



**A Study on the Influencing Factors of Customer Satisfaction in
Anyang Wanda Plaza**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
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Anyang Wanda Plaza**

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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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ABSTRACT

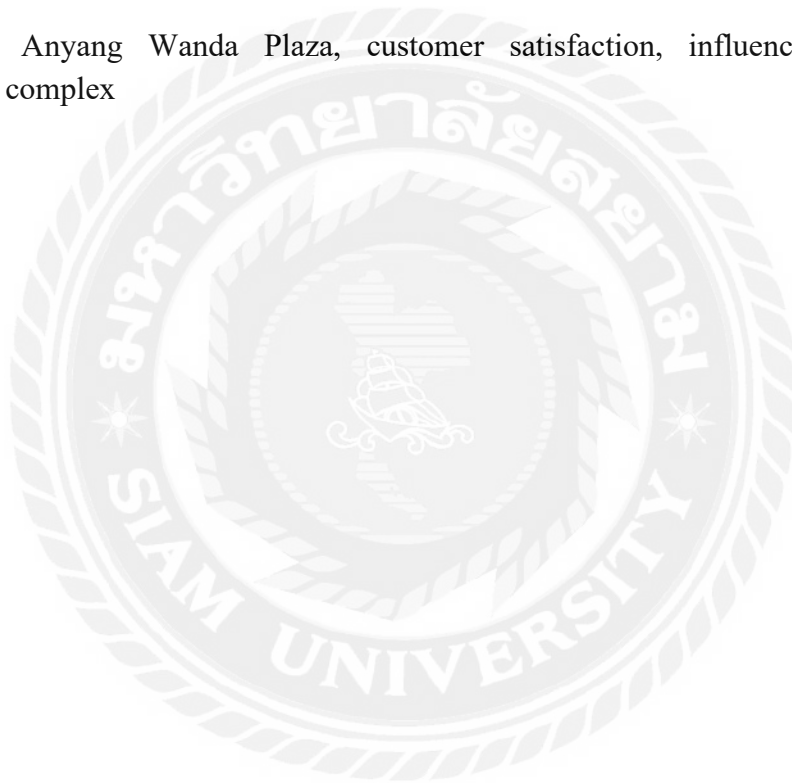
Against the backdrop of consumption upgrading and increasingly fierce commercial competition, customer satisfaction has become a key indicator of the core competitiveness of commercial complexes. As a landmark commercial complex in Anyang City, the operational quality and customer satisfaction with Anyang Wanda Plaza directly affect the regional commercial pattern and its own sustainable development. In recent years, with the rise of other local commercial projects and the impact of online consumption, Anyang Wanda Plaza is facing the dual challenges of customer diversion and demand iteration. Consumers have increasingly high requirements for commodity cost-effectiveness, service professionalism, shopping environment comfort, marketing activity attractiveness, and travel convenience. Improving customer satisfaction has thus become a crucial task for the plaza to maintain its leading position in the market.

The specific research objectives were as follows: 1. To explore whether commodity factors have a significant positive impact on customer satisfaction with Anyang Wanda Plaza; 2. To explore whether service factors have a significant positive impact on its customer satisfaction; 3. To explore whether environmental factors have a significant positive impact on its customer satisfaction; 4. To explore whether marketing factors have a significant positive impact on its customer satisfaction; 5. To explore whether convenience factors have a significant positive impact on its customer satisfaction.

This study adopted a quantitative research methodology, and the research results show that the key influencing factors exert a significant positive impact on the overall customer satisfaction with Anyang Wanda Plaza, with the specific suggestions as follows: 1. For commodity factors, Anyang Wanda Plaza should enrich commodity categories, strengthen quality control, optimize pricing, and accelerate the update of commodities and brands; 2. For service factors, Anyang Wanda Plaza should carry out employee training, optimize response processes, improve after-sales service, and

upgrade service facilities; 3. For environmental factors, Anyang Wanda Plaza should integrate local culture to create characteristic scenarios, strengthen hygiene management, and optimize space, temperature and noise control; 4. For marketing factors, Anyang Wanda Plaza should innovate promotion forms, upgrade the membership system, conduct precise publicity, and increase the frequency of customer interaction; 5. For convenience factors, Anyang Wanda Plaza should optimize transportation and parking facilities, improve surrounding business formats to build a one-stop consumption ecology, so as to comprehensively improve customer satisfaction with Anyang Wanda Plaza. The research results can not only provide empirical basis for Anyang Wanda Plaza to optimize its business strategies and improve service quality but also serve as a reference for customer satisfaction management of similar commercial complexes.

Keywords: Anyang Wanda Plaza, customer satisfaction, influencing factors, commercial complex



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Yuan ZeQun

DECLARATION

I, Yuan ZeQun , hereby declare that this Independent Study entitled “A Study on the Influencing Factors of Customer Satisfaction with Anyang Wanda Plaza” is an original work and has never been submitted to any academic institution for a degree.

(Yuan ZeQun)

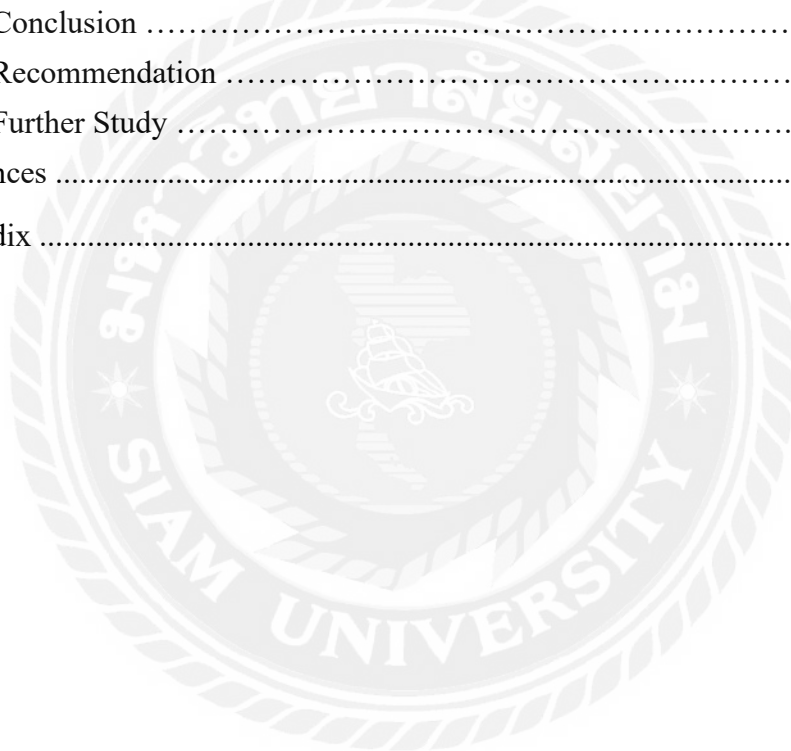
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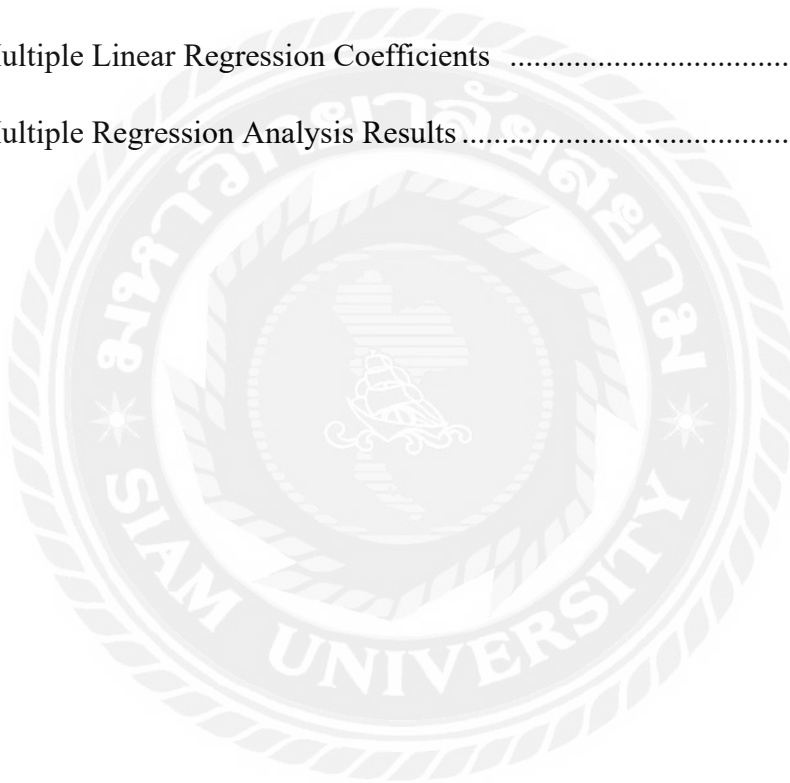
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Chapter 1 Introduction

1.1 Background of the Study

In recent years, China's consumption market has undergone profound changes driven by the continuous improvement of residents' income levels and the iterative upgrading of consumption concepts. Consumers are no longer satisfied with single shopping functions but pursue a diversified consumption experience integrating "shopping + catering + entertainment + leisure". Commercial complexes, as comprehensive carriers of this new consumption demand, have become an important part of urban commercial development. However, with the accelerated pace of urbanization and the intensification of market competition, the number of commercial complexes in various regions has surged. For example, in Anyang City alone, in addition to the early-established Anyang Wanda Plaza, a number of commercial projects such as local characteristic commercial streets and comprehensive shopping malls have emerged in recent years. These new projects have seized market share by virtue of their differentiated positioning and innovative operation models, bringing fierce competitive pressure to Anyang Wanda Plaza.

