



**A STUDY OF THE INFLUENCE OF PRECISION MARKETING
ON CUSTOMER LOYALTY TO WECHAIT**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
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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

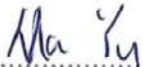
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ABSTRACT

With the development of mobile Internet technology, the O2O e-commerce model has emerged, and social networks such as WeChat have emerged in the marketing field. In today's fast-growing e-commerce environment, the O2O model, as a business model that integrates online and offline advantages, has been widely used in many fields. However, for now, the research on customer loyalty in the O2O model is still in the stage of imperfection. This study aimed: 1) To explore the relationship between precision marketing and customer loyalty, 2) To explore the relationship between switching costs and customer loyalty. A quantitative research method using a questionnaire survey was adopted.

The results indicate that precision marketing has a positive impact on customer loyalty, and the path coefficient is significant, but the impact of switching costs on customer loyalty is not significant, and the hypothesis is not established, possibly because of the passive loyalty of users.

In the O2O model, targeted marketing strategies, user segmentation, and multi-channel marketing should be adopted to improve customer loyalty. Future research needs to further develop scales, accurately define loyalty, deeply examine the influence mechanism of variables, and explore the similarities and differences between the physical and online marketing environments.

Keywords: O2O, precision marketing, customer loyalty, switching costs

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ZU QIANYI

DECLARATION

I, ZU QIANYI, hereby declare that this Independent Study entitled “A STUDY OF THE INFLUENCE OF PRECISION MARKETING ON CUSTOMER LOYALTY TO WECHAIT” is an original work and has never been submitted to any academic institution for a degree.

(ZU QIANYI)

Sep 20, 2024



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Chapter 1 Introduction

1.1 Background of the Study

In the past period of time, mobile Internet technology has achieved rapid development along with the gradual maturity of 3G and 4G technologies. This development trend is an important manifestation of the escalating influence of the Third Industrial Revolution on the world. The innovation of information technology has brought about earth-shaking changes to human production and life. Among them, the popularization speed of intelligent terminals is particularly astonishing, and the e-commerce model based on mobile terminals has achieved unprecedented development achievements by taking this opportunity.

The O2O (online to offline) e-commerce model emerged in such a large environment. It is a new model derived after traditional e-commerce models such as B2B, B2C, and C2C have continuously progressed and developed and reached a certain scale. Its unique feature is that it covers the life and service e-commerce fields that those traditional business models have not yet involved. Group-buying websites, as the first successful example of the O2O model, have successfully opened up a huge potential market that combines online payment and purchase with offline services. This market contains huge business potential.

At the same time, with the continuous diversification of information dissemination tools and the exponential growth rate of replacement, social networks represented by QQ, Weibo, and WeChat have gradually emerged in the marketing field. In this context, how to improve the precision of marketing has become the core issue that many researchers focus on (Afuah & Tucci, 2001).

In August 2024, the China Internet Network Information Center (CNNIC) released the 54th "Statistical Report on the Development of China's Internet Network" in Beijing. The report pointed out that as of June 2024, the scale of Internet users in China was nearly 1.1 billion (1.09967 billion), and the Internet penetration rate reached 78.0%. Among them, teenagers and the "silver-haired group" have become the main force of new growth, and the groups aged 50-59 and 60 and above respectively account for a certain proportion of the new Internet users (Alex, 2013). The number of users of desktop and notebook computers has declined slightly, which indicates the rapid development and irreplaceability of mobile terminals, as shown in Tables 1-1 and 1-2 (from the 54th "Statistical Report on the Development of China's Internet Network"). It is in such an Internet development context that the characteristics of the O2O e-commerce model, which combines online purchase and offline consumption, have given birth to an instant marketing model characterized by segmented markets and specific target customer groups, and have gradually entered people's vision (Bai & Liu, 2002). In early 2011, Tencent launched the instant messaging APP WeChat, which has multiple functions such as sending text, voice messages, small videos, and pictures (Cao, 2010). Judging from the growth of the number of users, the development momentum of WeChat is extremely rapid. By 2024, the combined monthly active users

of WeChat and WeChat have approached 1.4 billion (Kenneth & Carol, 2004). According to the summary of expert interviews, the average usage time of its video account in December 2023 was approximately 58.5 minutes, and the daily active users of the video account also showed a growth trend, reaching 450 million as of July 2023. Since then, the functions of WeChat have been continuously upgraded and improved, and a series of practical functions such as one - to - one communication, location sharing based on LBS, QR code scanning, Moments, and public platforms have been successively launched (Magnus, 1998). The rapid popularization and wide use of these functions among the vast number of users have continuously demonstrated the huge business opportunities hidden behind WeChat marketing, providing broad development space and infinite possibilities for the realization of precision marketing in the O2O e - commerce model (Zhao, 2010).

Table 1.1 Scale of Mobile Internet Users in China

Time	The Scale of Mobile Internet Users in China (100 million people)
December 2018	8.17
June 2019	8.47
December 2020	9.86
June 2021	10.07
December 2022	10.91
December 2023	10.91
June 2024	10.97

Table 1.2 Scale of Internet Users in China

Time	The Scale of Internet Users in China (100 million people)
December 2018	8.29
June 2019	8.54
March 2020	9.04
June 2020	9.40
December 2020	9.89
June 2024	11

1.2 Questions of the Study

In the current rapidly developing e-commerce environment, the O2O model, as a business model that integrates the advantages of both online and offline, has been

widely applied in many fields. However, currently, the research on customer loyalty in the O2O model is still in an imperfect stage. Specifically, it is manifested in the following two aspects:

1. What impact does precision marketing have on customer loyalty in the O2O e-commerce model?
2. What impact do switching cost have on customer loyalty in the O2O e-commerce model?

1.3 Objectives of the Study

1. To examine the relationship between precision marketing and customer loyalty in the O2O e-commerce model.
2. To examine the relationship between switching costs and customer loyalty in the O2O e-commerce model.

1.4 Scope of the Study

The model scope mainly focuses on the O2O e-commerce model and the relationships among the three variables of precision marketing, switching costs, and customer loyalty. It explored how precision marketing and switching costs affected customer loyalty. This study took WeChat as a case. It analyzed the characteristics and functions of precision marketing of WeChat in the O2O e-commerce model, such as one-to-one communication, location sharing based on LBS, QR code scanning, moments, and public platforms of WeChat. The time range of this questionnaire survey was from September to October 2024.

1.5 Significance of the Study

Since the O2O e-commerce model based on mobile terminal sales has gained a foothold in the market, relying on the characteristics of the extensive distribution and large number of physical operator service points as well as the regional and local advantages, it has rapidly expanded the online member user group through various channels. Subsequently, it further expands the surrounding user groups by virtue of the geographical location advantage. With the help of the all-round integrated information exchange system, the O2O model has successfully closely connected online customers with offline resources, which not only accelerates the circulation speed of offline goods but also greatly enhances the user experience of online consumers. For this reason, improving the loyalty of online customers and ensuring their continuous consumption has become the key factor restricting the further development of the O2O model.

Since the WeChat APP has been widely downloaded and popularized by the public, the research enthusiasm for WeChat marketing in China has continued to rise. The characteristics of precision, diversity, and low cost of WeChat marketing have become hot topics in academic research. Among them, how to improve the loyalty of WeChat users and prompt them to continue using WeChat has become the focus issue of the information system behavior school at present. With the wide application of the

O2O e-commerce model, WeChat, as an application program integrating the two core functions of communication and marketing, has been highly valued by merchants and user groups.

This study deeply analyzes the specific methods of WeChat precision marketing in the O2O e-commerce model, and based on classic theories, explores the research model of the impact of precision marketing on customer loyalty. It aims to provide theoretical references and basic strategies for enterprises and merchants to carry out marketing activities using WeChat, help them achieve accurate market positioning, expand the market scale, reduce marketing costs, maximize the potential customers, and effectively conduct customer relationship management. Eventually, it explores suitable marketing strategies and means for the balanced and healthy development of enterprises, enables the O2O model to reach measurable and controllable standards at the marketing level, and thus realizes the maximization of enterprise profits and creates considerable economic and social benefits.

With the passage of time, the continuous development of the O2O e-commerce model has gradually attracted the attention of many scholars at home and abroad. However, the research on customer loyalty is still relatively scarce. The existing literature mostly focuses on the exploration of the ways and methods of precision marketing in the O2O model, but seldom conducts in-depth research on the behavior patterns of the public in the O2O model from the perspective of combining user experience perception and precision marketing.

1.6 Definition of Key Terms

1. O2O

O2O stands for Online To Offline, which refers to the combination of offline business opportunities and the Internet, so that the Internet can become the front desk of offline transactions. Specifically, the O2O e-commerce model needs to have elements such as an independent online mall, national authoritative industry credible website certification, online network advertising and marketing promotion, comprehensive social media and customer online interaction, and online and offline integrated membership marketing system.

