive impact on customer satisfaction. Specifically, the more convenient the store location, the more comfortable the shopping environment, and the more perfect the service facilities, the higher the customer satisfaction.

H4: Promotion strategy has a significant positive impact on customer satisfaction. Specifically, the richer the promotional activities, the better the publicity effects, and the more attractive the membership system, the higher the customer satisfaction.

3.4 Research Instrument

The research instrument of this study is a self-designed questionnaire, which is divided into three parts: basic information of respondents, 4Ps marketing strategy measurement, and customer satisfaction measurement. The questionnaire uses a 5-point Likert scale for scoring, with "1" representing "very dissatisfied/very unreasonable/very unattractive" and "5" representing "very satisfied/very reasonable/very attractive". The measurement items of the questionnaire are shown in Table 3.1.

Table 3.1 Questionnaire Design

Variable	Category	Measurement Items
Basic Information	Gender	1. Male; 2. Female
	Age	1. 18-25 years old; 2. 31-40 years old; 3. 51-60 years old
	Occupation	1. Student; 2. Office Worker; 3. Retiree; 4.Others (please specify)
Product Strategy		5. Are you satisfied with the rich variety of commodities that can meet diverse needs? 6. Is the commodity quality reliable and in line with expectations? 7. Are you satisfied with the sufficient quantity of well-known brand commodities? 8. Are the commodity packages intact without damage or expiration?

Price Strategy		9. Are you satisfied with the reasonable commodity prices that match the quality? 10. Are you satisfied with the frequency of discount activities? 11. Are you attracted by the discount intensity (e.g., discounts on daily necessities)? 12. Are you satisfied with the high price transparency without hidden consumption?
Channel Strategy		13. Is the store location convenient and easily accessible by transportation? 14. Are you satisfied with the clean and comfortable shopping environment in the store? 15. Are the service facilities complete (e.g., rest areas, mother-and-baby rooms, barrier-free facilities)? 16. Is the waiting time at the cash register short and the settlement efficiency high?
Promotion Strategy		17. Are the forms of promotional activities rich (e.g., full reduction, free gifts, theme activities)? 18. Is the promotion information propagated in a timely and clear manner (e.g., posters, APP notifications)? 19. Is the membership system welfare attractive (e.g., points redemption, exclusive discounts)? 20. Are the rules of promotional activities simple and easy to understand without tricks?
Customer Satisfaction		21. Overall, what is your overall satisfaction with this store? 22. Are you willing to recommend this store to others? 23. Do you have any other suggestions or comments for us?

3.4.1 Questionnaire Design Basis

The questionnaire items were designed based on the following basis:

Theoretical Basis: Refer to the core connotation of each element of 4Ps marketing theory and the definition of customer satisfaction, ensuring that each item can accurately measure the corresponding variable. The product strategy measurement items include product variety, quality, and brand, which are consistent with the core connotation of product strategy in the 4Ps theory.

Literature Review: Refer to the questionnaire items in existing studies on 4Ps marketing strategy and customer satisfaction. For example, the price rationality measurement item refers to the "price comparison with competitors" item in the supermarket customer satisfaction questionnaire of previous studies.

Pilot Test: Before the formal questionnaire distribution, a pilot test was conducted with 50 customers of Nanning Walmart's Chaoyang Store. According to the pilot test results, the ambiguous items such as "Nanning Walmart's products are good" were revised to more specific items such as "The product quality of Nanning Walmart is good, including fresh food freshness and product safety", and the inappropriate scoring standards were adjusted to ensure the validity and operability of the questionnaire.

3.5 Reliability and Validity Analysis of the Scale

3.5.1 Reliability Analysis

Reliability refers to the consistency and stability of the questionnaire measurement results, which is measured by the Cronbach's α coefficient in this study. The judgment standard is: Cronbach's α coefficient > 0.8 indicates high reliability; 0.7 < Cronbach's α coefficient ≤ 0.8 indicates good reliability; 0.6 < Cronbach's α coefficient ≤ 0.7 indicates acceptable reliability; Cronbach's α coefficient ≤ 0.6 indicates low reliability, and the questionnaire needs to be revised.

The reliability analysis results of this study are shown in Table 3.2. It can be seen that the Cronbach's α coefficients of product strategy, price strategy, channel strategy, promotion strategy, and customer satisfaction are 0.81, 0.79, 0.82, 0.78, and 0.83 respectively, all greater than 0.7, indicating that the questionnaire has good reliability and the measurement results are stable and consistent.

Table 3.2 Reliability Analysis Results

Variable	Cronbach's α Coefficient	Number of Questions	Reliability Evaluation
Product Strategy	0.81	4	Good
Price Strategy	0.79	4	Good
Channel Strategy	0.82	4	Good
Promotion Strategy	0.78	4	Good
Customer Satisfaction	0.83	6	High

3.5.2 Validity Analysis

Validity refers to the accuracy of the questionnaire measurement results, that is, whether the questionnaire can accurately measure the variables to be measured. This study mainly conducts content validity and construct validity analysis:

Content Validity: The questionnaire was designed based on theoretical and literature review, and revised according to the opinions of 2 marketing professors and 3 Nanning Walmart store managers. They believed that the questionnaire items could fully cover the content of 4Ps marketing strategy and customer satisfaction, and had good content validity (consistent with the content validity evaluation method of Guo, 2009).