At the same time, the rapid development of online consumption has also had a significant impact on the offline commercial market. E-commerce platforms have the advantages of convenient shopping, rich product categories, and competitive prices, which have diverted a large number of price-sensitive consumers. According to the Statistical Communiqué on National Economic and Social Development in 2023 released by the National Bureau of Statistics, the national online retail sales of physical goods reached 12.0 trillion yuan, an increase of 6.5% year-on-year, accounting for 27.6% of the total retail sales of social consumer goods. Faced with the dual impact of offline homogeneous competition and online consumption diversion, offline commercial complexes represented by Anyang Wanda Plaza are facing an unprecedented survival crisis. How to enhance customer stickiness and maintain market competitiveness by improving customer satisfaction has become an urgent problem to be solved.

As the largest and most comprehensive urban complex in Anyang City, Anyang Wanda Plaza has a prime geographical location, covering a total construction area of more than 800,000 square meters, integrating shopping centers, residential areas, office buildings, and cultural and entertainment facilities. Since its opening, it has relied on rich format combinations and high-quality brand resources to become the core consumption choice of local residents, and its operational status has a profound impact on the regional commercial pattern. According to the 2024 Annual Operation Report of Anyang Wanda Plaza, the annual passenger flow of the plaza reached 12 million person-times, and the annual sales volume was 800 million yuan. However, in recent years, with the emergence of new commercial projects, the passenger flow and sales volume of Anyang Wanda Plaza have shown a slow downward trend. The data show that from 2023 to 2024, the passenger flow of the plaza decreased by 3.2% year-on-year, and the sales volume decreased by 2.8% year-on-year.

In addition, consumers' requirements for the consumption experience of commercial complexes are increasingly diversified and personalized. In terms of products, consumers not only pay attention to quality and price but also pursue uniqueness and scarcity; in terms of services, they hope to obtain more professional, efficient, and humanized services; in terms of the shopping environment, they pay more attention to comfort, cultural connotation, and sense of experience; in terms of marketing activities, they are no longer satisfied with simple discount promotions but are more interested in interactive and experiential marketing activities; in terms of convenience, transportation accessibility and parking conditions have become important factors affecting their consumption decisions.

Against this background, this study has long been concerned about the operation and development of Anyang Wanda Plaza. During the internship in the marketing department of the plaza, the researcher found that many customers have complaints about parking difficulties, single marketing activities, and slow after-sales service response. These problems not only affect the customer's consumption experience but also restrict the sustainable development of the plaza. Therefore, it is of great practical significance to carry out in-depth research on the influencing factors of customer satisfaction with Anyang Wanda Plaza. This research aims to identify the key factors affecting customer satisfaction, find out the existing problems in the operation of the plaza, and propose targeted optimization suggestions, which will help Anyang Wanda Plaza improve its operational quality and enhance its core competitiveness. At the same time, the research results can also provide a reference for the operation and management of other commercial complexes in third- and fourth-tier cities, enrich the empirical research on customer satisfaction of regional commercial complexes, and have important theoretical value.

1.2 Questions of the Study

1. Do commodity factors (including commodity variety, quality, price, brand diversity, and update speed) have a significant positive impact on customer satisfaction with Anyang Wanda Plaza?
2. Do service factors (including enthusiasm of service attitude, service response speed, employee professionalism, comprehensiveness of after-sales service, and convenience of service facilities) have a significant positive impact on customer satisfaction with Anyang Wanda Plaza?
3. Do environmental factors (including distinctiveness of decoration style, hygiene conditions, rationality of spatial layout, appropriateness of temperature and ventilation, and effectiveness of noise control) have a significant positive impact on customer satisfaction with Anyang Wanda Plaza?
4. Do marketing factors (including attractiveness of promotional activities, preference for the membership system, effectiveness of advertising and promotion, and frequency of customer interaction) have a significant positive impact on customer satisfaction with Anyang Wanda Plaza?

5. Do convenience factors have a significant positive impact on customer satisfaction with Anyang Wanda Plaza?

1.3 Objectives of the Study

Based on Anyang Wanda Plaza's core position in the regional commercial market, this study focused on customer satisfaction—a key indicator measuring commercial operation effectiveness. It aimed to comprehensively deconstruct the core factors and mechanisms influencing the plaza's customer satisfaction through systematic and multi-dimensional in-depth analysis, providing scientific support for the plaza to optimize operational strategies and strengthen competitive advantages. The study specifically set four core objectives as follows:

1. To explore whether commodity factors (including commodity variety, quality, price, brand diversity and update speed) have a significant positive impact on customer satisfaction with Anyang Wanda Plaza;
2. To explore whether service factors (including service attitude, response speed, employee professionalism, after-sales service and facility convenience) have a significant positive impact on its customer satisfaction;
3. To explore whether environmental factors (including decoration style, hygiene condition, spatial layout, temperature and ventilation conditions and noise control) have a significant positive impact on its customer satisfaction;
4. To explore whether marketing factors (including promotional activities, membership benefits, advertising and promotion and customer interaction) have a significant positive impact on its customer satisfaction;
5. To explore whether convenience factors (including transportation accessibility, parking convenience, and location accessibility) have a significant positive impact on its customer satisfaction;
6. To propose targeted operational optimization strategies and suggestions for Anyang Wanda Plaza based on the research findings.

1.4 Scope of the Study

This study took Anyang Wanda Plaza as the research subject, with the survey scope covering consumer groups of all formats (shopping, catering, entertainment, leisure, etc.) in the plaza. The respondents were customers who had consumption experience at Anyang Wanda Plaza in the past 3 months. Samples were randomly selected in a balanced manner across gender (equal ratio of males to females), age (18-30 years old, 31-50 years old, over 50 years old), occupation (students, office workers, retirees, freelancers, etc.), and consumption frequency (once a week or more, 2-4 times a month, once a month or less) to ensure sample representativeness.

The research focused on five core factors: commodity factors (commodity variety, quality, price rationality, brand diversity, update speed); Service factors (service attitude, response speed, employee professionalism, after-sales service, facility convenience); Environment factors (decoration style, hygiene conditions, spatial layout, temperature

and ventilation conditions, noise control); Marketing factors (attractiveness of promotional activities, membership system discounts, advertising effect, customer interaction level); Convenience factor (transportation convenience, parking facilities, surrounding supporting facilities). Data collection was conducted in 2025 to ensure the timeliness and practical guiding value of the research results.

1.5 Significance of the Study

1.5.1 Theoretical Significance

First, this study enriches the research on customer satisfaction of commercial complexes. Most existing studies focus on national chain brands or commercial complexes in first-tier cities, while there are relatively few empirical studies on regional leading commercial complexes in third- and fourth-tier cities. This study took Anyang Wanda Plaza as a case to conduct in-depth research, which fills the research gap in this field and provides new empirical evidence for the localized application of customer satisfaction theories.

Second, this study constructs a multi- factor customer satisfaction evaluation index system for regional commercial complexes. By refining the specific observation indicators under the five factors of product, service, environment, marketing, and convenience, this study provides a more targeted and operable analytical framework for subsequent related research, which helps to standardize the research on customer satisfaction of commercial complexes.

Third, this study deepens the research on the relationship between consumer group heterogeneity and satisfaction influencing factors. By analyzing the differences in satisfaction perception among different demographic customer groups, this study reveals the impact of consumer characteristics on satisfaction evaluation, which helps to enrich the theoretical research on customer satisfaction and provide a new perspective for the study of consumer behavior.

1.5.2 Practical Significance

First, for Anyang Wanda Plaza, the research results can provide direct operational guidance. By accurately identifying the core factors affecting customer satisfaction and the existing shortcomings in operation, the plaza can avoid blind investment, concentrate resources on key areas that have a significant impact on customer satisfaction (such as optimizing pricing strategies and improving parking facilities), and improve the scientific and efficiency of strategy formulation.

Second, for other commercial complexes in the region, the index system and research methods of this study can serve as a reference. The problems and challenges faced by Anyang Wanda Plaza are representative among regional commercial complexes in third- and fourth-tier cities. The optimization suggestions proposed in this study can provide replicable experience for other commercial complexes to improve customer satisfaction.

Third, improving customer satisfaction of Anyang Wanda Plaza is conducive to driving the vitality of regional commercial consumption. As a core commercial carrier in Anyang City, the healthy development of Anyang Wanda Plaza can drive the

development of surrounding supporting industries, promote the upgrading of the regional commercial industry, and then contribute to local economic development.

1.6 Definition of Key Terms

1.6.1 Customer Satisfaction

Customer satisfaction refers to the emotional feedback formed by customers when comparing their actual consumption experience at Anyang Wanda Plaza with their expected experience. It is a comprehensive evaluation of the product quality, service level, shopping environment, marketing activities, and convenience of the plaza.

1.6.2 Commercial Complex

A commercial complex refers to a large-scale commercial facility that integrates multiple formats such as shopping, catering, entertainment, leisure, office, and residential, with complete supporting facilities and providing one-stop consumption and living services for consumers. The research case of this study, Anyang Wanda Plaza, is a typical commercial complex, which covers multiple functional modules and meets the diversified needs of consumers.

1.6.3 Product Factor

The product factor refers to the comprehensive performance of the commodities and services provided by the merchants in Anyang Wanda Plaza, including product variety richness (the number and types of products provided by the plaza), product quality reliability (whether the product meets the relevant national standards and consumer expectations), price rationality (whether the product price is consistent with its value and market price level), brand diversity (the number and level of brand types introduced by the plaza), and product update speed (the frequency of new products launched by the merchants in the plaza).

1.6.4 Service Factor

The service factor refers to the professional level and quality of services provided by the employees of Anyang Wanda Plaza and its supporting facilities, including service attitude (the enthusiasm, patience, and friendliness of employees when providing services), response speed (the time it takes for employees to respond to customer needs and inquiries), employee professionalism (employees' mastery of product knowledge, service skills, and business processes), after-sales service completeness (the perfection of after-sales service policies and the efficiency of problem solving), and service facility convenience (the rationality of the layout and the convenience of use of service facilities such as information desks, cash registers, and rest areas in the plaza).