2. Precision Marketing:

Precision marketing is a type of marketing based on the premise of precise positioning and relies on modern information technology to establish a personalized customer communication service system.

3. Customer loyalty:

Customer loyalty refers to the user's deep recognition and dependence on the products and services of a certain brand or enterprise, and the willingness to purchase or use them repeatedly for a long time.

4. Switching Costs:

Switching costs are the one-time costs that consumers face when switching from using one product or service to another competing product or service. This cost can be economic, such as the cost of purchasing new equipment. It can also be time and effort.



Chapter 2 Literature Review

2.1 Introduction

This chapter mainly reviews the concept of each variable in the literature, and then gives operational definitions, laying a theoretical foundation for the hypotheses, model construction, data collection and analysis.

2.2 O2O

2.2.1 Concept of E-commerce

Currently, due to its contribution to the rapid development of the economy, e-commerce (Electronic Commerce) has been supported by various economic organizations around the world. E-commerce refers to the completion of business transactions in a virtual manner, where both parties conduct commercial transactions in the form of intangible information (Hu, 2006). The basic terminology of e-commerce in China proposes that e-commerce refers to conducting trade activities electronically. Foreign scholars such as Kalakota, Afuah, Tucci, and Kenneth C. Laudon have expounded on the concept of e-commerce from different perspectives. Domestic scholar Song Ling believes that e-commerce is a new type of transaction approach (Wu, 2012), and the most basic framework is the Internet. Fang Meiqi believes that e-commerce is based on various websites and encompasses all aspects and processes involved in various trading activities (Hu, 2006).

Generally speaking, in e-commerce, all parties involved in transactions communicate bilaterally through the Internet, integrating sales and purchases, as well as physical goods and intangible services, to meet the needs of consumers, thereby improving production efficiency, enhancing service quality, and reducing production and logistics costs. Kalakota and Whinston divided the main business models of e-commerce into four types (Chang, 2008), each with its own different scope of application and characteristics, which have greatly promoted the in-depth development of e-commerce (Srinivasan et al., 2002). With the emergence and popularization of mobile devices, the emergence and rapid development of the O2O model have enabled people to conduct various trading activities without being restricted by time and space, bringing huge changes to people's lives and work.

2.2.2 Concept and Characteristics of O2O E-commerce Model

(I) Concept of the E-commerce Model

In today's digital age, the e-commerce model has become one of the core concepts in the business field. It is a business operation framework based on information technology and Internet platforms (Song, 2000). Enterprises or merchants integrate various resources, including human, material, financial, and information resources, through careful planning to construct a unique set of business logic and operation methods, aiming to achieve specific business goals.

This model elaborately describes the interaction process of enterprises with all relevant parties throughout the business activities. It covers how enterprises closely

cooperate with suppliers to ensure the stable supply of raw materials or goods; how they work together with partners to achieve resource sharing and complementary advantages and jointly expand the market; and how they effectively interact with customers, accurately grasp customer needs, provide products or services that meet their expectations, and ultimately obtain revenue (Crosby et al., 1990).

(II) Characteristics of the E-commerce Model

1. Virtuality

A prominent characteristic of the e-commerce model is its virtuality. In this model, commercial transaction activities mainly rely on the virtual network environment. The two parties in the transaction no longer depend on traditional physical stores and face-to-face communication methods but conduct commercial communication and transaction operations using intangible information as the carrier.

2. Global Reach

The e-commerce model has a global market coverage, which is another important feature that distinguishes it from traditional business models. With the powerful connection ability of the Internet, enterprises can promote their products or services to consumers in every corner of the world, and consumers also have the convenience of choosing and purchasing goods or services on a global scale (Wu, 2012).

3. High Efficiency

High efficiency is one of the core advantages of the e-commerce model. By fully utilizing information technology, e-commerce has realized the automation and informatization of the transaction process, thus greatly improving the efficiency of business operations.

4. Interactivity

The e-commerce model emphasizes the interaction and communication between enterprises and customers, which is the key to maintaining competitiveness and meeting customer needs.

5. Innovativeness

Innovativeness is the driving force for the continuous development and evolution of the e-commerce model. With the continuous development of information technology and changes in market demands, the e-commerce model is always in a process of continuous innovation.

2.3 Precision Marketing

2.3.1 Concept of Precision Marketing Theory

The precision marketing theory is an important and influential concept and method in the field of modern marketing (Wang, 2013). It has gradually formed and developed with the rapid development of information technology and the increasingly fierce market competition (Song, 2000).

The precision marketing theory emphasizes that enterprises should conduct highly precise positioning and operations in all aspects of marketing activities. Its core lies in accurately identifying the target customer group and deeply understanding their various characteristics such as needs, preferences, behavior habits, and consumption

psychology. Through the precise grasp of these key information, enterprises can formulate more targeted marketing strategies, thereby improving the measurability of marketing effects and achieving efficient and high - return communication with customers.

From the perspective of marketing object positioning, precision marketing requires enterprises to abandon the relatively broad and fuzzy target customer definition method in the traditional mass marketing model. It no longer attempts to promote products or services to a large number of consumers with diverse needs but focuses on those segmented customer groups with specific needs and characteristics (Chang & Chen, 2008). These segmented groups may be divided based on various factors such as age, gender, region, consumption ability, and hobbies.

Based on the accurate positioning and in - depth understanding of the target customers, enterprises can be targeted in formulating marketing strategies. Precision marketing strategies cover multiple aspects, including the precise positioning of products, the reasonable setting of prices, the optimized selection of channels, and the personalized design of promotional activities.

The precision marketing theory is a theory that takes customers as the center and uses information technology and data analysis methods to conduct all - round precise positioning and operations in marketing activities (Wang, 2013). It provides enterprises with a more efficient and targeted marketing method in the fierce market competition, helping enterprises improve marketing effects, enhance customer satisfaction and loyalty, and thus achieve sustainable development of enterprises.

2.3.2 Characteristics and Core Ideas of Precision Marketing Theory

(I) Characteristics of Precision Marketing Theory

1. Clear Targeting

The precision marketing theory emphasizes that the identification and positioning of the audience should be highly targeted and purposeful. In terms of market segmentation, it requires enterprises to deeply understand various characteristics of consumers, including age, gender, region, consumption ability, hobbies, consumption habits, etc., and based on this Wang(2013) divided the market into multiple sub - markets with unique needs.

2. Effective Communication

The precision marketing theory requires that communication strategies and behaviors should be effective and measurable. In terms of communication strategies, enterprises should be able to touch the inner needs of consumers and stimulate their purchase desires. This requires enterprises to deeply understand the psychological and behavioral characteristics of consumers and formulate communication content and methods that meet the needs of consumers.

3. Dynamic Adaptability

The precision marketing theory has the characteristics of dynamics and relativity, which are determined by the continuous development of information technology and the continuous change of the market environment. With the rapid development and update of information technology, the network access threshold is getting lower and lower, the

market competition is more intense, and the needs and behaviors of consumers are also constantly changing. Therefore, precision marketing theory requires enterprises to be able to dynamically adjust marketing strategies according to market changes.

(II) Core Ideas of Precision Marketing Theory

1. High Accuracy

The precision marketing theory pursues a high degree of accuracy in marketing, realizing the combination of qualitative and quantitative market segmentation and market positioning. Traditional mass marketing can often only achieve qualitative analysis, and the market segmentation is relatively fuzzy, making it difficult to accurately grasp the needs of consumers and market changes. However, precision marketing theory can accurately segment the market and determine the needs and characteristics of different consumer groups by analyzing a large amount of data of consumers, such as purchase history (Chen, 2003), browsing behavior, and social media interaction.

2. Low Cost

The precision marketing theory relies on rapidly changing high - tech means to achieve a long - term mechanism for personalized communication, breaks through the limitations of the traditional marketing system and mechanism and the waste of sales resources, and reduces production and sales costs (Kalakota & Robinson, 2002). In the traditional marketing model, enterprises often need to invest a large amount of human, material, and financial resources in large - scale advertising and market promotion, but the effect is difficult to guarantee. However, precision marketing theory can accurately target the target customer group and conduct personalized marketing activities for them by using information technology and data analysis, reducing unnecessary marketing waste.

3. Evaluability

The precision marketing theory makes the results of marketing activities measurable and controllable by reducing high advertising costs and achieving actual consumption results, thus promoting the long - term and stable development of enterprises and merchants (Wang, 2013). Enterprises evaluate whether marketing activities have achieved the expected results by setting clear marketing goals and indicators, such as the growth of sales volume, the increase in the number of customers, the improvement of customer loyalty (Chen, 2003), and the expansion of market share. At the same time, enterprises will also analyze the data generated in the marketing process and continuously optimize marketing strategies to improve marketing effects.