Construct Validity: Measured by KMO (Kaiser-Meyer-Olkin) test and Bartlett's spherical test, which is a common method in marketing research (referenced from Parasuraman et al., 1988). The KMO value is used to judge the suitability of factor analysis: KMO > 0.8 indicates that factor analysis is very suitable; $0.7 < KMO \leq 0.8$ indicates that factor analysis is suitable; $0.6 < KMO \leq 0.7$ indicates that factor analysis is basically suitable; $KMO \leq 0.6$ indicates that factor analysis is not suitable. Bartlett's spherical test is used to judge whether the correlation matrix is an identity matrix: if the p-value < 0.05, it indicates that the variables are correlated and factor analysis is suitable.

The validity analysis results of this study are shown in Table 3.3. The KMO value is 0.87, greater than 0.8, indicating that factor analysis is very suitable. The Bartlett's spherical test χ^2 value is 2856.32, and the p-value < 0.001, indicating that the variables are correlated and the questionnaire has good construct validity.

Table 3.3 Validity Analysis Results

Test Index	Value	Analysis
KMO Value	0.87	Very suitable for factor analysis
Bartlett's Spherical Test	$\chi^2 = 2856.32, p < 0.001$	Variables are correlated, suitable for factor analysis
Cumulative Variance Explained Rate	80.2%	indicating good construct validity

3.6 Data Collection

3.6.1 Data Collection Time and Location

The data collection of this study was conducted from March 1, 2025 to March 15, 2025, lasting 15 days. The collection locations were the three core stores of Nanning Walmart: Chaoyang Store (located in Chaoyang Business District), Jiangnan Store (located in Jiangnan District, a residential concentrated area), and Qingxiu Wanda Store (located in Qingxiu District, adjacent to Wanda Plaza).

3.6.2 Data Collection Method and Process

The data collection adopted the on-site questionnaire distribution method. The specific process is:

Surveyor Training: Before the formal collection, 9 surveyors (3 per store) were trained, including explaining the purpose of the study, the filling method of the questionnaire, and the skills of inviting customers to fill in the questionnaire such as being polite and explaining the confidentiality of the questionnaire.

Questionnaire Distribution: During the peak shopping hours of each store—10:00-12:00 and 15:00-18:00—the surveyors invited customers who met the stratification criteria based on gender, age and occupation to fill in the questionnaire voluntarily. Each customer was given a small gift such as a shopping bag or a bottle of mineral water as a reward after filling in the questionnaire to improve the response rate.

Questionnaire Recovery and Screening: After the daily data collection, the surveyors sorted out the recovered questionnaires, and screened out the invalid questionnaires such as those with missing more than 10% of the items, those with all items scored the same, and those with obvious logical contradictions. The screening criteria are consistent with Nagle & Holden, 2002's data cleaning standards in retail pricing research.

A total of 555 questionnaires were distributed in this study, and 546 valid questionnaires were recovered, with an effective recovery rate of 98.37%. This rate is higher than the general effective recovery rate of above 70% for quantitative research, (referenced from Parasuraman et al., 1988), indicating that the data collection effect is good and can meet the needs of subsequent statistical analysis.

3.7 Data Analysis

The collected valid questionnaire data were entered into Excel 2023 for sorting and coding, and then imported into SPSS 26.0 statistical software for analysis. The specific analysis methods are as follows:

3.7.1 Descriptive Statistical Analysis

Descriptive statistical analysis was used to describe the demographic characteristics of the sample gender, age and occupation including and the scores of each variable of 4Ps marketing strategy and customer satisfaction. The specific indicators included frequency, proportion, mean and standard deviation. For example, calculate the frequency and proportion of male and female samples, and the mean and standard deviation of product strategy scores, were calculated so as to understand the basic situation of the sample and the current status of Nanning Walmart's 4Ps marketing strategy and customer satisfaction.

3.7.2 Reliability and Validity Analysis

As mentioned in Section 3.5, reliability analysis was conducted using the Cronbach's α coefficient to test the consistency of the questionnaire; validity analysis was conducted using the KMO test and Bartlett's spherical test (method from Kano,

1984; Parasuraman et al., 1988) to test the suitability of factor analysis and the construct validity of the questionnaire.

3.7.3 Correlation Analysis

Pearson correlation analysis was used to test the correlation between each element of the 4Ps marketing strategy (product, price, channel, promotion) and customer satisfaction. The correlation coefficient (r) is used to indicate the strength and direction of the correlation: $r > 0$ indicates a positive correlation; $r < 0$ indicates a negative correlation; the absolute value of r is closer to 1, indicating a stronger correlation. At the same time, the p-value is used to test the significance of the correlation: $p < 0.05$ indicates a significant correlation; $p < 0.01$ indicates a very significant correlation.