1.6.5 Environmental Factor

The environment factor refers to the overall environment and spatial experience of Anyang Wanda Plaza, including decoration style characteristics (whether the decoration style of the plaza is unique, in line with the aesthetic needs of target customers, and integrated with cultural elements), hygiene and cleanliness (the cleanliness of public areas, restrooms, catering areas, and other places in the plaza),

spatial layout rationality (the rationality of the layout of stores, aisles, and functional areas in the plaza, and the convenience of customer flow), temperature and ventilation effect (whether the temperature and air circulation in the plaza are appropriate), and noise control effect (the control of noise from crowds, background music, and merchant operations in the plaza).

1.6.6 Marketing Factor

The marketing factor refers to a series of activities carried out by Anyang Wanda Plaza to attract customers, enhance customer stickiness, and promote sales, including promotional activity attractiveness (the innovation, richness, and practicality of promotional activities launched by the plaza), membership system preferential intensity (the attractiveness of membership discounts, points, and other benefits), advertising and promotion effectiveness (the accuracy and attractiveness of the information released by the plaza through various channels), and customer interaction degree (the frequency and depth of interaction between the plaza and customers through online and offline channels).

1.6.7 Convenience Factor

The convenience factor refers to the convenience of customers' consumption process at Anyang Wanda Plaza, including transportation accessibility (the convenience of reaching the plaza by public transport, self-driving, and other means of transportation), parking facility conditions (the number of parking spaces, parking convenience, and rationality of parking fees in the plaza), and surrounding supporting facility completeness (the completeness of supporting facilities such as catering, leisure, and daily services around the plaza).

Chapter 2 Literature Review

2.1 Core Connotation of Customer Satisfaction

Customer satisfaction has always been a core research topic in the fields of marketing and consumer behavior. As early as the 1960s, scholars began to explore the connotation of customer satisfaction. Cardozo (1965) first proposed the concept of customer satisfaction in the field of marketing, believing that customer satisfaction is a psychological state formed by customers after purchasing products or services, which is related to their expectations before purchase. With the deepening of research, the definition of customer satisfaction has been continuously enriched and improved.

Traditional research regards customer satisfaction as a unidimensional concept, that is, a continuous spectrum between "satisfaction" and "dissatisfaction". For example, Oliver (1980) proposed the "Expectation-Confirmation Theory", which holds that customer satisfaction is the result of comparing the actual consumption experience with the pre-purchase expectations. If the actual experience exceeds the expectations, the customer is satisfied; if it is lower than the expectations, the customer is dissatisfied; if it is consistent with the expectations, the customer is in a neutral state. This theory has laid a foundation for the research on customer satisfaction and is widely used in empirical research.

However, with the development of research, scholars have found that the unidimensional perspective can no longer fully explain the formation mechanism of customer satisfaction. Based on Herzberg's Two-Factor Theory, some scholars have proposed that customer satisfaction can be divided into motivational factors and hygiene factors (Herzberg et al., 2011). Motivational factors refer to factors that can bring positive satisfaction to customers, such as high-quality services, distinctive experiences, and personalized products. The absence of these factors will not lead to customer dissatisfaction, but their presence can significantly enhance customer satisfaction. Hygiene factors refer to the basic conditions that customers expect to obtain during the consumption process, such as product quality, reasonable prices, and a clean environment. The presence of these factors will not improve customer satisfaction, but their absence will cause strong dissatisfaction among customers. This dual-factor perspective has enriched the understanding of the connotation of customer satisfaction and provided an important theoretical basis for identifying key factors affecting customer satisfaction.

In recent years, with the upgrading of consumption, customer satisfaction has shown a more complex and diversified connotation. Consumers are no longer satisfied with the basic satisfaction of product functions and service quality but pay more attention to the emotional experience and value recognition brought by consumption. For example, some scholars believe that customer satisfaction includes not only cognitive satisfaction (rational evaluation of product and service quality) but also emotional satisfaction (emotional experience generated during the consumption process)

(Yi, 1990). Cognitive satisfaction is the foundation of customer satisfaction, while emotional satisfaction is an important factor affecting customer loyalty.

In the research on customer satisfaction of commercial complexes, due to the characteristics of multiple formats and comprehensive services of commercial complexes, customer satisfaction is a comprehensive evaluation of the entire consumption process, involving products, services, environment, marketing, convenience, and other multiple aspects. CSDN Blog (2024) pointed out that customer satisfaction of commercial complexes is multi-dimensional emotional feedback formed by customers based on their comprehensive perception of the consumption experience, which is affected by various factors such as product quality, service level, shopping environment, and convenience conditions. Therefore, when studying the customer satisfaction of commercial complexes, it is necessary to adopt a multi-dimensional perspective to comprehensively analyze its influencing factors.

2.2 Research on Influencing Factors of Customer Satisfaction in Commercial Complexes

Existing studies have shown that customer satisfaction of commercial complexes is affected by multiple factors, and scholars have conducted in-depth research on its influencing factors from different perspectives.

In the commodity factor, product-related factors are the core of customer satisfaction. Li (2019) conducted research on urban commercial complexes and found that product variety richness, quality reliability, and price rationality are the key factors affecting customer satisfaction. Consumers hope to purchase products with reliable quality, reasonable prices, and diverse types in commercial complexes to meet their diversified consumption needs. In addition, brand diversity and product update speed also have a certain impact on customer satisfaction. Commercial complexes that introduce well-known brands and update products in a timely manner can better attract customers and improve their satisfaction.

In the service factor, service quality is an important factor affecting customer satisfaction. Wang (2009) studied the impact of service quality on customer satisfaction of commercial complexes and found that employees' service attitude, response efficiency, and professional competence directly affect customer interaction experience. Friendly service attitude and efficient response speed can enhance customers' sense of identity and trust in the commercial complex; while employees' professional competence can help customers solve problems in a timely manner and improve the consumption experience. In addition, comprehensive after-sales service can reduce consumers' perceived risk and enhance their satisfaction. Parasuraman et al. (1988) proposed the SERVQUAL scale, which measures service quality from five factors: tangibility, reliability, responsiveness, assurance, and empathy, and pointed out that service quality has a significant positive impact on customer satisfaction.

In the environmental factor, the shopping environment of commercial complexes has an important impact on customer satisfaction. Zhang (2020) studied the relationship between shopping environment perception and customer satisfaction and found that the

comfort of the shopping environment (temperature, ventilation, hygiene), the rationality of spatial layout, and the distinctiveness of decoration style can significantly increase customers' stay time and consumption willingness. A clean, comfortable, and uniquely decorated shopping environment can bring customers a pleasant consumption experience and improve their satisfaction. In addition, noise control is also an important part of the environment factor. Excessive noise will affect customers' consumption mood and reduce their satisfaction.

In the marketing factor, marketing activities and membership systems are important means to enhance customer satisfaction. Chen (2021) pointed out that diversified and demand-oriented promotional activities can attract customers to participate and improve their purchase willingness; attractive membership benefits can enhance customer loyalty and satisfaction. In addition, the effectiveness of advertising and promotion and the degree of customer interaction also affect customer satisfaction. Commercial complexes that can accurately deliver promotional information and maintain good interaction with customers can better meet customer needs and improve their satisfaction.

In the convenience factor, convenience factors are the basic guarantee for improving customer satisfaction. Zhao (2003) studied the relationship between convenience factors and customer satisfaction of commercial complexes and found that transportation accessibility, parking convenience, and the completeness of surrounding supporting facilities have a significant positive impact on customer satisfaction. Convenient transportation and parking conditions can reduce customers' consumption costs and improve their willingness to consume; complete surrounding supporting facilities can meet customers' diversified needs and enhance their overall consumption experience.

2.3 Integration of Five Core Factors with the Operation of Commercial Complexes

The operation and development of commercial complexes rely on the synergistic effect of multiple operational elements, and the five core factors of product, service, environment, marketing, and convenience are highly integrated with the whole process of commercial complex operation, forming a multi-factor and systematic operational support system for commercial complexes. This integration is not only the embodiment of the commercial complex's core operational logic of "taking customer demand as the core", but also the key to realizing the organic combination of the commercial complex's resource allocation, service output and value realization, and its internal integration mechanism runs through the whole chain of the commercial complex's operation from brand introduction, service delivery to customer retention (Guanyan Report Network, 2025).

From the perspective of product factor integration, the product layout of commercial complexes is the core of operational positioning, and its integration with operation is reflected in the matching of commodity categories, brand levels and product update speed with the target consumer groups of the plaza. For commercial

complexes, the product factor is the foundation of attracting customers, and its operation integration needs to follow the principle of "demand-oriented". It is necessary to conduct in-depth research on the consumption capacity, consumption preferences and consumption trends of regional target customers, and carry out hierarchical and diversified layout of commodity categories and brand resources on this basis (Nielsen, 2014). For example, for the core consumer groups of middle-aged and young office workers with stable income, it is necessary to balance the layout of mass consumption brands and medium and high-end fashion brands, and at the same time keep the product update speed in line with the market trend, so as to realize the deep integration of product supply and customer demand. In the daily operation, the commercial complex needs to establish a dynamic monitoring mechanism for product sales and customer feedback, adjust the commodity structure and brand introduction strategy in a timely manner, and ensure that the product factor can continuously adapt to the changes of the consumption market, which is the core of the product factor's support for the sustainable operation of the commercial complex (CBRE, 2014).