The characteristics and core ideas of precision marketing theory provide important guiding principles and methods for enterprises to conduct marketing activities in the modern market environment, helping enterprises improve marketing effects, reduce costs (Kalakota & Robinson, 2002), enhance customer satisfaction and loyalty, and thus achieve sustainable development of enterprises.

2.3.3 Theoretical Basis of Precision Marketing Theory

The precision marketing theory has a solid foundation and great theoretical and practical significance. Its main theoretical bases are mainly in the following aspects:

(I) Customer Delivered Value Theory

The customer delivered value theory is an important theory proposed by Philip Kotler and constitutes one of the key foundations of precision marketing theory. This theory points out that the difference between the total customer value and the total customer cost is the customer delivered value. The total customer value covers multiple aspects such as product value (Chen, 2003), personnel value, service value, and image value. Product value is reflected in the function, characteristics, quality, and style of the product; personnel value is related to the business philosophy and knowledge level of employees; service value is the value brought by the additional services accompanying the physical sales (Kalakota & Robinson, 2002); and image value is the value of the enterprise and the product in the eyes of the public.

The total customer cost includes monetary cost, time cost, energy cost, and physical cost. Monetary cost refers to the currency spent on purchasing goods or services; time cost refers to the time spent in the purchasing process; energy cost is the energy invested by consumers in the purchasing process; and physical cost is the physical consumption related to the purchasing behavior.

The precision marketing theory, with the help of customer delivered value theory, is committed to maximizing customer delivered value by accurately grasping the needs and expectations of customers, increasing the total customer value while reducing the total customer cost (Wang, 2013).

(II) Market Segmentation Theory

The market segmentation theory also occupies an important position in precision marketing theory. This theory emphasizes that according to the personal preference characteristics and differentiated demands of different consumers for goods or services, the obtainable consumer groups are divided into different demand entities according to certain division criteria (Chen, 2003).

These division criteria can be diverse, and common ones include age, gender, region, consumption ability, hobbies, etc. Through market segmentation, enterprises can more clearly understand the demand characteristics of different consumer groups and thus formulate targeted marketing strategies.

The precision marketing theory applies market segmentation theory to divide the market into multiple parts, rationally allocate human and material resources according to the characteristics of different parts, and adopt different sales strategies (Wang, 2013). The advantage of this is that it greatly reduces the marketing cost and also efficiently realizes the main communication between merchants and consumers (Kalakota & Robinson, 2002), thereby improving the sales success rate.

(III) 4Cs Theory

4Cs represents four major marketing schemes: Consumer, Cost, Convenience, and Communication.

Centering on the needs and preferences of customers, merchants reasonably arrange production, formulate sales strategies, and provide goods or services that can meet their needs.

Convenience is also an important part of the 4Cs theory. Enterprises should fully consider the convenience of consumers in purchasing goods and services, and at the same time, have good interaction and communication with consumers, timely understand and update their current requirements, explore their potential requirements, expand the coverage of goods and services, and more accurately complete the sales task and improve the marketing efficiency (Kalakota & Robinson, 2002). For example, e-commerce platforms provide consumers with great convenience by providing a convenient shopping interface, multiple payment methods, and fast logistics distribution.

Communication is equally important in the 4Cs theory. When enterprises interact and communicate with consumers (Chen, 2003), it needs to be precise, efficient, fast, and convenient, and direct communication can enable the free flow of information between both parties.

(IV) One - to - One Direct Communication Theory

The one - to - one direct communication theory also plays an important role in precision marketing theory. When marketing goods and services, enterprises and consumers need to interact and communicate precisely, efficiently, quickly, and conveniently, and direct communication can enable the free flow of information between both parties. In addition, one - to - one communication is more targeted, making consumers have a sense of belonging, thereby further enhancing the communication effect and achieving the purpose of precision marketing.

(V) Customer Chain Reaction Principle

The customer chain reaction principle is also one of the important foundations of precision marketing theory. Chain reaction means that the result of an event contains the conditions for the occurrence of the event. Precision marketing, with the help of the customer chain reaction principle, digs out potential effective customers through existing customers, occurs one after another in a chain, and continues from generation to generation, so that the number of effective customers owned by the enterprise gradually increases and the marketing success rate gradually improves (Chen, 2003).

The more information an enterprise masters, the more conducive it is to segment consumers, tap consumers' potential needs, reduce marketing costs, and maximize profits.

The precision marketing theory is precisely based on these rich theoretical foundations. By integrating and applying these theories, it realizes the precise positioning and efficient operation of marketing activities, thus providing an effective marketing method for enterprises in the fierce market competition, helping enterprises improve marketing effects, enhance customer satisfaction and loyalty, and thus achieve the sustainable development of enterprises (Porter, 1997).

2.4 Customer Loyalty

2.4.1 Concept of Customer Loyalty

Customer loyalty is a concept of great significance in the field of marketing. It encompasses multiple levels of meanings and various measurement methods, and it is

constantly evolving with the changes in the market environment and consumer behavior.

(1) The Multifaceted Connotations of Loyalty

Loyalty, as a concept involving multiple fields, has rich and diverse connotations. As early as more than 2,000 years ago, loyalty was one of the traditional virtues of the Chinese nation and was written into articles by men of letters and military and state ministers, reflecting an individual's loyalty to the country, organizations or others. Abroad, Josiah Royce, a famous professor at Harvard University, put forward the definition of "loyalty" in the early 20th century: Loyalty refers to a person's long-term and lasting loyalty to his or her country, the organizations he or she has joined, and individuals (Porter, 1997).

(2) The Early Research on Customer Loyalty

From a commercial perspective, the research on customer loyalty originated from the research on economic behavior by American scholars Copeland and Churchill. The early research mainly focused on judging customer loyalty by observing consumers' purchasing behaviors, which formed two different identification methods: the behavioral approach and the attitudinal approach (Fang, 2001).

The behavioral approach takes the quantity of purchases and the time interval between purchases by consumers as evaluation indicators and judges customer loyalty by observing consumers' consumption behaviors. While the attitudinal approach means that not only the purchasing behaviors of consumers in the behavioral approach should be considered (Dweyer, & Tanner, 2002), but also further measurements should be made on consumers' purchasing preferences and their attitudes before and after purchases. The main indicators include quantity, frequency, preference, expectation, utility, etc. This approach believes that customer loyalty is not just the repetition of purchasing behaviors, but also involves consumers' attitudes and emotions towards brands in their hearts (Zhang, 2013).

(3) Various Definitions and Measurement Methods of customer loyalty

With the deepening of research, different scholars have defined and measured customer loyalty from different perspectives.

1. Definition and Measurement Based on Purchasing Behavior

Some scholars define customer loyalty as consumers' continuous purchases of a product or service for many times, and they only purchase this product and do not consider other brands.

2. Definition and Measurement Based on the Integration of Attitude and Behavior

Some scholars also believe that the most essential customer loyalty is a repeated consumption behavior accompanied by positive emotional experiences. It includes both consumers' preferences for products and services and their relative attitudes towards competitors (Porter, 1997). Under this comprehensive definition, the measurement of customer loyalty needs to consider aspects such as consumers' repurchase tendency, purchase frequency, purchase quantity, word-of-mouth, and recommendation (Ma, 2012).

In addition, some scholars define the dynamic changes of customer loyalty from four perspectives: cognition, emotion, intention, and behavior. Cognition is an external perception, which comes from the existing popularity of the brand; emotion is an attitude and an affirmation of cognition; intention, as its literal meaning implies, represents a tendency to purchase (Dweyer & Tanner, 2002). It is a higher level of cognition and an internal driving force that stimulates the occurrence of purchasing behaviors; behavior refers to the generation of consumption behaviors, which represents the maximum value of loyalty and has been manifested through actual actions. For example, consumers have a certain cognition of a well-known brand of sports shoes, knowing that its quality is good and its styles are new (cognition). For this reason, they like this brand (emotion). When they have a purchase need, they first think of this brand (intention), and finally they purchase the sports shoes of this brand (behavior).

(4) Customer Loyalty in the O2O E-commerce Model

The loyalty in the O2O e-commerce model is called e-loyalty by scholars. Research points out that the above traditional loyalty theories are applicable to the current e-commerce model and are also divided into two aspects: attitude and behavior. Therefore, the measurement of traditional customer loyalty can be applied to this research.

2.4.2 Measurement of Customer Loyalty

customer loyalty is one of the important goals pursued by enterprises in market competition and is of crucial significance for the sustainable development of enterprises (Gao & Yu, 2004). Measuring customer loyalty is a complex process, involving multiple dimensions and methods.

(1) Measurement Based on Behavior

1. Repeat Consumption

Repeat consumption is an important behavioral indicator for measuring customer loyalty. When users make continuous purchases of a certain product or service for multiple times, it indicates that they have a certain degree of loyalty to this product or service. This repeated purchasing behavior not only reflects users' recognition of the product itself but also embodies their trust and dependence on the brand (Chen, 2012).