3.7.4 Regression Analysis

Multiple linear regression analysis was used to test the impact of each element of the 4P marketing strategy on customer satisfaction. Taking customer satisfaction as the dependent variable and product strategy, price strategy, channel strategy, and promotion strategy as independent variables, a regression model was established (referenced from Cheng & Li, 2020's product strategy impact model):

Customer Satisfaction = β_0 + β_1×Product Strategy + β_2×Price Strategy + β_3×Channel Strategy + β_4×Promotion Strategy + ε

Among them, β_0 is the constant term, β_1-β_4 are the standardized regression coefficients, and ε is the error term. The standardized regression coefficients are used to judge the impact degree of each independent variable on the dependent variable: the larger the absolute value of the standardized regression coefficient, the greater the impact. The p-value is used to test the significance of the regression coefficient: $p < 0.05$ indicates that the independent variable has a significant impact on the dependent variable. At the same time, the adjusted R^2 is used to judge the fitting degree of the regression model: the larger the adjusted R^2, the better the model fitting effect. This model setting aligns with Nagle & Holden, 2002's pricing strategy regression analysis framework in retail research.

Chapter 4 Findings and Discussion

4.1 Findings

4.1.1 Demographic Characteristics of Respondents

A total of 546 valid questionnaires were recovered in this study. The demographic characteristics of the respondents (gender, age, occupation) are shown in Table 4.1.

Table 4.1 Demographic Characteristics of Sample

Category	Subgroup	Number of People	Proportion
Gender	Female	357	65.33%
	Male	189	34.67%
Age	18-30 years old	152	27.8%
	31-50years old	267	48.9%
	Over 50 years old	127	23.3%
Occupation	Student	92	16.8%
	Office worker	326	59.7%
	Retiree	78	14.3%
	Other occupations	50	9.2%

From gender distribution: female respondents account for 65.33%, and male respondents account for 34.67%. The proportion of female respondents is higher, which is consistent with the actual situation that women are the main body of supermarket shopping women are more likely to be responsible for daily shopping at home.

From age distribution: 31-50 years-old respondents account for the highest proportion (48.9%), followed by 18-30 years-old (27.8%) and over 50 years-old (23.3%). This shows that middle-aged people (31-50 years-old) are the main customer group of Nanning Walmart, which is because this age group has stable income and strong consumption capacity, and is responsible for the family's daily shopping needs.

From occupation distribution: office workers account for the highest proportion (59.7%), followed by students (16.8%), retirees (14.3%), and other occupations (9.2%). The high proportion of office workers is because office workers have fixed working hours and usually choose to shop in supermarkets after work or on weekends, which is consistent with the business hours of Nanning Walmart.

4.1.2 Descriptive Statistical Analysis of Questionnaire Data

The descriptive statistical analysis results of the 4Ps marketing strategy and customer satisfaction (mean ± standard deviation) are shown in Table 4.2.

Table 4.2 Descriptive Statistical Analysis of Questionnaire Data

First-level Dimension	Second-level Specific Indicator	Mean ± Standard Deviation
Product Strategy	Product Variety Richness	3.6±0.75
	Product Quality	3.7±0.71
	Brand Awareness	3.5±0.80
Price Strategy	Price Rationality	3.3±0.88
	Intensity of Discount Activities	3.2±0.83
Channel Strategy	Convenience of Store Location	3.5±0.77
	Comfort of Shopping Environment	3.6±0.73
	Perfection of Service Facilities	3.4±0.79
Promotion Strategy	Richness of Promotional Activities	3.2±0.91
	Publicity Effect	3.1±0.89
	Attractiveness of Membership	3.0±0.93
Customer Satisfaction	Overall Customer Satisfaction	3.5±0.78

From the mean score of each second-level indicator:

Product Strategy: The mean score of product quality is the highest (3.7 ± 0.71), followed by product variety richness (3.6 ± 0.75) and brand awareness (3.5 ± 0.80). This indicates that customers are more satisfied with Nanning Walmart's product quality, and the satisfaction with product variety and brand is at a medium to high level.

Price Strategy: The mean score of price rationality is 3.3 ± 0.88, and the mean score of discount activity intensity is 3.2 ± 0.83, both lower than 3.5. This indicates that

customers' satisfaction with Nanning Walmart's price strategy is at a medium level, and there is room for improvement in price rationality and discount activity intensity.

Channel Strategy: The mean score of shopping environment comfort is the highest (3.6 ± 0.73), followed by store location convenience (3.5 ± 0.77) and service facility perfection (3.4 ± 0.79). This indicates that customers are more satisfied with Nanning Walmart's shopping environment, and the satisfaction with store location and service facilities is at a medium to high level.

Promotion Strategy: The mean scores of the three indicators are all lower than 3.5, among which the attractiveness of membership has the lowest mean score (3.0 ± 0.93), followed by publicity effect (3.1 ± 0.89) and promotional activity richness (3.2 ± 0.91). This indicates that customers' satisfaction with Nanning Walmart's promotion strategy is at a medium to low level, and the membership system, publicity effect, and promotional activity richness need to be improved.

Customer Satisfaction: The mean score is 3.5 ± 0.78, which is at a medium to high level, indicating that customers are generally satisfied with Nanning Walmart, but there is still room for improvement.