From the perspective of service factor integration, service is the soft-core competitiveness of commercial complexes, and its integration with operation is reflected in the construction of a full-process service system covering pre-consumption, in-consumption and post-consumption, and integrating the service quality requirements into the daily management norms of the plaza and the job responsibilities of employees. The service operation of commercial complexes is not a single behavior of front-line employees, but a systematic project involving multiple departments such as property management, merchant management, and customer service. Its integration needs to realize the standardization and humanization of service. On the one hand, it is necessary to formulate unified service specifications and operation processes, such as the standard of employee reception, the processing process of customer complaints, and the service standard of supporting facilities, to ensure the consistency of service output; on the other hand, it is necessary to combine the characteristics of different consumption scenarios to provide personalized services, such as mother-and-baby services, barrier-free services, and VIP exclusive services, to meet the diversified service needs of customers (China Consumers Association, 2023). In the operation, the commercial complex needs to take service quality as an important indicator of merchant assessment and employee performance appraisal, and establish a service improvement mechanism based on customer feedback, so that the service dimension can become a key link to enhance customer experience and brand loyalty (Douyin Encyclopedia, 2025a).

From the perspective of environmental factor integration, the shopping environment of commercial complexes is the carrier of customer consumption experience, and its integration with operation is reflected in the combination of environmental design and operation positioning, functional layout and customer experience, and the realization of the dual value of environmental functionality and experience in the daily operation and maintenance. The environmental operation of commercial complexes needs to take "improving customer stay time and consumption willingness" as the core goal. In the design stage, it is necessary to combine the regional

cultural characteristics and the positioning of the plaza to carry out the design of decoration style, spatial layout and functional zoning, and ensure the rationality of aisle design, the convenience of functional area distribution and the comfort of environmental facilities; in the operation and maintenance stage, it is necessary to establish a standardized environmental management system, including the frequency of hygiene cleaning, the regulation of temperature and ventilation, the control of noise and the maintenance of facilities, to ensure the stability of the environmental experience (Li, 2019). At the same time, the commercial complex can carry out dynamic environmental optimization according to different festivals and marketing activities, such as thematic scene layout, to enhance the attractiveness of the shopping environment, so that the environment dimension can become an important support for the commercial complex to form differentiated operational advantages (Douyin Encyclopedia, 2025b).

From the perspective of marketing factor integration, marketing is the important means for commercial complexes to attract customers and enhance customer stickiness, and its integration with operation is reflected in the combination of marketing activities with the product, service and environment resources of the plaza, the realization of the precision and synergy of marketing, and the integration of marketing management into the customer life cycle management of the plaza. The marketing operation of commercial complexes needs to break the single model of traditional discount promotion, and build a multi-factor marketing system integrating "offline activities + online promotion + membership operation". On the one hand, marketing activities need to be closely combined with the product resources of the merchants in the plaza, such as joint brand promotion, thematic product festivals, to realize the mutual promotion of marketing and product sales; on the other hand, it is necessary to combine the environmental advantages of the plaza to carry out experiential marketing activities, such as parent-child interaction, fashion shows and cultural salons, to enhance the participation and experience of customers (Wang, 2016). In the daily operation, the commercial complex needs to build a customer big data platform, record and analyze the consumption behavior and preference of customers, carry out precise marketing and personalized recommendation, and at the same time optimize the membership system, improve the membership benefits and interaction methods, realize the refined operation of members, and make the marketing factor a key link to connect the plaza with customers and realize customer retention (China Consumers Association, 2024).

From the perspective of convenience factor integration, convenience is the basic guarantee for the commercial complex to reduce customer consumption costs and improve consumption efficiency, and its integration with operation is reflected in the optimization of the whole consumption chain from customer arrival, parking to consumption and departure, and the integration of convenience improvement with the regional urban supporting construction. The convenience operation of commercial complexes needs to take "reducing customer transaction costs and improving consumption experience" as the core, and carry out systematic optimization from three aspects: transportation accessibility, parking facility conditions and surrounding supporting facilities. In terms of transportation, it is necessary to strengthen cooperation

with the urban public transport department, optimize the bus route layout and increase the transportation connection points, and at the same time improve the road sign guidance and parking lot guidance system; in terms of parking, it is necessary to rationally plan the parking space layout, optimize the parking fee policy, and introduce intelligent parking systems to solve the problem of parking difficulty; in terms of surrounding supporting facilities, it is necessary to build a "one-stop" consumption ecology by introducing catering, leisure, daily services and other formats, and realize the complementary advantages of the plaza and the surrounding business formats (Zhangjiagang Municipal Government, 2023). In the operation, the commercial complex needs to keep close contact with the local urban construction department, timely grasp the regional traffic and supporting construction planning, and adjust the convenience optimization strategy in a timely manner, so that the convenience factor can become the basic guarantee for the commercial complex to stabilize the customer flow and improve the overall operational efficiency.

In general, the five-core factors are not isolated in the operation of commercial complexes, but form an interconnected and mutually promoting organic whole. The product factor is the foundation, the service factor is the core, the environmental factor is the carrier, the marketing factor is the means, and the convenience factor is the guarantee. The effective integration of the five factors with the daily operation of the commercial complex is the key to realizing the commercial complex's "customer factor-oriented" operational transformation, improving customer satisfaction and enhancing the core competitiveness of the plaza. Only by realizing the synergistic development of the five factors and forming a systematic operational advantage can commercial complexes stand out in the fierce market competition and realize sustainable development (Guanyin Report Network, 2025).

2.4 Deficiencies of Existing Research and Supplements of This Study

Although existing studies have conducted in-depth research on the influencing factors of customer satisfaction with commercial complexes, there are still some deficiencies, which provide a space for this study to supplement and innovate.

First, the research subject of existing studies are mostly national chain brands or commercial complexes in first-tier cities, and there are relatively few empirical studies on regional leading commercial complexes in third- and fourth-tier cities. Commercial complexes in third- and fourth-tier cities have obvious differences from those in first-tier cities in terms of consumer characteristics, market competition, and operational models. Consumers in third- and fourth-tier cities have lower income levels, stronger price sensitivity, and different demand preferences compared with those in first-tier cities (CBRE, 2014; Nielsen, 2014). Therefore, the research results of commercial complexes in first-tier cities cannot be directly applied to regional commercial complexes in third- and fourth-tier cities. This study took Anyang Wanda Plaza, a regional leading commercial complex in a third-tier city, as the research subject, which fills the research gap in this field and provides targeted research results for the operation and management of commercial complexes in third- and fourth-tier cities.

Second, existing studies have insufficient in-depth analysis of convenience factors. Most studies only regard transportation accessibility and parking convenience as the main indicators of convenience factors, and there is a lack of comprehensive consideration of the completeness of surrounding supporting facilities and other factors. In fact, the completeness of surrounding supporting facilities (such as catering, leisure, daily services, etc.) is also an important part of convenience factors, which has a significant impact on customers' overall consumption experience (Wang, 2016). This study refines the observation indicators of the convenience dimension, including transportation accessibility, parking facilities, and the completeness of surrounding supporting facilities, and conducts in-depth analysis, which enriches the research on convenience factors.

Third, existing studies have less analysis of the differences in satisfaction among different customer groups. Most studies focus on the overall impact of various factors on customer satisfaction, and there is a lack of in-depth exploration of the differences in demand preferences and satisfaction perception among different demographic customer groups (such as different ages, occupations, and consumption frequencies). In fact, different customer groups have significant differences in demand preferences and satisfaction evaluation standards (China Consumers Association, 2023, 2024). Therefore, analyzing the differences in satisfaction among different customer groups is of great significance for commercial complexes to formulate differentiated operational strategies. This study focuses on the differences in satisfaction among different demographic customer groups, which enriches the research content of customer satisfaction of commercial complexes.

2.4.1 Variable Explanation

2.4.1.1 Dependent Variable: Customer Satisfaction

As the dependent variable of this study, customer satisfaction is a key topic in consumer behavior research. Cardozo (1965) first proposed the concept of customer satisfaction in the field of marketing, defining it as a psychological state formed by customers after purchasing products or services and associated with pre-purchase expectations. Oliver (1980) proposed the Expectation Disconfirmation Theory (ECT), the core view of which is that customer satisfaction is an emotional response generated by customers comparing their actual consumption experience with their pre-consumption expectations; when the actual experience exceeds expectations, customers generate satisfaction, and vice versa for dissatisfaction. Farris et al. (2006) supplemented the connotation of customer satisfaction, pointing out that it is a comprehensive evaluation of an enterprise's product quality, service level, shopping environment, marketing activities and convenience from the perspective of consumers. In the research on commercial complexes, CSDN Blog (2024) further defined customer satisfaction of commercial complexes as a multi-factor emotional feedback formed by customers based on their comprehensive perception of the entire consumption experience, involving multiple factors such as products, services and environment.

For the measurement of customer satisfaction, Parasuraman et al. (1988) recommended a 5-point Likert scale based on the SERVQUAL model (1=Strongly

Dissatisfied, 2=Dissatisfied, 3=Neutral, 4=Satisfied, 5=Strongly Satisfied), which is widely used in empirical research on customer satisfaction due to its high reliability and operability (Girsang & Faadhil, 2025). This study adopts this scale to measure customers' overall satisfaction with Anyang Wanda Plaza, taking it as the core dependent variable for subsequent quantitative analysis.

2.4.1.2 Independent Variables

Product Factor

A product factor is the core material foundation affecting the customer satisfaction of commercial complexes, and Li (2019) defined it as the comprehensive performance of commodities provided by merchants in commercial complexes, which is the primary factor for customers to generate consumption demand and satisfaction. Combined with the operational characteristics of Anyang Wanda Plaza, this study refines the product factor into five specific indicators: commodity variety, commodity quality, commodity price, brand diversity and commodity update speed, with reference to the research of CBRE (2014) and Nielsen (2014). Among them, Li (2019) pointed out in his research on urban commercial complexes that product variety richness, quality reliability and price rationality are the key sub-indicators of product factors affecting customer satisfaction; while brand diversity and product update speed are important supplements, as commercial complexes that introduce diverse brands and update products in a timely manner can better meet the personalized and iterative consumption needs of customers (Nielsen, 2014)

Service Factor

A service factor is the soft-core competitiveness of commercial complexes, and Wang (2009) defined it as the professional level and quality of various services provided by commercial complex employees and supporting service facilities in the whole consumption process of customers, which directly affects the customer's interactive experience and emotional perception. Parasuraman et al. (1988) proposed the SERVQUAL scale, measuring service quality from five factors of tangibility, reliability, responsiveness, assurance and empathy, which laid the theoretical foundation for the indicator refinement of service factors in this study. Combined with the actual situation of Anyang Wanda Plaza, this study divides service factors into five specific indicators: service attitude, service response speed, employee professionalism, after-sales service and service facility convenience. Wang (2009) emphasized in his research that service attitude and employee professionalism are the core of the service experience, while service response speed and after-sales service completeness are the key to solving customer consumption pain points and improving satisfaction; the convenience of service facilities is the tangible embodiment of service quality, which is an important part of the service factor system (China Consumers Association, 2023).