2. Secondary Behavior - Recommendation Behavior

Recommending a product or service to people around is also one of the important behavioral manifestations for measuring customer loyalty. When users are satisfied with a product or service, they are often willing to share it with their friends, family members or colleagues. This recommendation behavior can be carried out through word-of-mouth, social media sharing and other means. This recommendation behavior not only helps to expand the user group of the product or service but also reflects the high recognition and loyalty of the recommenders themselves to the product or service (Dweyer, & Tanner, 2002).

3. Repurchase Intention

Repurchase intention refers to the inner tendency of users to be willing to consume a certain product again. Even if users may not make a purchase for some reasons at

present, if they have a strong repurchase intention, it can also be regarded as a manifestation of loyalty. This repurchase intention reflects the potential loyalty of users to the brand and the product, indicating that there is a great possibility that they will continue to choose this product in the future (Gao & Yu, 2004).

(2) Measurement Based on Attitude

1. The Relationship between Enterprises and Consumers

Establishing a mutually trusting and mutually beneficial relationship between enterprises and consumers is an important attitudinal dimension for measuring customer loyalty (Gao & Yu, 2004). When enterprises can pay attention to the needs of consumers, provide high-quality products and services, and maintain good communication with consumers, consumers will often have trust and a favorable impression of the enterprises (Lee & Cunningham, 2001). This mutually trusting and mutually beneficial relationship is reflected not only in the quality of products and services but also in the importance and handling of consumer feedback by enterprises.

2. Attitude towards Price

Consumers' attitude towards the price of a product or service is also an aspect of measuring customer loyalty. Loyal users are often relatively less sensitive to price. They pay more attention to the quality of products or services and their own consumption experience. On the contrary, non-loyal users may easily change their purchasing decisions due to slight fluctuations in price.

3. Repurchase Intention (at the Attitudinal Level)

At the attitudinal level, repurchase intention is also an important indicator for measuring customer loyalty. When consumers have a strong psychological intention to repurchase a certain product or service, it reflects their positive attitude and loyalty to this product or service (Schmalensee, 1987).

(3) Comprehensive Measurement

1. Combining Multiple Behavioral and Attitudinal Indicators

In order to measure customer loyalty more comprehensively and accurately, it is usually necessary to consider multiple behavioral and attitudinal indicators. Only by considering these factors comprehensively can the loyalty of users be judged more accurately (Oliver, 1981).

2. Considering from Different Levels

It is also necessary to consider the measurement of customer loyalty from different levels. At the immediate level, users' current purchasing behaviors and attitudes can reflect their loyalty. At the long-term level, it is necessary to consider the changes in users' purchasing behaviors and attitudes over a relatively long period of time. By considering from different levels, a more comprehensive understanding of users' loyalty can be achieved (Fornell, 1992).

This research measures the impact of precision marketing on customer loyalty from both behavioral and attitudinal aspects. It includes not only users' behavioral manifestations towards WeChat marketing but also their psychological manifestations. Considering users' behaviors and psyches from these two angles comprehensively is reasonable and effective.

2.5 Switching Costs

Switching cost refers to the additional expenses incurred when a customer switches from purchasing a product from one supplier to purchasing a product from another supplier. The concept of "switching cost" (Conversion Cost) was first put forward by Michael Porter in 1980. This kind of cost is not only economic but also involves time, energy and emotions. Here are some detailed information about switching costs:

1. Categories: Switching costs can be divided into eleven types, including procedural, economic risk, evaluation, learning, establishment, financial, loss of benefits, loss of money, relational, loss of personal relationships and loss of brand relationships (Schmalensee, 1987).

2. Effects:

(1) Switching costs effect: The greater the investment required to change suppliers, the lower the price sensitivity of consumers to the products of existing suppliers.

(2) Instability of switching costs: The loyalty associated with switching costs is not eternal. When the auxiliary investment environment changes, the price sensitivity of consumers will increase (Liu, Guo & Lee, 2010).

3. Impacts on enterprises:

(1) Positive impacts: Switching costs are an important factor in building the competitive barriers of enterprises. If an enterprise's products or services have relatively high switching costs, customers will face greater obstacles when switching, and thus are more inclined to continue using the enterprise's products or services. This helps enterprises maintain customer loyalty, increase market share and profitability.

(2) Negative impacts: If an enterprise's switching costs are too high, it may limit consumers' choices and cause dissatisfaction among consumers. In a highly competitive market environment, it may lead to customer loss. In addition, enterprises also need to continuously invest resources to maintain and increase switching costs, which will increase their operating costs (Crosby et al., 1990).

2.6 Precision Marketing, Switching Costs and Customer Loyalty

In the field of research on the impact of switching costs on customer loyalty, most domestic and foreign scholars have been studying switching costs and customer loyalty as independent variables for many years. Looking back to the traditional business environment of brick-and-mortar enterprises, when consumers and manufacturers establish a buying and selling relationship and become interdependent, the possibility of consumers switching to purchase other products or services will be significantly reduced due to concerns about losses in upfront investment costs. Even if they are occasionally dissatisfied with a certain consumer experience, consumers usually will not easily switch to other manufacturers' products or services. This is because the buyer-seller relationship that has been successfully established many times prevents consumers from easily breaking this cooperation due to one failure. As explained, in order to maintain the value of the invested costs, consumers are more inclined to maintain long-term buying and

selling relationships with manufacturers. This phenomenon also exists in the context of online buying and selling. In order to maintain the established buying and selling relationship, website users are often willing to pay higher prices to purchase products or services from original online sellers. Some studies have also confirmed this conclusion. In the Internet environment, switching costs have a significant positive impact on online loyalty. For example, Zha (2006) found that online customers have a strong sense of asset exclusivity for the shopping websites they use. The stronger this sense of exclusivity, the higher the switching costs, and thus the higher the loyalty. It is also proposed that switching costs are closely related to the establishment of e-loyalty. Zhang (2008) showed through research on physical enterprises that the greater the switching costs, the stronger the switching barriers established by enterprises to prevent consumer loss, and the easier it is for consumers to be retention and loyalty will increase accordingly. In addition, foreign scholars compared switching costs with satisfaction and interactive interface quality and found that switching costs can also drive e-loyalty.

However, as times develop and e-commerce becomes widely popular, it has become very easy for consumers to switch goods or service providers. They only need to cancel their existing accounts and download a new app. This change has reduced the switching cost to a certain extent, but it does not mean that consumers no longer have customer loyalty. On the contrary, customer loyalty in the online environment is formed differently from that in the physical environment, and once established, this loyalty is difficult to revoke. WeChat is a typical example, which is discussed further below.

Some scholars have studied switching costs and loyalty from different dimensions. For example, Hu (2005) took Taiwanese phone users as an empirical subject and conducted research from the two dimensions of program switching cost and relationship switching cost, and found that both types of switching costs can effectively retain customers. Scholar Zhao (2015) proposed hypotheses from three dimensions: procedural switching cost, financial switching cost and relationship switching cost, and studied their impact on behavioral loyalty and attitudinal loyalty. The results showed that switching cost has a positive effect on loyalty, but in practical applications It is necessary to learn to distinguish the impact of various factors on loyalty and to judge whether the switching cost is false loyalty. Took four English training schools in Nanjing as the research object. By constructing related loyalty models, he found that different types of switching costs have different impacts and significance on the English training industry. Among them, procedural and relational types have a positive impact on loyalty. While financial type has a negative impact on loyalty, but the overall effect of switching costs is still positive. Gao (2020) took B2C online bookstore as an example and constructed a loyalty model based on switching costs for research. The results showed that three types of network switching costs can positively affect the generation of loyalty, but the impact mechanism and effect are different. Wang (2013) introduced perceived risk as a moderating variable when studying e-loyalty, and explored its mechanism of action on loyalty from the three dimensions of switching costs. It was found that under the regulation of perceived risk, the two dimensions of finance and relationship have a significant positive impact on loyalty. And in today's e-commerce context, the proportion of each dimension of

switching costs will change according to specific circumstances, which will also lead to corresponding changes in its impact on customer loyalty.

There are also some scholars who have studied switching costs and loyalty from the perspective of satisfaction. For example, scholars Wang (2013) pointed out that among the many factors that drive customer loyalty, switching cost is different from customer value and satisfaction, and it is a semi-driving factor. Domestic scholars Wang (2004) used customer switching intention as their investigation content and pointed out that switching costs have a significant impact on loyalty regardless of consumer satisfaction.