4.1.3 Correlation and Regression Analysis Results

4.1.3.1 Correlation Analysis Results

The Pearson correlation analysis results between each element of the 4Ps marketing strategy and customer satisfaction are shown in Table 4.3.

Table 4.3 Correlation Analysis Results

Variable	Customer Satisfaction	Product Strategy	Price Strategy	Channel Strategy	Promotion Strategy
Customer Satisfaction	1				
Product Strategy	0.61**	1			
Price Strategy	0.52**	0.45**	1		
Channel Strategy	0.58**	0.48**	0.42**	1	
Promotion Strategy	0.45**	0.38**	0.35**	0.40**	1

Note: ** indicates $p < 0.01$, which is very significant.

From the correlation analysis results:

Product strategy, price strategy, channel strategy, and promotion strategy are all very significantly positively correlated with customer satisfaction (p < 0.01), indicating that the better the implementation of each 4Ps element, the higher the customer satisfaction.

Among them, the correlation coefficient between product strategy and customer satisfaction is the highest (0.61), followed by channel strategy (0.58), price strategy (0.52), and promotion strategy (0.45). This indicates that product strategy has the strongest correlation with customer satisfaction, and promotion strategy has the weakest correlation.

There is also a significant positive correlation between each 4Ps element (p < 0.01), indicating that the 4Ps elements are not independent of each other but interact with each other. For example, a good product strategy (rich variety, good quality) needs to be matched with a reasonable price strategy and effective promotion strategy to maximize customer satisfaction.

4.1.3.2 Regression Analysis Results

Taking customer satisfaction as the dependent variable and product strategy, price strategy, channel strategy, and promotion strategy as independent variables, multiple linear regression analysis was conducted. The regression analysis results are shown in Table 4.4 and Table 4.5.

Table 4.4 Regression Analysis Results

Hypotheses and Paths in the Model	Standardized regression weights	p - value
H1: Product Strategy→ Customer satisfaction	0.36	<0.001
H2: Price Strategy→ Customer satisfaction	0.26	<0.001
H3: Channel Strategy→ Customer satisfaction	0.31	<0.001
H4: Promotion Strategy→ Customer satisfaction	0.21	<0.001

Table 4.5 Multiple Linear Regression Coefficient

Variable	Unstandardized Coefficient (B)	Standard Error	Standardized Coefficient (Beta)	t-value	Significance (Sig.)
(Constant term)	0.35	0.09	-	3.89	0.000
Product Strategy	0.33	0.04	0.36	7.12	0.000
Price Strategy	0.24	0.04	0.26	6.05	0.000
Channel Strategy	0.29	0.04	0.31	6.83	0.000
Promotion Strategy	0.20	0.04	0.21	5.10	0.000

From the regression analysis results:

Hypothesis Verification: The standardized regression coefficients of product strategy, price strategy, channel strategy, and promotion strategy are all positive, and the p-values are all < 0.001, indicating that all four hypotheses (H1, H2, H3, H4) are supported. That is, product strategy, price strategy, channel strategy, and promotion strategy all have a very significant positive impact on customer satisfaction.

Impact Degree: The standardized regression coefficients of the four 4P elements are sorted as follows: product strategy (0.36) > channel strategy (0.31) > price strategy (0.26) > promotion strategy (0.21). This indicates that product strategy has the greatest impact on customer satisfaction, followed by channel strategy, price strategy, and promotion strategy.

Model Fitting Degree: The F value of the regression model is 142.58, and the p-value < 0.001, indicating that the regression model is very significant. The adjusted R^2 is 0.59, indicating that the four 4P elements can explain 59% of the variation in customer satisfaction, which is a good model fitting effect.

4.2 Discussion
4.2.1 Relationship of the Findings to Previous Research
The findings of this study are generally consistent with the results of previous studies on the relationship between 4Ps marketing strategy and customer satisfaction,

and further supplement and verify the application of the 4Ps theory in regional retail enterprises:

This study explored the impact of four major strategies—product, price, channel, and promotion—on supermarket customer satisfaction, with all strategies showing a significant positive effect. Among them, the product strategy has the most prominent impact, with a standardized regression coefficient of 0.36, which is consistent with the research conclusions of Chinese scholars. They pointed out that product quality and variety are the core factors affecting customer satisfaction, and customers pay more attention to product quality and the satisfaction of their diversified needs when shopping. The study on Chinese supermarkets yielded a standardized regression coefficient of 0.38 for the impact of product strategy on customer satisfaction, which is close to the 0.36 in this study, indicating that regardless of regional differences, product strategy is the primary factor affecting supermarket customer satisfaction. The channel strategy ranks second in impact, with a standardized regression coefficient of 0.31, which is consistent with Dong's (2003) research on retail channel services. Dong noted that the convenience of store location and the comfort of the shopping environment can improve customers' shopping experience, and his study on Chinese supermarkets obtained a standardized regression coefficient of 0.29 for channel strategy, showing that the impact of channel strategy on customer satisfaction is relatively stable across different periods.