Environmental Factor

An environmental factor refers to the comprehensive spatial experience and environmental perception obtained by customers in the commercial complex, and Zhang (2020) defined it as the sum of various environmental elements in the shopping space of commercial complexes, which has a significant impact on customers'

consumption stay time and emotional satisfaction. Li (2019) pointed out in the research on shopping environment perception that the environmental factor of commercial complexes should include both the hard environmental design and the daily environmental operation and maintenance, and this study refines it into five specific indicators: decoration style, hygiene condition, spatial layout, temperature and ventilation conditions and noise control with reference to this view. Zhang (2020) confirmed that the rationality of spatial layout and the comfort of temperature and ventilation are the key factors affecting the customer's basic environmental experience; the distinctiveness of decoration style can enhance the differentiated competitiveness of the commercial complex, and the effectiveness of hygiene condition and noise control is the basic guarantee of the shopping environment (Douyin Encyclopedia, 2025b).

Marketing Factor

A marketing factor is the important means for commercial complexes to attract customers and enhance customer stickiness, and Chen (2021) defined it as a series of marketing activities and operation strategies carried out by commercial complexes to promote sales, maintain customer relations and enhance brand influence. This study drew on the research results of Wang (2016) and China Consumers Association (2024), and refined the marketing factor into four specific indicators: attractiveness of promotional activities, preferential strength of membership system, effectiveness of advertising and promotion and degree of interaction with customers. Chen (2021) pointed out that diversified and demand-oriented promotional activities and attractive membership benefits are the core of improving customer satisfaction in the marketing factor; Wang (2016) emphasized that the effectiveness of advertising and promotion determines the accuracy of customer access to information, and the frequency and depth of customer interaction are the key to realizing customer retention and word-of-mouth communication.

Convenience Factor

A convenience factor is the basic guarantee for commercial complexes to reduce customer consumption costs and improve consumption efficiency, and Zhao (2003) was the first to define it as the convenience of customers in the whole process of reaching, consuming and leaving the commercial complex, which is a basic factor affecting customers' consumption decision-making. Most existing studies only focused on transportation and parking indicators, and this study supplements the completeness of surrounding supporting facilities as an important sub-indicator with reference to the research of Wang (2016) and Zhangjiagang Municipal Government (2023), forming three specific indicators: transportation accessibility, parking facilities and completeness of surrounding supporting facilities. Zhao (2003) confirmed that transportation accessibility and parking convenience are the core of the convenience factor, which directly affect the customer's willingness to choose offline consumption; Zhangjiagang Municipal Government (2023) pointed out that the completeness of surrounding supporting facilities is an important extension of the convenience of

commercial complexes, and the construction of a one-stop consumption ecology can significantly improve the customer's overall consumption experience and satisfaction.

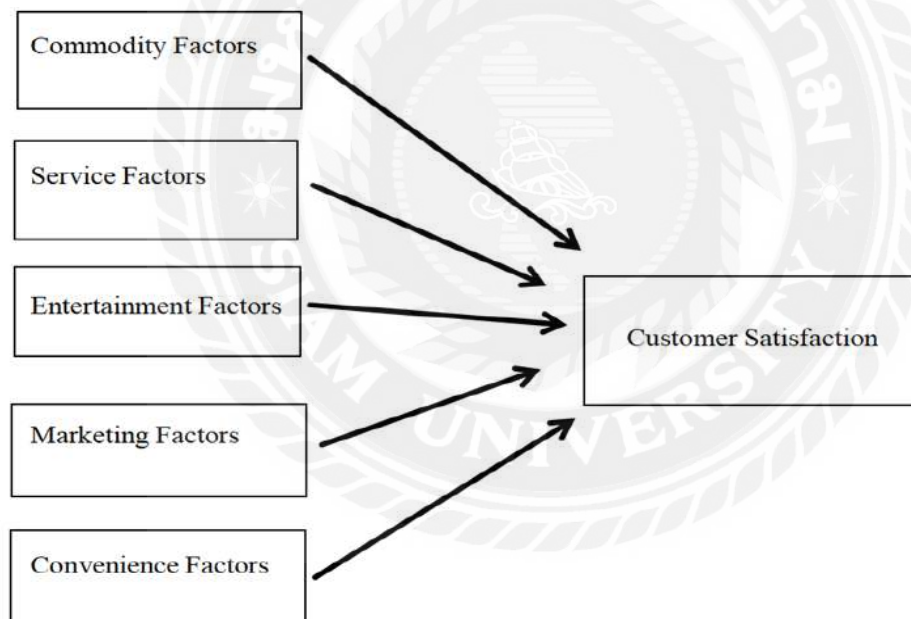
2.5 Conceptual Framework

2.5.1 Conceptual Framework

Based on the above literature review, this study constructed a conceptual framework of the influencing factors of customer satisfaction with Anyang Wanda Plaza, taking product, service, environment, marketing, and convenience as independent variables and customer satisfaction as the dependent variable. The specific framework is shown in Figure 2.1.

In this framework, the five independent variables (product, service, environment, marketing, convenience) are the core factors affecting customer satisfaction, and each independent variable contains multiple specific observation indicators. These independent variables jointly act on the dependent variable (customer satisfaction), and there may be mutual influence among the independent variables.

Figure 2.1 Conceptual Framework of Customer Satisfaction Influencing Factors



Chapter 3 Research Methodology

3.1 Research Design

3.1.1 Research Type

This study adopted a quantitative research method as the research approach. This method was applied to carry out large-scale data collection and systematic statistical analysis through the distribution and collection of questionnaires, with the core research objective of scientifically verifying the proposed research hypotheses of the study.

3.1.2 Research Methods

Quantitative research method: Questionnaire survey with close questions and rating scales. A structured questionnaire was designed to measure customers' perceptions of each influencing factor and their overall satisfaction, and statistical analysis was performed on the collected data.

3.2 Population and Sample

3.2.1 Population

The population of this study was all customers who had consumption experience at Anyang Wanda Plaza in the past 3 months, including customers who consume in shopping, catering, entertainment, leisure and other formats. There was no restriction on gender, age, occupation and other aspects, as long as they met the condition of having consumption experience in the plaza during the specified period.

3.2.2 Sample Size and Sampling Method

According to the sample size determination principle in social science research (generally 10-20 times the number of observation indicators), this study had 25 observation indicators, so the minimum sample size was 250-500. Considering the possible invalid questionnaires, 300 questionnaires were finally distributed.

The sampling method adopted random sampling. During the peak business hours of Anyang Wanda Plaza (weekends and evenings on working days), investigators distributed questionnaires randomly to customers who had just finished consumption. At the same time, the balance of sample structure was considered, and the distribution was adjusted appropriately according to gender, age and other factor to ensure the representativeness of the sample.

3.3 Hypothesis

Based on the aforementioned theoretical framework and the actual operation of Anyang Wanda Plaza, the following research hypotheses were proposed:

H1: Commodity factors have a significant positive impact on customer satisfaction. Specifically, the richer the variety of commodities, the more reliable the quality, the

more reasonable the price, the higher the brand diversity, and the faster the update speed, the higher the customer satisfaction.

H2: Service factors have a significant positive impact on customer satisfaction. Specifically, the more enthusiastic the service attitude, the faster the response speed, the higher the professionalism of employees, the more comprehensive the after-sales service, and the more convenient the service facilities, the higher the customer satisfaction.

H3: Environmental factors have a significant positive impact on customer satisfaction. Specifically, the more distinctive the decoration style, the better the hygiene condition, the more reasonable the spatial layout, the more appropriate the temperature and ventilation, and the more effective the noise control, the higher the customer satisfaction.

H4: Marketing factors have a significant positive impact on customer satisfaction. Specifically, the more attractive the promotional activities, the greater the preferential strength of the membership system, the better the effect of advertising and promotion, and the more frequent the interaction with customers, the higher the customer satisfaction.

H5: Convenience factors have a significant positive impact on customer satisfaction. Specifically, the more convenient the transportation, the better the parking facilities, and the more complete the surrounding supporting facilities, the higher the customer satisfaction.

3.4 Research Instrument

The main research instrument of this study is a structured questionnaire, which is divided into three sections:

3.4.1 Basic Information of Respondents

This section includes 4 questions, covering gender, age, occupation and consumption frequency, which are used to analyze the demographic characteristics of the sample and the differences in satisfaction among different groups.

3.4.2 Perception of Influencing Factors

This section covers 25 specific observation indicators under the five factors of product, service, environment, marketing and convenience. Each indicator adopts a 5-point Likert scale, with 1 representing "Strongly Dissatisfied", 2 representing "Dissatisfied", 3 representing "Neutral", 4 representing "Satisfied" and 5 representing "Strongly Satisfied". The specific indicators are as follows:

Table 3.1 Factors and Corresponding Indicators

Factor	Number of Indicators	Specific Indicator
Commodity Factors	5	Commodity variety, commodity quality, commodity price, brand diversity, commodity update speed

Service Factors	5	Service attitude, service response speed, employee professionalism, after-sales service, service facility convenience
Environmental Factors	5	Decoration style, hygiene condition, spatial layout, temperature and ventilation conditions, noise control
Marketing Factors	4	Promotional activities, membership benefits, advertising and promotion, customer interaction
Convenience Factors	3	Transportation accessibility, parking facilities, completeness of surrounding supporting facilities

3.4.3 Customer Satisfaction Evaluation

This section includes 1 question, which asks customers to evaluate their satisfaction with Anyang Wanda Plaza, also using a 5-point Likert scale.