In addition, some scholars have conducted relevant research on switching costs from the perspectives of merchants and consumers. For example, Shapiro and Varian (2012) found that the customer loyalty of online consumers is generated by the intellectual property and technical support of the website used. This means that the generation of consumer continuous consumption behavior depends in part on the technical content of the website. When consumers learn and adapt to the use of a certain technical website, they are less willing to spend time and energy to study other types of websites, thereby increasing switching costs and improving customer loyalty. Yan (2003) provided an effective strategy for enterprises to cultivate customer loyalty from the perspective of consumer psychological perception of switching costs, which has practical application value. These studies reveal the complex relationship between switching costs and customer loyalty from different perspectives, and provide an important theoretical basis for further understanding and optimization of precision marketing. Therefore, when considering switching costs from the perspective of merchants or consumers, their impact on loyalty is positive.

There are also scholars who have conducted empirical research on switching costs and loyalty from the perspective of different industries. Ruyter (1999) believed that the impact of switching costs on loyalty is different in various industries and pointed out after studying the banking industry and the hairdressing industry that if satisfaction is low, the impact is extremely significant. Kim (2004) studied the Korean mobile communications industry pointed out that due to the constraints of high switching costs, consumers are unwilling to change even if they are currently unsatisfied with the buyer-seller relationship; Caruana (2004) used mobile phone company customers as subjects to empirically analyze the direct impact of switching costs on loyalty. Yang and Peterson (2004) pointed out that customer satisfaction and customer value determine customer loyalty in the electronics industry, and switching costs only have an impact on customer loyalty after satisfaction and perceived value reach a certain level; Li (2003) studied users of electronic securities transactions. Proposed a strategy to retain securities firms by increasing switching costs, and used the relationship between switching costs and customer loyalty to construct a customer loyalty-driven model for online securities, confirming the positive relationship between the two. Zhang (2013) used mobile communications and electronic finance industries as an empirical object. She believed that high switching costs only produce false loyalty of customers, and an important

factor in retaining dissatisfied customers is the perception of switching costs. It can be seen that for different industries, increasing switching costs can increase loyalty.

As a social O2O website, WeChat's first major use is daily social interaction. Each of us adds our relatives and friends through WeChat, many of whom come from mobile phone books, QICQ friend lists and nearby people. In other words, WeChat circles are composed of users' daily social circles. Everyone knows or is familiar with each other, which makes WeChat have a social monopoly. First of all, this circle relationship restricts the user's entry and exit to a certain extent. When everyone is using WeChat for social interaction, non-users will have great curiosity and a strong desire to integrate, which prompts new users to join. After joining, users are reluctant to give up the stable circle relationship they have established. They will not easily give up WeChat and choose other social portals because of a little dissatisfaction. This increases the user's conversion cost and increases the user's exit barrier at the level of WeChat's own functions; secondly, when a user is satisfied with a certain product or service, he or she may recommend this product or service to familiar friends through "friend circle" or "private message". Users are less vigilant and have high trust in acquaintances. When other users have such needs, they are more likely to give priority to the goods and services recommended by friends. If the user is satisfied with a certain product or service, he or she may recommend this product or service to familiar friends through "friend circle" or "private message". Users are less vigilant and have high trust in acquaintances. When other users have such needs, they are more likely to give priority to the goods and services recommended by friends. If a user is satisfied with the product after the experience and recommends it again, the user's favorability towards the product will be deepened for the second time, which will encourage other people to try the product or service. This kind of self-splitting promotion effect of one old user generating many new users, and new users splitting into new users is powerful. This kind of accurate delivery and dissemination based on the chain of acquaintances has strong credibility and extremely low cost, and can form a viral precision marketing model at any time. In addition, the common friend function of WeChat allows users to psychologically develop the concept of an exclusive circle. For example, messages and likes are only visible to common friends. When users find that their friends buy products or services from the same merchant, they will have a sense of security and certainty, which will increase their future consumption at this merchant, and they may even pay a higher price than providers of similar products to maintain this buying and selling relationship. It is precisely because of the indirect increase in conversion costs that WeChat businesses have been profitable and booming in recent years.

In addition, compared with Weibo marketing, WeChat marketing has the advantages of "WeChat payment" and "Weibo membership card", which makes WeChat marketing more accurate. The Weibo membership card is a powerful tool to connect online users and offline merchants. It obtains customers by providing localized services and discounts to online users. Users become brand or store members by scanning QR codes or adding them online. Merchants provide membership card holders with conveniences such as stored value, discounts, accumulated points, prizes, gifts, customer

clubs, and online resource sharing. These conveniences are not available to non-member users, and the steps to become a member are free of cost, so users are willing to become holders of electronic membership cards. Electronic cards are conducive to merchants recording user consumption information, facilitating merchants to conduct back-end data statistics and analysis, and can get feedback in a timely manner, meet customer needs, and improve customer loyalty. In order to meet the e-commerce function of WeChat, WeChat Pay provides users with instant payment function through WeChat Wallet and binding with Alipay, which allows users to shoot and buy at the same time, realizing seamless connection between marketing and consumption. WeChat Pay is also instantly bound to group buying websites such as Meituan and Wowotuan, realizing the reaction chain operation of online merchants. The development of Meituan can drive the development of WeChat Pay, and WeChat Pay also promotes Meituan at the same time, presenting a win-win situation.

Finally, for mobile users with weak learning abilities, the time and effort spent on mastering the various functions and uses of WeChat can generate switching costs. Such users are not very willing to switch to a new APP or learn a new function, which indirectly increases customer loyalty.

2.7 Conceptual Framework



Figure 2.1 Conceptual Framework

The above figure shows the conceptual model of the research. The research explores how precision marketing and switching costs affect customer loyalty.

The relationship between precision marketing and customer loyalty forms a hypothesis H1: Precision marketing has a positive impact on customer loyalty, which means that through precise marketing means, such as personalized recommendations, targeted advertisements, etc., the loyalty of users to products or services can be enhanced.

The relationship between switching costs and customer loyalty forms a hypothesis H2: Switching costs have a positive impact on customer loyalty, which means that when the cost for users to switch from one product or service to another is relatively high, users are more inclined to maintain their loyalty to the existing product or service.

Chapter 3 Research Methodology

3.1 Research Design

This study adopted the quantitative research method, using a questionnaire to collect data.

3.1.1 Questionnaire Design Process

The design, distribution and analysis of the questionnaire are important steps of the study. To ensure that the questionnaire survey was carried out in a scientific and reasonable manner, the questionnaire design process was as follows:

(1) Based on the existing theoretical foundation and the constructed hypotheses, research scales in relevant domestic and foreign literature were searched.

(2) Taking the scales determined in the first step as the research basis, the scales were adjusted.

(3) The study designed and modified the first draft of the questionnaire, and made appropriate adjustments to the structure of the entire questionnaire, hoping to make the questionnaire as scientific as possible.

(4) After the final modification of the questionnaire, a formal questionnaire was complete.

The main survey instrument of this study is the Wenjuanxing online survey system. As a professional online survey platform, the Wenjuanxing has advantages such as convenience, efficiency, and extensive reach. Through this system, researchers can quickly distribute well-designed Wenjuanxing to a large number of potential samples, overcoming geographical and temporal limitations, greatly improving the efficiency of data collection. At the same time, the Wenjuanxing system also has functions for data organization and preliminary analysis, making it convenient for researchers to organize and process the collected Wenjuanxing data, laying the foundation for further in-depth analysis.

3.1.2 Operational Definitions of Variables in This Research Model

Precision marketing refers to a series of targeted and purposeful marketing strategies adopted by WeChat merchants to maintain the buyer-seller relationship established with consumer users. Switching costs refer to the money, time, energy spent by WeChat users when they transfer from the existing WeChat marketing environment to a new marketing environment (such as Weibo marketing, Tencent marketing, etc.), as well as losses in interpersonal relationships and social recognition. Loyalty refers to

whether WeChat users have the intention to repurchase, the intention to stop using, or the intention to recommend to friends after their first consumption.

3.1.3 Item Design

The questionnaire in this research adopts the Likert 5-level scale, where "1" represents strongly disagree, "2" represents disagree, "3" represents neutral, "4" represents agree, and "5" represents strongly agree. All items are adjusted and modified based on the actual situation of users under the O2O model on the basis of the initial items.

The design of the questionnaire mainly includes two parts. The first part is the basic personal information of the respondents, and the second part is the measurement of the impact of precision marketing on the loyalty of WeChat users.

(1) Basic Personal Information

The main function of the first part of the questionnaire is to collect the basic personal information of the respondents, including gender, age, the time of using WeChat and use of WeChat. This part is shown in Table 3.1.