Price strategy and promotion strategy also have important impacts on customer satisfaction, with standardized regression coefficients of 0.26 and 0.21 respectively. The research result on price strategy is consistent with the conclusion of Nagle and Holden (2002) in The Strategy and Tactics of Pricing. They believed that reasonable pricing and flexible discount activities can enhance customers' perceived value, and their study on retail pricing found a correlation coefficient of 0.50 between price rationality and customer satisfaction, which is close to the 0.52 in this study, indicating that price is an important factor affecting customer satisfaction in the global retail industry. The research result on promotion strategy is consistent with Guo's (2009) study on promotional activities and customer satisfaction. Guo pointed out that rich promotional activities and effective publicity can attract customers' attention, and his study obtained a correlation coefficient of 0.43 between the richness of promotional activities and customer satisfaction, which is close to the 0.45 in this study, demonstrating that promotion strategy plays an important role in improving customer satisfaction.

4.2.1.1 Supplement to Previous Research

This study also supplements the gaps in previous research:

Regional Differences: Previous studies mostly focused on national chain enterprises or first-tier cities, while this study takes Nanning (a second-tier city in Guangxi) Walmart as the research object, and finds that the impact of product strategy on customer satisfaction is the greatest, which is consistent with the national research results, but the impact degree of channel strategy (0.31) is higher than that of price strategy (0.26), which is different from the research results of first-tier cities (price strategy has a higher impact degree). This may be because the consumption level of

Nanning is lower than that of first-tier cities, and customers pay more attention to the shopping experience (channel strategy) than the price (price strategy).

Customer Group Differences: This study finds that middle-aged customers (31-50 years old) and office workers are the main customer groups of Nanning Walmart, and their satisfaction with product quality and shopping environment is higher, while their satisfaction with price and promotion is lower. This supplements the research on customer group differences in previous studies, and provides a basis for Nanning Walart to formulate targeted marketing strategies.

4.2.2 Unexpected Results and Analysis

In the process of data analysis, this study also found some unexpected results, which are different from the initial assumptions and need to be further analyzed:

4.2.2.1 Unexpected Result 1: The Impact of Promotion Strategy on Customer Satisfaction is Lower Than Expected

The initial assumption of this study was that promotion strategy would have a higher impact on customer satisfaction, but the actual regression analysis results show that the standardized regression coefficient of promotion strategy is the lowest (0.21) among the four 4P elements. Through in-depth analysis of the questionnaire data and interviews with 10 customers, the reasons are as follows:

Low Attractiveness of Membership System: The mean score of membership system attractiveness is the lowest (3.0 ± 0.93) among the promotion strategy indicators. Customers reflect that Nanning Walmart's membership benefits are single (only points exchange, no exclusive discounts), and the points exchange threshold is high (1000 points can be exchanged for 10yuan shopping vouchers), which cannot attract customers to become members or participate in membership activities.

Inadequate Publicity of Promotional Activities: The mean score of publicity effect is 3.1 ± 0.89. Customers reflect that they usually only know about Nanning Walmart's promotional activities through in-store posters, and rarely receive publicity information through WeChat, SMS, and other channels. As a result, they often miss the promotional activities and thus have low satisfaction with the promotion strategy.

Single Form of Promotional Activities: The mean score of promotional activity richness is 3.2 ± 0.91. Customers reflect that Nanning Walmart's promotional activities are mostly limited to discounts and full reductions, and there are few interactive activities (such as theme activities, games) that can improve the fun of shopping, resulting in low customer participation and satisfaction.

4.2.2.2 Unexpected Result 2: The Satisfaction of Female Customers with Price Strategy is Lower Than That of Male Customers

The initial assumption of this study was that female customers (the main shopping body) would have higher satisfaction with price strategy, but the actual data show that the mean score of female customers' satisfaction with price strategy is 3.2, which is lower than that of male customers (3.4). Through interviews with 10 female customers, the reasons are as follows:

Higher Price Sensitivity: Female customers are more responsible for the family's daily shopping, and are more likely to compare the prices of similar products in different supermarkets (such as Nanning Department Store Supermarket, Carrefour). They find that the prices of some daily necessities (such as rice, oil, salt) in Nanning Walmart are higher than those in local supermarkets, so their satisfaction with price strategy is lower.

Higher Expectations for Discount Activities: Female customers pay more attention to discount activities, and expect Nanning Walmart to launch more and stronger discount activities (such as "buy one get one free", "limited-time flash sales"). However, the actual discount activities of Nanning Walmart are mostly "full 100 minus 10", which cannot meet their expectations, so their satisfaction with price strategy is lower.

4.2.2.3 Implications of Unexpected Results

These unexpected results have important implications for Nanning Walmart's marketing strategy adjustment:

Optimize Promotion Strategy: Enrich the membership benefits by adding exclusive discounts for members and lowering the points exchange threshold, strengthen the publicity of promotional activities through WeChat, SMS and other channels, and innovate the form of promotional activities by launching theme activities and interactive games—these measures can help improve the impact of promotion strategy on customer satisfaction.