Before the formal distribution of the questionnaire, a pre-survey was conducted with 30 customers to test the clarity and rationality of the questionnaire items. According to the pre-survey results, the ambiguous expressions in individual items were revised to ensure the validity and reliability 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 research instrument. This study uses Cronbach's α coefficient to test the reliability of the questionnaire. Generally, if the Cronbach's α coefficient is greater than 0.7, it indicates good reliability; if it is between 0.6 and 0.7, it indicates acceptable reliability; if it is less than 0.6, it indicates poor reliability.

Cronbach's α coefficient was used to test the reliability of the questionnaire, and KMO test and Bartlett's Test of Sphericity were used to test the validity of the questionnaire, so as to verify the scientific and rationality of the research instrument.

Table 3.2 Reliability Analysis Results

Factor	Cronbach's α Coefficient
Commodity Factors	0.83
Service Factors	0.81

Environmental Factors	0.79
Marketing Factors	0.80
Convenience Factors	0.78

3.5.2 Validity Analysis

Validity refers to the accuracy of the research instrument in measuring the target concept. This study uses KMO test and Bartlett's Test of Sphericity to test the construct validity of the questionnaire. The KMO value ranges from 0 to 1. If the KMO value is greater than 0.6, it indicates that the data are suitable for factor analysis. The Bartlett's Test of Sphericity is used to test whether the correlation matrix is an identity matrix. If the p-value is less than 0.05, it indicates that the variables are correlated with each other and suitable for factor analysis.

Table 3.3 Validity Analysis Results

Test Item	Test Result	Judgment Criterion	Result Judgment
KMO Test	0.85	≥ 0.6 (Suitable for factor analysis)	Suitable for Factor Analysis
Bartlett's Test of Sphericity	$p < 0.001$	$p < 0.05$ (Reject the null hypothesis)	Good Construct Validity

3.6 Data Collection

The data collection of this study was carried out from March 2025 to April 2025, lasting for one month. The specific process as follows:

Train the investigators to make them familiar with the content of the questionnaire, the distribution method and the precautions for guiding respondents to fill in the questionnaire.

Distribute questionnaires during the peak business hours of Anyang Wanda Plaza (10:00-21:00 on weekends, 17:00-21:00 on working days). The investigators explained the purpose and significance of the survey to the respondents, and invited them to fill in the questionnaire voluntarily.

Adopt the method of on-site distribution and on-site recovery to ensure the recovery rate of the questionnaire. After the respondents filled in the questionnaire, the investigators checked it on the spot to eliminate invalid questionnaires with missing items or regular answers.

Finally, 300 questionnaires were distributed, 292 were recovered, and 289 valid questionnaires were obtained after excluding 3 invalid questionnaires, with an effective recovery rate of 96.33%.

3.7 Data Analysis

3.7.1 Descriptive Statistical Analysis

SPSS 26.0 software was used to conduct descriptive statistical analysis on the sample demographic characteristics, calculate the frequency, proportion, mean and standard deviation of each variable, and understand the basic situation of the sample and the distribution characteristics of the data.

3.7.2 Reliability and Validity Analysis

Cronbach's α coefficient was used to test the reliability of the questionnaire, and KMO test and Bartlett's Test of Sphericity were used to test the validity of the questionnaire, so as to verify the scientific and rationality of the research instrument.

3.7.3 Correlation Analysis

Pearson correlation analysis was conducted to explore the correlation between each factor (product, service, environment, marketing, convenience) and customer satisfaction, and determine whether there is a significant linear relationship between the independent variables and the dependent variable.

3.7.4 Multiple Regression Analysis

Customer satisfaction was taken as the dependent variable and the five factors as independent variables to establish a multiple regression model, analyze the influence weight of each independent variable on the dependent variable, and verify the research hypotheses proposed in this study.

Chapter 4 Findings and Discussion

4.1 Findings

4.1.1 Demographic Characteristics of Respondents

Gender: Female customers account for 62.98% and male customers 37.02%. The higher proportion of female customers aligns with their more active participation in commercial consumption.

Age: Customers aged 31-50 make up the largest share (47.75%), followed by 18-30 years old (28.37%) and over 50 years old (23.88%), confirming middle-aged and young customers as the core consumer group of Anyang Wanda Plaza.

Occupation: Office workers account for the highest proportion (59.52%), followed by students (17.65%), retirees (14.19%) and others (8.65%). Office workers, with stable income and strong consumption capacity, are the key customer group of the plaza.

Consumption frequency: Customers who consume 2-4 times a month account for 52.25%, followed by those consuming once a week or more (26.99%) and once a month or less (20.76%). The relatively high consumption frequency of most customers ensures the authenticity and effectiveness of their perception evaluations.

Table 4.1 Demographic Characteristics of Respondents

Demographic Characteristic	Category	Number of Samples	Proportion (%)
Gender	Female	182	62.98
	Male	107	37.02
Age	18-30 years old	82	28.37
	31-50 years old	138	47.75
	Over 50 years old	69	23.88
Occupation	Students	51	17.65
	Office workers	172	59.52
	Retirees	41	14.19
	Others	25	8.65
Consumption Frequency	Once a week or more	78	26.99
	2-4 times a month	151	52.25
	Once a month or less	60	20.76

4.1.2 Descriptive Statistical Analysis Results of Factors

Table 4.2 presents the mean and standard deviation of each factor and specific indicator. The customer satisfaction mean is 3.4, at a medium level, indicating significant room for improvement in Anyang Wanda Plaza's customer satisfaction.

Table 4.2 Descriptive Statistics of Factors and Specific Indicators

First-Level Factor	Second-Level Specific Indicator	Mean $\pm$ Standard Deviation
Commodity Factor	Richness of product variety	3.7 ± 0.72
	Product quality	3.8 ± 0.68
	Reasonableness of price	3.2 ± 0.85
	Brand diversity	3.6 ± 0.76
	Product update speed	3.5 ± 0.79
	Factor Mean	3.56 ± 0.76
Service Factors	Service attitude	3.7 ± 0.70
	Response speed	3.4 ± 0.81
	Employee professionalism	3.5 ± 0.78
	After-sales service	3.3 ± 0.83
	Convenience of service facilities	3.4 ± 0.80
	Factor Mean	3.46 ± 0.78
Environmental Factors	Decoration style	3.6 ± 0.74
	Hygiene condition	3.7 ± 0.71
	Spatial layout	3.5 ± 0.77
	Temperature and ventilation	3.6 ± 0.73
	Noise control	3.3 ± 0.82
	Factor Mean	3.54 ± 0.75
Marketing Factors	Attractiveness of promotional activities	3.2 ± 0.88
	Preferential strength of membership system	3.0 ± 0.90
	Effectiveness of advertising and promotion	3.1 ± 0.89
	Degree of interaction with customers	2.9 ± 0.92
	Factor Mean	3.05 ± 0.90
Convenience Factors	Transportation accessibility	3.6 ± 0.75

	Parking facilities	3.1 ± 0.87
	Completeness of surrounding supporting facilities	3.5 ± 0.76
	Factor Mean	3.40 ± 0.79
Overall Customer Satisfaction	—	3.4 ± 0.80

Factors -level analysis: Commodity Factors (3.56) and Service Factors (3.46) have relatively high means, reflecting positive customer evaluations of the plaza's products and services. Environmental Factors (3.54) and Convenience Factors (3.4) are at medium levels. Marketing Factors (3.05) has the lowest mean, indicating the need for improvement in marketing activities.

Indicator-level analysis: High-score indicators (mean ≥ 3.7) include product quality (3.8), service attitude (3.7) and hygiene condition (3.7), which are the plaza's advantages. Low-score indicators (mean ≤ 3.1) include degree of interaction with customers (2.9), preferential strength of membership system (3.0), effectiveness of advertising and promotion (3.1) and parking facilities (3.1), which are key operational shortcomings.

4.1.3 Correlation Analysis

Pearson correlation analysis was conducted to explore the correlation between each factor (product, service, environment, marketing, convenience) and customer satisfaction, and determine whether there is a significant linear relationship between the independent variables and the dependent variable.

Table 4.3 Correlation Analysis Results

Factor	Correlation Coefficient	Significance Level	Result
Commodity Factors	0.63	$p < 0.001$	Significantly Positive Correlation
Service Factors	0.59	$p < 0.001$	Significantly Positive Correlation
Environmental Factors	0.56	$p < 0.001$	Significantly Positive Correlation
Convenience Factors	0.52	$p < 0.001$	Significantly Positive Correlation

Marketing Factors	0.48	p<0.001	Significantly Positive Correlation
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4.1.4 Multiple Regression Analysis

Customer satisfaction was taken as the dependent variable and the five factors as independent variables to establish a multiple regression model, analyze the influence weight of each independent variable on the dependent variable, and verify the research hypotheses proposed in this study.