Table 3.1 Basic Personal Information

Your age:	A. 15 - 20 years old B. 21 - 25 years old B. 26 - 30 years old D. 31 - 35 years old E. 36 - 40 years old F. Over 40 years old
Your gender:	A. Male B. Female
How long have you been using WeChat:	A. Less than 6 months B. More than 6 months but less than 1 year C. More than 1 year but less than 3 years D. More than 3 years
Which of the following consumptions have you made using WeChat:	A. WeChat payment B. Mobile phone bill recharge C. Buying movie tickets D. WeLife membership (following official accounts) E. Group buying (food, drink and entertainment) F. Lottery tickets G. Didi taxi H. Airline tickets and train tickets I. Others

(2) The Impact of Precision Marketing on Customer Loyalty

The second part which focuses on the impact of precision marketing on customer loyalty constitutes the main body of the questionnaire. It mainly includes three variables, namely precision marketing, switching costs and loyalty. The content of these variables and their sources are shown in Table 3.2 as follows.

Table 3.2 Variable Contents and Sources

Variables	Measurement Contents	Reference Sources
Precision Marketing	Whether the information is released in a timely manner, whether the price is reasonable, pertinence and dynamism	Liu Ruofei (self-developed)
Switching Costs	Procedural, relational, financial	Sharma 和 Patterso (2000)、 Burnham (2003)、 Serken (2005)
Loyalty	Behavior, psychology, attitude	Srinivasan、 Anderson&Ponnavolu(2002)

The specific item designs for each variable are as follows:

(1) Design of Precision Marketing Scale

This part mainly examines the user's understanding and perception of WeChat precision marketing. A scale was developed by interview method and conclusions were drawn. The specific items are shown in Table 3.3 below.

Table 3.3 Precision Marketing Scale

1 The official WeChat client will release information to me according to my personal instructions.	1.	2.	3.	4.	5.
2 The consumption price on the official WeChat client is reasonable.	1.	2.	3.	4.	5.
3 The official WeChat client will improve products or services according to my requirements.	1.	2.	3.	4.	5.
4 I am a member of some official WeChat accounts.	1.	2.	3.	4.	5.

5 The official WeChat client will dynamically and timely push product or service information to me.	1.	2.	3.	4.	5.
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(2) Design of Switching Costs Scale

This part mainly investigates the money, time, energy, and loss of interpersonal relationships and social identity when consumers move from the existing WeChat marketing environment to a new marketing environment (such as Weibo marketing, Tencent marketing, etc.). The scale includes three dimensions: procedure, relationship, and finance, with a total of 10 items. The specific items are shown in Table 3.4 below.

Table 3.4 Switching Costs Scale

6 Replacing other clients may take me more time and effort	1.	2.	3.	4.	5.
7 I'm not very familiar with the product or service offering process of other clients	1.	2.	3.	4.	5.
8 It is difficult to stop using the WeChat client	1.	2.	3.	4.	5.
9 Switching to a new client means re-establishing relationships and adapting	1.	2.	3.	4.	5.
10 If I give up using WeChat, I will lose my existing credit rating and customer points	1.	2.	3.	4.	5.
11 If I give up using WeChat, I will lose the benefits and benefits I can enjoy	1.	2.	3.	4.	5.
12 I may have to pay extra for converting the new client	1.	2.	3.	4.	5.
13 I have established a good relationship with my contacts in WeChat	1.	2.	3.	4.	5.
14 I don't want to give up the contacts I've already established	1.	2.	3.	4.	5.
15 I will pay attention to the popularity and credibility of the WeChat account I use	1.	2.	3.	4.	5.

(3) Design of Loyalty Scale

This part mainly investigates the behavior of WeChat users after making their first purchase, including their willingness to buy again, their willingness to stop using it, and their willingness to recommend it to friends, etc., totalling 4 items, as shown in Table 3.5 below.

Table 3.5 Loyalty Scale

16 If I consume again, I will also choose the merchant of WeChat	1.	2.	3.	4.	5.
17 I won't change WeChat easily	1.	2.	3.	4.	5.

18 I am willing to recommend WeChat merchants to my friends	1.	2.	3.	4.	5.
19 I am willing to make the decision to spend on WeChat again	1.	2.	3.	4.	5.

3.1.4 Pre-distribution of Questionnaires

In order to ensure the scientificity and reliability of the data obtained in this study, it is necessary to pre-distribute a small number of questionnaires, and further test and correct the formed questionnaires to determine the validity of the scales in the final questionnaire. A total of 100 questionnaires were distributed and 94 questionnaires were recovered, of which 91 were valid, and the effective rate of questionnaire recovery was 91%, which met the requirements of standard questionnaire collection efficiency. After a simple collation of the questionnaire data, a sample characteristic analysis, reliability analysis and correlation analysis of each index were carried out on the pre-issued questionnaires, and the data showed that the internal consistency coefficient of each variable was greater than 0.5, and it was feasible to perform factor analysis on the data. Table 3.6 shows the data of the pre-survey.

Table 3.6 Statistical Analysis Results of Pre-distribution Sample

Sample Characteristics	Classification	Frequency	Percentage (%)
Gender	Male	43	47.3
	Female	48	52.7
Ages	18-20	23	25.3
	21-23	56	61.5
	24-26	12	13.2
Time of using WeChat	T<6 months	5	5.5
	6 months<T<1 year	25	27.5
	1 year<T<3 year	51	56.0

3.2 Population and Sample

This study focused on users participating in WeChat marketing activities, aiming to explore the impact of precision marketing and switching costs on customer loyalty. The research collected data through the Wenjuanxing online survey system, distributing 280 questionnaires and recovering 243, with a recovery rate of 86.7%. After excluding 42 invalid questionnaires, 201 valid responses were obtained, resulting in an effective rate of 82.7%.

3.3 Hypothesis

Based on the above theoretical foundation and analysis of WeChat characteristics, the following hypotheses are proposed :

H1: Precision marketing has a positive impact on customer loyalty.

H2: Switching costs have a positive impact on customer loyalty.

3.4 Reliability and Validity Analysis of the Scale

3.4.1 Reliability Analysis

Reliability refers to the consistency, reliability and stability of the measurement results. In empirical research, the internal consistency coefficient Cronbach α is usually used as a standard to judge whether the data is reliable. The closer the value is to 1, the better. The judgment rule is: Cronbach α coefficient is between 0.8 and 0.9, indicating that the scale reliability is very good; Cronbach α coefficient is between 0.7 and 0.8, indicating that the scale stability is relatively good; Cronbach α coefficient is below 0.7, indicating that the measurement results are unreliable. In addition, when conducting reliability analysis on data, it is also necessary to pay attention to the total correlation coefficient of corrected items (CITC) and the α coefficient after deleting items (CITD). CITC represents the size of the correlation coefficient between the item and the subscale. If the correlation coefficient value is too small, consider deleting it; CITD represents the α coefficient of the subscale after deleting the item. If the value suddenly increases, it means that deleting the item can increase the α coefficient of the subscale. The reliability test results of this study are shown in Table 3.7.

Table 3.7 Reliability Test Results

Dimensions (number of items)	Question	CITC	CITD	α coefficient (dimension)
Precision Marketing(5)	The WeChat official client will release information to me according to my personal instructions	0.591	0.732	0.783
	Reasonable prices for consumption through WeChat official client	0.545	0.747	
	The WeChat client will improve its products or services according to my requirements	0.544	0.746	
	I am a member of some WeChat official accounts	0.530	0.761	
	WeChat client will push product or service information dynamically and timely	0.615	0.726	
	Switching to another client might take me more time and effort	0.627	0.830	
	I am not familiar with the product or service delivery process of other clients	0.608	0.832	

Switching Costs (10)	It is difficult to stop using WeChat client	0.563	0.836	0.851
	Changing to a new client means rebuilding relationships and adapting	0.610	0.832	
	If I give up using it, I will lose my existing credit rating and customer points	0.600	0.833	
	If I give up using WeChat, I will lose the benefits and privileges I enjoy.	0.584	0.834	
	I may have to pay additional fees for switching new clients	0.486	0.844	
	I have established good relationships with my contacts on WeChat	0.521	0.840	
	I don't want to give up the contacts I've already established	0.492	0.842	
	I will pay attention to the popularity and credibility of the WeChat account I use	0.450	0.845	
Customer Loyalty(4)	If I were to shop again, I would still choose merchants on WeChat	0.663	0.716	0.796
	I won't change WeChat easily	0.373	0.844	
	I am willing to recommend WeChat merchants to my friends	0.745	0.672	
	I am willing to make the decision to consume on WeChat again	0.667	0.715	

As can be seen from Table 3.7, the total correlation coefficient (CITC) of the items is greater than 0.5, and the α coefficient (CITD) after deleting the items has not increased suddenly, that is, each item has a good contribution to the dimension, and the questionnaire does not contain junk items. In addition, the α coefficient of precision marketing is 0.783, the α coefficient of switching costs is 0.851, and the α coefficient of customer loyalty is 0.796. These data show that the scale has a high internal consistency and good reliability.

3.4.2 Validity Analysis

Validity is effectiveness, which refers to the extent to which the questionnaire measures the object being measured. Generally, the higher the validity, the higher the degree to which the measurement results contain the essential characteristics of the measured content. The scale used in this study was developed by well-known scholars and has been verified by research. Therefore, it has good content validity and validity.