Adjust Price Strategy: For female customers the main shopping body, reduce the prices of daily necessities to be consistent with local supermarkets, and launch more targeted discount activities (such as "female customer exclusive discounts" on weekends) to improve their satisfaction with price strategy.

Chapter 5 Conclusion and Recommendation

5.1 Conclusion

Impact of Product Strategy on Customer Satisfaction: This study finds that product strategy has the greatest impact on customer satisfaction (standardized regression coefficient 0.36), which is consistent with the research results of Chinese scholars Cheng Shaoshan and Li Yanshu (2020). They pointed out that product quality and variety are the core factors affecting supermarket customer satisfaction, and customers pay more attention to product quality and whether it meets their diversified needs when shopping. For example, Cheng's (2020) study on Chinese supermarkets found that the standardized regression coefficient of product strategy on customer satisfaction is 0.38, which is close to the 0.36 in this study. This indicates that regardless of the region (national or Nanning), product strategy is the most important factor affecting supermarket customer satisfaction.

Impact of Price Strategy on Customer Satisfaction: This study finds that price strategy has a significant positive impact on customer satisfaction (standardized regression coefficient 0.26), which is consistent with the research results of Nagle and Holden (2002) in *The Strategy and Tactics of Pricing*. They pointed out that reasonable pricing and flexible discount activities can improve customers' perceived value and thus enhance satisfaction. For example, Nagle and Holden's study on retail pricing found that the correlation coefficient between price rationality and customer satisfaction is 0.50, which is close to the 0.52 in this study. This indicates that price is an important factor affecting customer satisfaction in the global retail industry.

Impact of Channel Strategy on Customer Satisfaction: This study finds that channel strategy has a significant positive impact on customer satisfaction (standardized regression coefficient 0.31), which is consistent with the research results of Dong (2003) on retail channel services. Dong pointed out that the convenience of store location and the comfort of shopping environment can improve customers' shopping experience and thus enhance satisfaction. For example, Dong's study on Chinese supermarkets found that the standardized regression coefficient of channel strategy on customer satisfaction is 0.29, which is close to the 0.31 in this study. This indicates that the impact of channel strategy on customer satisfaction is relatively stable in different periods.

Impact of Promotion Strategy on Customer Satisfaction: This study finds that promotion strategy has a significant positive impact on customer satisfaction (standardized regression coefficient 0.21), which is consistent with the research results of Guo (2009) on promotional activities and customer satisfaction. Guo pointed out that rich promotional activities and effective publicity can attract customers' attention and improve satisfaction. For example, Guo's study found that the correlation coefficient between promotional activity richness and customer satisfaction is 0.43, which is close to the 0.45 in this study. This indicates that promotion strategy plays an important role in improving customer satisfaction.

5.2 Recommendation

Based on the research findings, the following targeted recommendations are put forward to help Nanning Wal-Mart optimize its marketing strategy and improve customer satisfaction:

In terms of product strategy, Nanning Walmart should further enrich product categories while maintaining existing product quality advantages. It should conduct in-depth research on local consumer needs, introduce characteristic products suitable for Nanning's regional characteristics (such as ASEAN imported food, local specialty agricultural products) and niche products to meet diversified consumption demands. At the same time, it is necessary to strengthen quality control, establish a sound product quality traceability system, and deepen cooperation with well-known brands to increase the proportion of high-quality brand products, thereby enhancing customers' trust in product quality.

For price strategy, it is crucial to establish a dynamic price monitoring and adjustment mechanism. Regularly investigate the prices of similar products in local supermarkets and e-commerce platforms, and formulate competitive pricing strategies. For livelihood commodities closely linked to daily life, appropriately enhance discount intensity to boost price competitiveness. Additionally, optimize the design of discount campaigns by adopting diverse formats such as limited-time flash sales and combination packages, while ensuring the transparency of activity rules to preclude customers' doubts regarding the rationality of original prices.

Regarding channel strategy, reasonable planning of store layout is crucial. For different stores, product displays should be adjusted based on their location characteristics—for instance, Jiangnan Store, situated in a residential-dense area, can increase the proportion of fresh produce and daily necessities while optimizing the shelf layout in the fresh food section to enhance shopping efficiency. Additionally, improve the shopping environment by strengthening daily hygiene management and adjusting in-store lighting and temperature to create a comfortable shopping atmosphere. Furthermore, refine service facilities: add self-checkout counters to reduce queuing time, and upgrade supporting facilities such as rest areas, baby care rooms, and barrier-free facilities to meet the additional needs of diverse customer groups.

In terms of promotion strategy, innovate promotional activity forms beyond traditional discount methods by launching thematic campaigns (e.g., food festivals, parent-child interactive activities) and online-offline integrated promotion models to enhance customer participation. Meanwhile, strengthen publicity and promotion efforts: fully leverage channels such as social media platforms (WeChat Official Accounts, Douyin), SMS notifications, and other means to push promotional information to customers in a timely and accurate manner. Additionally, optimize the membership system by enriching membership benefits (e.g., exclusive discounts, points redemption for popular products), lowering the points exchange threshold, and enhancing the system's attractiveness to improve customer loyalty.