Table 4.4 Multiple Linear Regression Coefficients

Factor	Unstandardized Coefficient (B)	Standard Error	Standardized Coefficient (β)	t-value	p-value
Constant	0.32	0.08	--	4.01	<0.001
Commodity Factors	0.29	0.04	0.32	7.25	<0.001
Service Factors	0.26	0.04	0.28	6.53	<0.001
Environmental Factors	0.20	0.04	0.21	5.02	<0.001
Marketing Factors	0.15	0.04	0.16	3.07	<0.001
Convenience Factors	0.18	0.04	0.19	4.51	<0.001

Table 4.5 Multiple Regression Analysis Results

Research Hypothesis and Path	Standardized Regression Coefficient	p-value
H1: Commodity Factors → Customer Satisfaction	0.32	<0.001
H2: Service Factors → Customer Satisfaction	0.28	<0.001
H3: Environmental Factors → Customer Satisfaction	0.21	<0.001

Research Hypothesis and Path	Standardized Regression Coefficient	p-value
H4: Marketing Factors → Customer Satisfaction	0.16	<0.001
H5: Convenience Factors → Customer Satisfaction	0.19	<0.001

Calculation explanation: Standardized regression coefficients (β) are obtained by standardizing independent and dependent variables to eliminate the impact of measurement units. The VIF (Variance Inflation Factor) is used to test for multicollinearity, with values <5 indicating no multicollinearity issues.

Result interpretation: The model has good fit (Adjusted $R^2 = 0.58$), meaning the five dimensions explain 58% of the variation in customer satisfaction. Commodity factors have the highest influence weight ($\beta = 0.32$), followed by service factors ($\beta = 0.28$), environmental factors ($\beta = 0.21$), convenience factors ($\beta = 0.19$) and marketing factors ($\beta = 0.16$). All factors have a significant positive impact on customer satisfaction ($p < 0.001$), supporting all research hypotheses

4.2 Discussion

4.2.1 Analysis of Key Influencing Factors

Commodity factors are the most important influence on customer satisfaction ($\beta = 0.32$), consistent with Li's (2019) conclusion that product-related factors are core to commercial complex customer satisfaction. While product quality scores high (3.8), price rationality is relatively low (3.2). This may stem from increased customer price sensitivity due to more choices from online e-commerce and other commercial projects. The plaza should optimize pricing strategies while maintaining product quality to enhance price competitiveness.

Service factors rank second ($\beta = 0.28$). High scores for service attitude (3.7) and employee professionalism (3.5) reflect good service awareness and professional quality among staff. However, lower scores for response speed (3.4) and after-sales service (3.3) indicate deficiencies in service efficiency and after-sales support, consistent with Wang 's (2009) finding that these factors impact customer satisfaction. Optimizing service processes to improve efficiency is necessary.

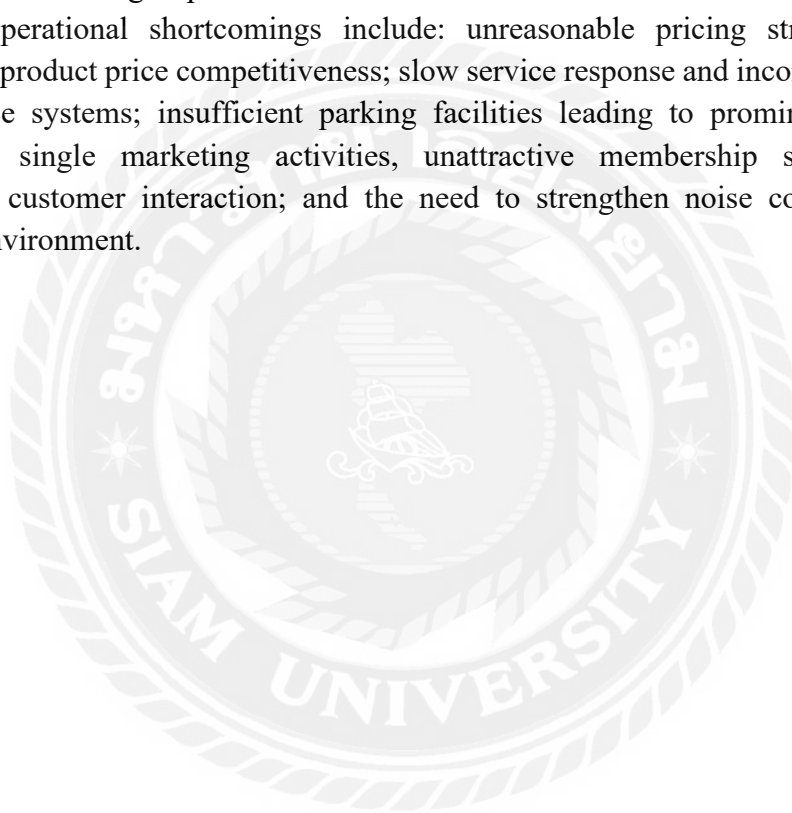
Environmental, convenience and marketing factors also have significant positive impacts. For environmental factors, high hygiene score (3.7) contrasts with low noise control (3.3), possibly due to large foot traffic and noise from various formats. In the convenience factor, parking facilities (3.1) are a common pain point for commercial complexes, with parking difficulty restricting consumption amid widespread private car

use. The marketing factor have the lowest overall scores, especially for customer interaction (2.9) and membership preferential strength (3.0), indicating unattractive marketing activities and the need to optimize the membership system to enhance customer stickiness.

4.2.2 Discussion on Satisfaction Differences and Operational Shortcomings

Demographic characteristics reveal satisfaction differences across customer groups. Young customers (18-30) prioritize product update speed and marketing innovation, while middle-aged and elderly customers (over 50) focus on service attitude and environmental comfort. Office workers demand parking convenience and consumption efficiency, while students are price and product variety sensitive. Differentiated operational strategies tailored to these needs are essential to improve satisfaction across all groups.

Key operational shortcomings include: unreasonable pricing strategies and insufficient product price competitiveness; slow service response and incomplete after-sales service systems; insufficient parking facilities leading to prominent parking difficulties; single marketing activities, unattractive membership systems and insufficient customer interaction; and the need to strengthen noise control in the shopping environment.



Chapter 5 Conclusion and Recommendation

5.1 Conclusion

This study took Anyang Wanda Plaza as the research subject, focused on the influencing factors of customer satisfaction, constructed a research framework including five factors of product, service, environment, marketing and convenience, and conducted in-depth analysis through questionnaire surveys. The main conclusions are as follows:

First, the overall customer satisfaction with Anyang Wanda Plaza is at a medium level, with certain advantages in product quality, service attitude and hygiene condition, but there are obvious shortcomings in customer interaction, membership system preferential intensity, parking facilities and other aspects.

Second, the five factors of product, service, environment, marketing and convenience all have a significant positive impact on customer satisfaction, and can explain 58% of the variation of customer satisfaction. Among them, product factors have the highest influence weight (0.32), followed by service factors (0.28), environmental factors (0.21), convenience factors (0.19) and marketing factors (0.16). This indicates that product and service are the core factors affecting customer satisfaction of Anyang Wanda Plaza, while environment, convenience and marketing also play an important role.

Third, there are differences in satisfaction among customer groups with different demographic characteristics. Young customers pay more attention to product update speed and marketing innovation, middle-aged and elderly customers pay more attention to service attitude and environmental comfort, office workers pay more attention to parking convenience and consumption efficiency, and students are more sensitive to price and product variety.

Fourth, the customer satisfaction evaluation index system constructed in this study has good reliability and validity, which can effectively measure the customer satisfaction of regional commercial complexes and provide a reference for similar research.

In general, this study confirms that the five-factors model can effectively explain the influencing factors of customer satisfaction in commercial complexes. The research results not only clarify the key factors affecting customer satisfaction of Anyang Wanda Plaza, but also provide a scientific basis for the plaza to optimize operational strategies.

5.2 Recommendation

Based on the research conclusions, combined with the actual operation of Anyang Wanda Plaza and customer suggestions, the following optimization recommendations are proposed:

5.2.1 Optimize Product Strategy to Consolidate Core Advantages

Enrich product categories: According to the needs of different customer groups, supplement niche categories and local characteristic products, such as local intangible cultural heritage handicrafts and professional outdoor equipment, to meet the diversified needs of customers.

Strengthen quality management: Establish a "quality access + regular sampling inspection" mechanism for suppliers, improve the quality traceability system, and ensure the stability and reliability of product quality.

Refine pricing strategy: Implement a "fair-price strategy" for people's livelihood products, reduce costs through centralized procurement, and maintain price advantages; for fashion and experiential products, launch a combination of "membership discounts + limited-time offers" to enhance price competitiveness.

5.2.2 Upgrade Service Quality to Address Experience Shortcomings

Strengthen employee training: Conduct regular training on communication skills, product knowledge and emergency handling for employees, incorporate service attitude and professionalism into performance evaluation, and establish a "Service Star" incentive mechanism to improve employees' service awareness and professional quality.

Optimize service response process: Add intelligent customer service terminals in the plaza, open online feedback channels (such as WeChat public account and APP), commit to responding to general inquiries within 24 hours and resolving complex issues within 48 hours, and improve service efficiency.

Improve service facilities: Install additional rest areas with charging equipment on each floor, upgrade mother-and-baby room facilities, set up barrier-free services and convenience stations (providing umbrella rental, power bank rental, etc.), and enhance the convenience of service facilities.

5.2.3 Enhance Environmental Experience to Create a Distinctive Atmosphere

Integrate local cultural elements: Combine Anyang's local cultural resources such as Yinxu Culture and Oracle Bone Scripts to carry out thematic decoration of the public areas of the plaza, create differentiated shopping scenarios, and enhance the cultural connotation and attractiveness of the plaza.

Strengthen hygiene and noise management: Increase the cleaning frequency of the plaza, focus on cleaning restrooms, catering areas and children's play zones, and introduce intelligent cleaning equipment to improve cleaning efficiency; use sound insulation materials in public spaces, reasonably arrange the layout of noisy formats (such as children's playgrounds and catering), and reduce noise interference.

Optimize spatial layout: Widen the main corridors of the plaza, adjust the signs of format zoning, add electronic navigation screens, and improve the convenience of customer shopping; upgrade the HVAC system, dynamically adjust the temperature according to the pedestrian density in different areas, and improve the comfort of the shopping environment.