3.5 Data Collection

This study collected data through the Questionnaire Star online survey system, with the following distribution and recovery of questionnaires:

1. Questionnaire Distribution

- Pre-distribution: A random distribution was conducted among university students from several universities in the city, with a total of 100 questionnaires distributed and 94 collected, of which 91 were valid, resulting in a validity rate of 91%.
- Large-scale formal distribution: It was done using the Questionnaire Star online survey system, with an expected distribution of 200 - 300 questionnaires, and an actual distribution of 280 questionnaires.

2. Questionnaire Recovery • The total number of recovered questionnaires was 243, with a recovery rate of 86.7%. • Among them, 42 were invalid questionnaires, and after deletion, 201 valid questionnaires were obtained, resulting in a validity rate of 82.7%.

3.6 Data Analysis

1. Descriptive statistical analysis: SPSS software was used to conduct descriptive statistical analysis of the sample and the three variables: precision marketing, switching costs and customer loyalty.

2. Structural equation modeling: Structural equation modeling analysis was carried out with the help of AMOS software, and the influence strength and effect of variables were tested by path coefficients.

Chapter 4 Findings and Discussion

4.1 Findings

4.1.1 Demographic Characteristics of Respondents

A total of 280 questionnaires were distributed in this study, and the total number of questionnaires was 243, with a questionnaire recovery rate of 86.7%, of which 42 were invalid, and 201 valid questionnaires were obtained after deletion, with an effective rate of 82.7%. Table 4.1 shows the statistical analysis results of the sample structure.

Table 4.1 Descriptive Statistics of Sample (N=201)

Demographic variables	Classification	Number of samples	percentage(%)	Cumulative percentage (%)
Gender	Male	96	47.8	47.8
	Female	105	52.2	100.0
Age	15-20 years old	8	4.0	4.0
	21-25 years old	34	16.9	20.9
	26-30 years old	64	31.8	52.7
	31-35 years old	60	29.9	82.6
	36-40 years old	19	9.4	92.0
	Over 40 years old	16	8.0	100.0
Use WeChat Time	Less than 6 months	12	6.0	6.0
	More than 6 months and less than 1 year	34	16.9	22.9
	More than 1 year Less than 3 years	126	62.7	85.6
	3 years or more	29	14.4	100.0

As shown in Table 4.1, the effective sample of this study is 201. In the survey on gender, there are 96 males and 105 females, accounting for 47.8% and 52.2% of the total sample respectively; in the survey on age, there are 158 respondents aged 21 to 35, accounting for 78.6% of the total sample, and only 21.4% are concentrated in other age groups; in the survey on WeChat usage time, most respondents are concentrated in more than 1 year and less than 3 years, which is consistent with the trend of WeChat popularity

in the past two years. In summary, the sample structure from the questionnaire survey is close to reality and tends to be reasonable.

According to the data, the gender distribution is relatively balanced, with the age group concentrated in 21-35 years old, and the duration of WeChat use is mostly 1-3 years, which is consistent with the popularity trend of WeChat in the market, indicating that the sample structure is relatively reasonable and can represent the target population to a certain extent.

4.1.2 Descriptive Statistical Analysis of Variables

This section used SPSS software to conduct descriptive statistical analysis on the variables.

Table 4.2 Descriptive Statistics of Variables (N=201)

Variable Name	N	Minimum	Maximum	Mean	Standard Deviation
Precision Marketing	201	1	5	4.0488	.61531
Switching Costs	201	1	5	4.0791	.52977
customer loyalty	201	1	5	4.2065	.60954

The results showed that the mean value of precision marketing was 4.0488, the mean conversion cost was 4.0791, the mean customer loyalty was 4.2065, and the standard deviations were 0.61531, 0.52977 and 0.60954, respectively. These data reflect a high level of overall perception of the variables by the sample.

4.1.3 Structural Equation Model Analysis

This study used AMOS software to conduct structural equation model analysis. The path coefficient is a regression coefficient used to test the strength and degree of effect between variables, that is, the standardized coefficient. In the process of path analysis, in order to obtain the standardized coefficient, all data must first be standardized. If the coefficient is greater than zero, it means that the independent variable has a positive impact on the dependent variable. If the coefficient is less than zero, it means that the independent variable has a negative impact on the dependent variable. In addition, the absolute value of the standardized coefficient can also be used to judge the size of the impact. The larger the absolute value, the stronger the impact.

After verifying the model, this study reached the following conclusions: the path coefficient between customer loyalty and precision marketing is significant, while the path coefficient between customer loyalty and switching costs is not significant.

Table 4.3 Path Coefficient and Significance

Assumptions and Paths	Standardized regression coefficients	S.E.	C.R.	P-value	Significance
Customer loyalty < Precision marketing	.039	.679	.057	<0.01	significance
Customer loyalty < Switching cost	-.278	.221	-1.262	.207	Not significant

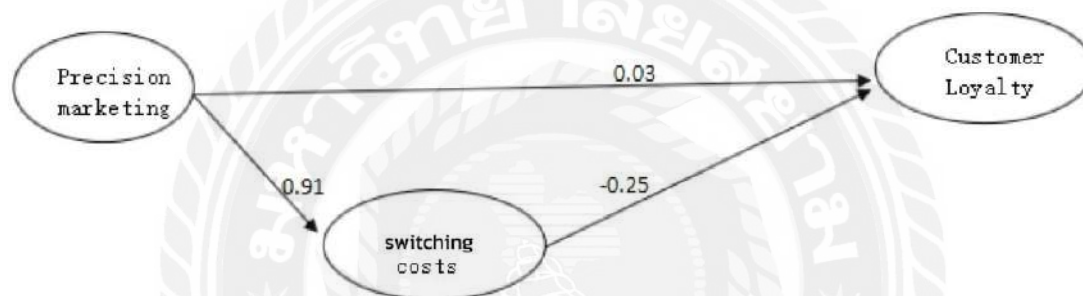


Figure 4.1 Path Coefficient Diagram

Chi-square value = 873.016; Degrees of freedom = 397; Chi-square degree of freedom ratio = 2.199; P=.000; GFI=.750; AGFI=.708; RMSEA=.077

From the data in Table 4.3 and Figure 4.1 , we can draw the following conclusions: the path coefficient value of precise marketing impact on customer loyalty is 0.03, which is a positive impact; The path coefficient value of precision marketing on switching costs is 0.91, which is a significant positive impact. The value of the path coefficient of switching costs on customer loyalty is -0.25, which is a negative effect.

It is inconsistent with the original model.

4.2 Hypothesis Test Results

Table 4.4 Hypothesis Tests Results

Research Hypothesis	Result
Hypothesis 1 (H1): Precision marketing has a positive impact on customer loyalty.	Supported

Hypothesis 2 (H2): Switching costs have a positive impact on customer loyalty.	Not supported
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As shown in Table 4.3 and Figure 4.1 above, the hypothesis that ultimately holds true in the hypothesis test is: precision marketing has a positive impact on conversion costs. The hypothesis that ultimately does not hold true is: switching costs have a positive impact on customer loyalty. The reason for the prediction is that with the acceleration of the pace of life and the great changes in the times, people's mentality has also changed significantly. This change has led to people having different views on different things. The increase in switching costs can lead to customer loyalty, but this loyalty may be a passive loyalty. This passive loyalty may be caused by the high switching costs, which is actually a kind of usage bundling. In order not to give up the previously established relationships, organizations, memberships and discounts, users have to continue to use it. This use is based on non-relinquishment rather than loyalty. The essential reason for this still requires us to continue to conduct in-depth investigations in future research.

4.3 Discussion

After obtaining the results that precision marketing has a positive impact on customer loyalty, while switching costs have no effect on customer loyalty, the following aspects need to be further discussed:

1. Interpretation and in-depth analysis of results:

The positive impact of precision marketing explain why precision marketing is effective in increasing customer loyalty. For example, it is possible to analyze how specific strategies of precision marketing (such as personalized recommendations, targeted advertising, etc.) can meet user needs and improve user experience, so as to enhance users' brand identity and loyalty.

No impact of switching costs: The possible reason why switching costs do not have a significant impact on customer loyalty is that, for example, in modern society, users have more diverse and flexible choices of products or services, and high switching costs may no longer be a major obstacle for users to remain loyal.

2. Research limitations and future research directions:

Sample limitations: Future research may identify possible geographical, age, occupational, and other limitations of the research sample, and discuss the impact of these limitations on the research results.

Variable expansion: Future research may consider introducing more relevant variables, such as brand image, service quality, user satisfaction, etc., to more comprehensively understand the formation mechanism of customer loyalty.

Cross-case analysis: In addition to WeChat, future research can also select other O2O e-commerce platforms for case analysis to verify the generalizability of the research results.