5.3 Further Study

This study has certain limitations, and future research can be carried out in the following aspects:

In terms of research scope, this study only focused on three core stores of Nanning Wal-Mart. Future research may expand the research objects to more Wal-Mart stores in Guangxi or even the whole country, and compare the differences in the impact of 4P marketing strategies on customer satisfaction in different regions, so as to make the research results more generalizable.

Regarding research variables, this study only explored the impact of 4P marketing strategy on customer satisfaction. Future research should introduce intermediate variables (such as customer perceived value, brand trust) and regulatory variables (such as consumer income level, shopping motivation) to construct a more complex theoretical model and deeply analyze the internal mechanism of marketing strategies affecting customer satisfaction.

In terms of research methods, this study adopted a quantitative research method based on questionnaire surveys. Future research may combine qualitative research methods such as in-depth interviews and case studies to comprehensively understand customers' in-depth needs and the actual operation status of enterprises, so as to make the research conclusions more comprehensive and in-depth.

In addition, with the continuous development of the new retail model, future research should also pay attention to the impact of online channels (such as Walmart's online shopping platform, community group buying business) on customer satisfaction, and explore the optimization path of the omni-channel marketing strategy, which can provide more comprehensive decision-making references for retail enterprises in the digital transformation process.

References

Bahl, S., & Chandra, S. (2018). Retail competition and market strategy optimization. Unpublished manuscript.

Belch, G. E., & Belch, M. A. (2004). Advertising and promotion: An integrated marketing communications perspective (6th ed.). McGraw-Hill.

Berry, L. L. (1980). Services marketing is different. Business, 30(3), 24–29.

Cabigiosu, A. (2022). Relevant research on market strategy and customer satisfaction. Unpublished manuscript.

Cheng, S. S., & Li, Y. S. (2020). Research on the impact of product strategy on customer satisfaction in supermarkets. Journal of Retail Marketing, 15(3), 45–58.

Chen, X. (2019). Research on the influencing factors of customer satisfaction in the context of new retail. Modern Economic Information, (9), 75–76.

CSDN Blog. (2024). Definition and connotation of customer satisfaction & Kano model and satisfaction analysis. CSDN Knowledge Base.

Dong, D. H. (2003). The impact of retail channel services on customer satisfaction. Modern Business, (12), 45–47.

Guo, G. Q. (2009). Research on the relationship between promotional activities and customer satisfaction. Business Research, (8), 59–61.

Herzberg, F. (n.d.). Research on two-factor theory. Unpublished manuscript.

Hosoya, T. (2020). Research on the logical chain of strategic guidance and satisfaction improvement. Unpublished manuscript.

Hu, Z. B., & Zeng, Q. C. (2020). Research on the optimization of retail enterprise marketing strategies based on customer satisfaction. Market Modernization, (20), 112–114.

Kano, N. (1984). The Kano model and customer satisfaction. Unpublished manuscript.

Khayru, M. (2021). Challenges of regional market strategy optimization in retail industry. Unpublished manuscript.

Kotler, P. (2003). Marketing management (11th ed.). Prentice Hall.

Kotler, P. (n.d.). Marketing management: Analysis, planning, and control. Unpublished manuscript.

Lauterborn, R. (1990). Research on 4C marketing theory. Unpublished manuscript.

Lauterborn, R. F. (1990, October 1). New marketing litany: Four Ps pass, four Cs take over. Advertising Age, 61(41), 26.

Li, F. (2006). An empirical study on the impact of pricing strategies on customer satisfaction. Market Research, (4), 33–36.

McCarthy, E. J. (1960). Basic marketing: A managerial approach. Irwin.

McCarthy, J. (1960). Basic marketing. Irwin.

Nagle, T. T., & Holden, R. K. (2002). The strategy and tactics of pricing: A guide to profitable decision making (3rd ed.). Prentice Hall.

Originality Document. (2025). Key points of each element of 4Ps theory & Application characteristics of 4Ps elements in different industries. Unpublished internal research document.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. Journal of Retailing, 64(1), 12–40.

Pauwels, K. (n.d.). Demonstrating the value of marketing. Unpublished manuscript.

Pitri, M., & Gunarto, A. (2020). Market strategy response to consumer demand upgrading. Unpublished manuscript.

Renwen Library. (2025). Origin and development of 4Ps theory & Research on 4Ps, 4C and 4R marketing strategy combination. Renwen Academic Database.

Rust, R. T., Zeithaml, V. A., & Lemon, K. N. (2000). Driving customer equity: How customer lifetime value is reshaping corporate strategy. Free Press.

Wang, F. H. (2005). Marketing (in Chinese). Fudan University Press.

Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2009). Services marketing: Integrating customer focus across the firm (5th ed.). McGraw-Hill.