5.2.4 Innovate Marketing Models to Boost Customer Stickiness

Diversify promotional activities: In addition to traditional discount promotions, launch experiential activities such as "themed food festivals", "parent-child interaction days" and "fashion shows" to enhance customer participation; simplify promotion rules to avoid complex calculations and improve customer experience.

Upgrade membership system: Increase the point redemption rate, add exclusive benefits for members (such as birthday gifts, free parking, priority participation in activities), establish a tiered membership structure based on consumption amount, and provide differentiated services to enhance member stickiness.

Implement precise marketing: Use local lifestyle platforms and social media accounts (such as Douyin and WeChat) to promote activities and preferential information; analyze member consumption data, send personalized product recommendations and promotional information, and improve the effectiveness of marketing.

5.2.5 Improve Convenience to Reduce Consumption Costs

Optimize transportation conditions: Strengthen cooperation with public transport companies, adjust and optimize the surrounding bus routes, extend the operating hours of buses during peak consumption periods, add bus stop signs and guide signs around the plaza, and improve transportation accessibility.

Upgrade parking facilities: Expand the parking lot or introduce shared parking resources to increase the number of parking spaces; adjust the parking fee standard, implement measures such as free parking for minimum consumption and exclusive parking discounts for members; launch an intelligent parking system to realize functions such as parking space reservation and reverse car search, and solve the problem of parking difficulty.

Improve surrounding supporting facilities: Introduce characteristic catering, parent-child education, daily services and other formats around the plaza, build a "one-stop" consumption ecosystem, and meet the diversified needs of customers; add convenient facilities such as charging piles and shared bike parking areas to improve the completeness of supporting facilities.

5.3 Further Study

This study has certain limitations, which also point out the direction for further research:

First, the research subject was limited to Anyang Wanda Plaza. Although it has certain representativeness among regional commercial complexes in third- and fourth-tier cities, the research results may not be fully applicable to commercial complexes in first- and second-tier cities or other types of commercial formats. Future research can expand the research scope, compare the customer satisfaction of commercial complexes in different regions and different scales, and enrich the research results.

Second, this study mainly focused on the direct impact of the five dimensions on customer satisfaction, and did not explore the mediating or moderating effects between

variables. For example, customer perceived value may play a mediating role between product factors and customer satisfaction, and customer age may play a moderating role between service factors and customer satisfaction. Future research can introduce relevant mediating and moderating variables to construct a more complex theoretical model and deepen the research on the mechanism of customer satisfaction.

Third, the data collection of this study was cross-sectional, which can only reflect the current situation of customer satisfaction of Anyang Wanda Plaza. Future research can adopt a longitudinal research design, track and investigate customer satisfaction over a long period of time, analyze the dynamic changes of customer satisfaction and its influencing factors, and provide more targeted suggestions for the long-term development of commercial complexes.

In addition, with the development of digital technology, online and offline integrated consumption has become a new trend. Future research can focus on the impact of digital transformation (such as online shopping, intelligent services) on customer satisfaction of commercial complexes, and explore new ways to improve customer satisfaction in the digital era.



References

- Anyang Municipal Bureau of Commerce. (2024). Development plan of Anyang commercial circulation industry (2021–2025). Anyang Municipal Bureau of Commerce.
- Anyang Wanda Plaza. (2024). Annual operation report. Anyang Wanda Commercial Management Co., Ltd. (Internal document).
- Bao, G., & Liu, J. (2023). Customer satisfaction research of regional commercial complexes in third and fourth-tier cities. *Journal of Commercial Economics*, (5), 103–106.
- Cardozo, R. N. (1965). An experimental study of customer effort, expectation, and satisfaction. *Journal of Marketing Research*, 2(3), 244–249.
- CBRE. (2014). Asia Pacific consumer survey. *Economic Daily*.
- Chen, J. (2021). The role of marketing activities and membership systems in improving customer loyalty of commercial complexes. *Enterprise Economy*, (7), 98–102.
- China Consumers Association. (2023). 2023 100-city consumer satisfaction evaluation report. China News Service.
- China Consumers Association. (2024). 2024 100-city consumer satisfaction evaluation report. China Economic Net.
- CSDN Blog. (2024). Core connotation and measurement of customer satisfaction. CSDN.
- Douyin Encyclopedia. (2025a). Customer experience management.
- Douyin Encyclopedia. (2025b). Shopping mall grade evaluation standards.
- Farris, P. W., Bendle, N. T., Pfeifer, P. E., & Reibstein, D. J. (2006). *Marketing metrics: The definitive guide to measuring marketing performance*. Pearson Education.
- Girsang, H., & Faadhil, A. (2025). The effect of service quality on customer satisfaction and loyalty: A case study of the retail industry. *Journal of Asian Business and Economic Studies*, 32(1), 89–105.
- Guanyan Report Network. (2025). Special analysis of the business model of China's commercial complex industry and research report on the enterprise investment environment.
- Herzberg, F., Mausner, B., & Snyderman, B. B. (2011). *The motivation to work* (2nd ed.). Wiley.
- Kotler, P., Armstrong, G., Harris, L. C., & Piercy, N. F. (2022). *Principles of marketing* (19th ed.). Pearson.
- Li, H. (2019). Research on the influencing factors of customer satisfaction in urban commercial complexes. *Modern Economic Information*, (12), 112–113.
- Li, X. (2019). Analysis of factors affecting the vitality of commercial complexes in Hangzhou based on heat map data. *Journal of Geo-information Science*, 21(10), 1560–1589.

- National Bureau of Statistics. (2024). Statistical communiqué on national economic and social development in 2023. National Bureau of Statistics of the People's Republic of China.
- Nielsen. (2014). 2013–2014 shopper trends report. Commercial and Real Estate.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460–469.
- 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.
- Wang, Y. (2009). The impact of service quality on customer satisfaction of commercial complexes. *Commercial Research*, (8), 78–81.
- Wang, Y. (2016). Analysis of business district attraction factors based on principal component Logistic model. *Acta Geographica Sinica*, 71(11), 1945–1958.
- Yi, Y. (1990). A critical review of customer satisfaction. In J. N. Sheth & D. E. Garrett (Eds.), *Marketing theory: Evolution and evaluation* (pp. 68–123). South-Western College Publishing.
- Zhang, L. (2020). Study on the relationship between shopping environment perception and customer satisfaction. *Market Modernization*, (15), 65–67.
- Zhangjiagang Municipal Government. (2023). Public opinion survey report on the layout planning of commercial outlets in Zhangjiagang City.
- Zhao, W. (2003). Convenience factors and customer satisfaction of commercial complexes. *Modern Business*, (9), 45–47.

Appendix

Dear Customers, to gain an in-depth understanding of your consumption experience at Anyang Wanda Plaza and effectively improve the mall's service quality and operational standards, we are conducting this questionnaire survey. This questionnaire is anonymous, and all data will be used solely for academic research and operational optimization, with strict confidentiality of personal information. Please fill it out truthfully based on your actual consumption experience. Thank you for your support and cooperation!

I. Basic Information

1. Your gender:

- A. Male
- B. Female

2. Your age group:

- A. 18-30 years old
- B. 31-50 years old
- C. Over 50 years old

3. Your occupation:

- A. Student
- B. Office worker
- C. Retiree
- D. Freelancer
- E. Others

4. How frequently have you consumed at Anyang Wanda Plaza in the past 3 months?

- A. Once a week or more
- B. 2-4 times a month
- C. Once a month or less

II. Consumption Experience Evaluation (Please select based on your actual feelings: 1=Strongly Dissatisfied, 2=Dissatisfied, 3=Neutral, 4=Satisfied, 5=Strongly Satisfied)

(I) Product Factors

Evaluation Indicators Strongly Dissatisfied (1) Dissatisfied (2) Neutral (3) Satisfied (4) Strongly Satisfied (5)

- 1. Richness of product variety
- 2. Reliability of product quality
- 3. Reasonableness of product prices
- 4. Diversity of brands
- 5. Speed of product updates

(II) Service Factors

Evaluation Indicators Strongly Dissatisfied (1) Dissatisfied (2) Neutral (3) Satisfied (4) Strongly Satisfied (5)

- 1. Service attitude of staff

2. Speed of service response
3. Professionalism of staff
4. Completeness of after-sales service
5. Convenience of service facilities (e.g., information desk, cash register)

(III) Environment Factors

Evaluation Indicators Strongly Dissatisfied (1) Dissatisfied (2) Neutral (3)
Satisfied (4) Strongly Satisfied (5)

1. Characteristics of mall decoration style
2. Sanitation and cleanliness (including restrooms and public areas)
3. Rationality of spatial layout (e.g., aisle width, store distribution)
4. Temperature and ventilation effect
5. Noise control effect (e.g., background music, crowd noise)

(IV) Marketing Factors

Evaluation Indicators Strongly Dissatisfied (1) Dissatisfied (2) Neutral (3)
Satisfied (4) Strongly Satisfied (5)

1. Attractiveness of promotional activities
2. Preferential intensity of membership system
3. Effectiveness of advertising and promotion (information accuracy, attractiveness)
4. Degree of interaction with customers (e.g., online interaction, offline activity participation)

(V) Convenience Factors

Evaluation Indicators Strongly Dissatisfied (1) Dissatisfied (2) Neutral (3)
Satisfied (4) Strongly Satisfied (5)

1. Transportation accessibility (e.g., convenience of bus routes, self-driving routes)
2. Parking facilities (number of parking spaces, parking convenience, rationality of fees)
3. Completeness of surrounding supporting facilities (e.g., catering, leisure, daily services)

III. Overall Satisfaction Evaluation

Your overall satisfaction with Anyang Wanda Plaza:

- A. Strongly Dissatisfied
- B. Dissatisfied
- C. Neutral
- D. Satisfied
- E. Strongly Satisfied

IV. Open Suggestions (Optional)

In which aspects do you think Anyang Wanda Plaza needs improvement? Or do you have any other valuable suggestions? Please comment below:

Thank you again for your participation! Wish you a pleasant life!