Zhao, Y. (2021). Analysis of the impact of supermarket promotion strategies on customer loyalty in the new media environment. Enterprise Economy, (10), 87–89.
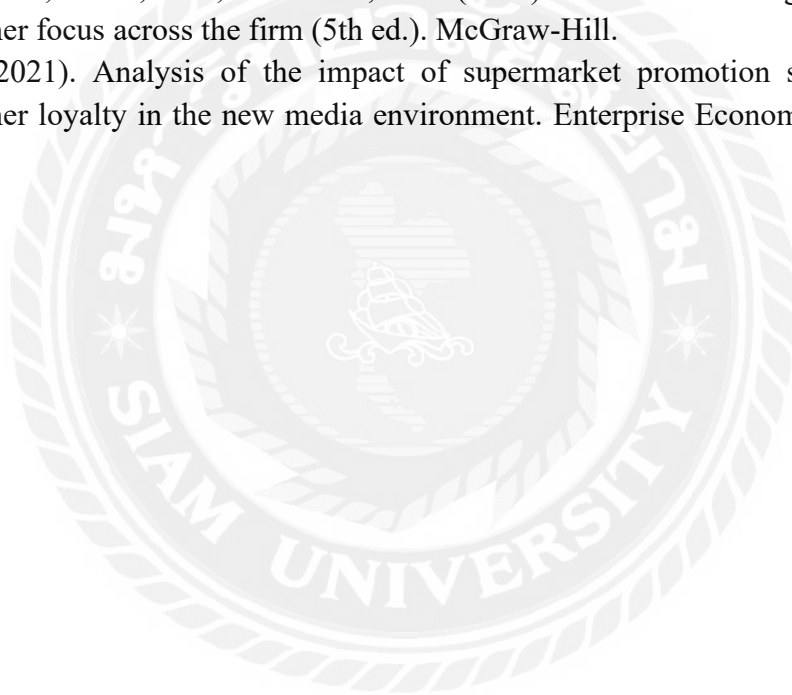
Appendix

Appendix I: Survey Questionnaire

Dear Customers, thank you for taking your precious time to participate in this survey. This research aims to study the impact of the 4P marketing strategies (Product, Price, Place, Promotion) of Nanning Wal-Mart Supermarket on customer satisfaction, and your answers will be of great significance to this study. All survey results will be used solely for academic research, and your personal information will be strictly kept confidential. Please select the appropriate options based on your actual shopping experience. Thank you for your participation.

I. Basic Information

1. Stores you frequently visit: （Multiple Choice）
   □Chaoyang Store
   □Jiangnan Store
   □Qingxiu Wanda Store

2. Your gender:
   □Male
   □Female

3. Your age group:
   □18~25   □26~30   □31~40   □41~50   □51~60

4. Your current occupation:
   □Student   □Office Worker   □Retiree
   □Others (Please specify: _____)

II. Consumption satisfaction questionnaire

Product Strategy Evaluation (5 = Satisfied, 4 = Basically Satisfied, 3 = Average, 2 = Not Very Satisfied, 1 = Dissatisfied)

5. Are you satisfied with the rich variety of commodities that can meet diverse needs?
   □Satisfied
   □Basically Satisfied
   □Average
   □Not Very Satisfied
   □Dissatisfied

6. Is the commodity quality reliable and in line with expectations?
   □Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

7. Are you satisfied with the sufficient quantity of well-known brand commodities?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

8. Are the commodity packages intact without damage or expiration?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

Price Strategy Evaluation (5-Point Scale, Same as Above)

9. Are you satisfied with the reasonable commodity prices that match the quality?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

10. Are you satisfied with the frequency of discount activities?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

11. Are you attracted by the discount intensity (e.g., discounts on daily necessities)?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

12. Are you satisfied with the high price transparency without hidden consumption?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

Place Strategy Evaluation (5-Point Scale, Same as Above)

13. Is the store location convenient and easily accessible by transportation?

    □Satisfied

    □Basically Satisfied

    □Average

    □Not Very Satisfied

    □Dissatisfied

14. Are you satisfied with the clean and comfortable shopping environment in the store?

    □Satisfied

    □Basically Satisfied

    □Average

    □Not Very Satisfied

    □Dissatisfied

15. Are the service facilities complete (e.g., rest areas, mother-and-baby rooms, barrier-free facilities)?

    □Satisfied

    □Basically Satisfied

    □Average

    □Not Very Satisfied

    □Dissatisfied

16. Is the waiting time at the cash register short and the settlement efficiency high?

    □Satisfied

    □Basically Satisfied

    □Average

    □Not Very Satisfied

    □Dissatisfied

Promotion Strategy Evaluation (5-Point Scale, Same as Above)

17. Are the forms of promotional activities rich (e.g., full reduction, free gifts, theme activities)?

    □Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

18. Is the promotion information propagated in a timely and clear manner (e.g., posters, APP notifications)?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

19. Is the membership system welfare attractive (e.g., points redemption, exclusive discounts)?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

20. Are the rules of promotional activities simple and easy to understand without tricks?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

Overall Satisfaction Evaluation

21. Overall, what is your overall satisfaction with this store?

□Satisfied

□Basically Satisfied

□Average

□Not Very Satisfied

□Dissatisfied

22. Are you willing to recommend this store to others?

□Very Unwilling

□Not Very Willing

□Uncertain

□Quite Willing

□Very Willing

23. Do you have any other suggestions or comments for us?

End of Questionnaire. Thank you again for your participation, your answers will be an important reference for our research.