3. Practical significance and application suggestions:

Enterprise Strategy Suggestions: Based on the research results, specific strategic suggestions for enterprises to carry out precision marketing activities in the O2O e-commerce model are obtained, for example, strengthen data analysis capabilities to more accurately identify user needs, optimize personalized recommendation algorithms, etc.

User Experience Optimization: Improve user experience through precision marketing, thereby enhancing customer loyalty. For example, providing customized services, increasing user interaction, etc.

4. Theoretical Contributions and Academic Value:

Theoretical Supplement: This study points out the theoretical supplementary effect of the relationship between precision marketing and customer loyalty under the O2O e-commerce model.

Academic Dialogue: Comparative analysis with the existing literature to explore the unique contribution and potential dialogue space of this research in the academic field.

5. Policy Recommendations and Industry Norms:

Policy guidance: Explore how the government or industry organizations can guide enterprises to make reasonable use of precision marketing methods while protecting user privacy and rights and interests.

Industry norms: Establish or improve O2O e-commerce industry norms to promote the healthy and orderly development of the industry.

Through these discussions, the research can be further enriched and deepened, and the academic value and practical significance of the research can be enhanced.

Chapter 5 Conclusion and Recommendation

5.1 Conclusion

This study focuses on the impact of precision marketing on the loyalty of WeChat users in the O2O e-commerce model. By constructing a research model, collecting data through large-scale questionnaires, and conducting analysis, the following core conclusions are drawn:

The sample of this study covers people of different genders, ages, and WeChat usage durations. The sample structure is close to reality and is reasonable. The mean values of the three variables - precision marketing, switching costs, and customer loyalty - are all around 4, indicating a relatively high overall level. However, the impact of switching costs on customer loyalty did not meet expectations.

A total of 280 questionnaires were distributed in this study, and 243 questionnaires were collected, with a questionnaire collection rate of 86.7%. Among them, 42 invalid questionnaires were deleted, and a total of 201 valid questionnaires were obtained after deletion, with an effective rate of 82.7%.

In the survey on gender, there are 96 males and 105 females, accounting for 47.8% and 52.2% of the total sample respectively. In the survey on age, there are 158 respondents aged 21 to 35, accounting for 78.6% of the total sample, and only 21.4% are concentrated in other age groups. In the survey on WeChat usage time, most respondents are concentrated in more than 1 year and less than 3 years, which is consistent with the trend of WeChat popularity in the past two years. In summary, the sample structure of the data collected from the questionnaire survey is close to reality and tends to be reasonable.

Precision marketing has a positive impact on customer loyalty. Precision marketing accurately positions the target customer group, deeply understands their needs, preferences, and other characteristics, and formulates targeted marketing strategies, such as personalized recommendations and targeted advertising. These strategies can better meet user needs, enhance the user experience, and thus strengthen users' brand identity and loyalty. Hypothesis H1 is verified.

The impact of switching costs on customer loyalty is not significant. It was originally hypothesized that switching costs had a positive impact on customer loyalty (Hypothesis H2). However, the research results show that the path coefficient between the two is not significant and is negatively correlated. The possible reason is that with the acceleration of the pace of life and the changes of the times, people's concepts have changed. Facing diverse and flexible choices of products and services, high switching costs are no longer the main factor for users to remain loyal. Users may continue to use

a product or service due to high switching costs, but this is passive usage rather than true loyalty.

5.2 Recommendation

(1) Improve the quality of customer relationships is an important focus

1) Adopt targeted marketing strategies: Under the O2O model, precision marketing should focus on customer needs and interests, and use the advantages of online and offline models, such as LBS positioning technology, to push different products, make up for the shortcomings of mass marketing, and improve the effectiveness of information dissemination.

2) Strengthen customer demand understanding and service customization: The e-commerce background should regularly investigate and interview users, improve goods and services according to needs, customize an exclusive customer service system, collect opinions through one-to-one communication, increase user emotional costs, reduce conversion behavior, and maintain customer loyalty.

3) Analyze user data to optimize operations: Online brands need to regularly analyze back-end user information, classify user characteristics, adjust product and service levels accordingly, and feedback the adjustment information to users, collect feedback in a timely manner, adapt to changes in consumer demand, and enhance competitiveness.

4) Establish a membership system and care mechanism: Merchants can create an online club membership organization, implement a point accumulation and redemption system, launch preferential activities on holidays or anniversaries, record users' important dates and send gifts or blessings, and improve user satisfaction and loyalty.

(2) Segment user groups and adopt differentiated strategies

1) Pay attention to user interaction and relationship maintenance: Under the O2O model, merchants should strengthen their interaction with users, pay attention to users' feelings about brand image, speech and behavior, establish positive emotional reflections, and reduce user management costs.

2) User preference positioning and market segmentation: Conduct preference positioning and market segmentation for users, and use different ways to communicate according to different needs and preferences to improve communication efficiency.

3) Use data classification to implement differentiated marketing: Use the background database to qualitatively classify users, such as according to new and old customers, consumption frequency, consumption type, etc., and push different products and services for different users to improve user experience.

(3) Multi-channel marketing: Take the initiative to establish loyalty-oriented customer links

1) Optimize the user experience of the APP: Optimize the APP operation interface and process to make it simple and easy to understand, reduce the learning cost and worries of first-time users, and improve the willingness of users to use and consume again.

2) Implement user binding strategy: Adopt flexible user binding methods, such as providing exclusive discounts or discounts for VIP members, organizing exclusive physical entertainment promotional activities for members, etc., but the key is to ensure the quality of goods and service levels.

3) Enhance brand image: Establish a good public image and brand awareness through active publicity methods such as public welfare, donations, education, environmental protection and cooperation with big brands, attract users with different needs, and establish a huge consumer community.

4) Take the advantages of social networks: Take social O2O e-commerce such as WeChat as an example, use the interpersonal relationship costs of social networks to carry out viral publicity and word-of-mouth diffusion, mobilize business-user and user-user interaction, and consolidate customer loyalty.

5.3 Further Study

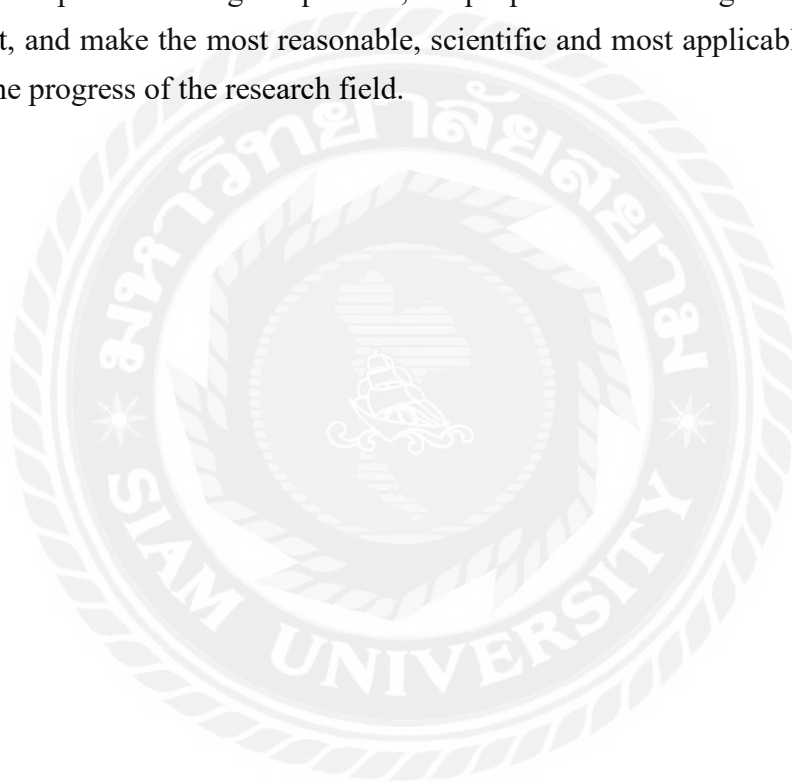
(1) Few studies on precision marketing and transfer value at home and abroad focus on empirical research, and most of them are theoretical studies, so there is no recognized scale which was tested and developed by interview method, and the corresponding conclusions were obtained through empirical analysis, which proved that it has high reliability and validity. However, the scale still needs to be further developed, researched and proven by researchers in related fields, and then a more complete scale is further developed to form a scale suitable for the actual situation of China's O2O e-commerce model.

(2) The definition of loyalty should be more precise. In the study of loyalty, scholars at home and abroad have described the definition of loyalty in accordance with the big concept in the context, and there is no effective and accurate description of each field of research. Therefore, the concept of loyalty needs to be further refined and refined in future research, so as to explore the interrelationship between variables in more detail and derive the essence of the problem.

(3) The influence mechanism between variables should be studied more deeply. In this study, the relationship between the three variables was discussed, hypotheses were

proposed, and a model was constructed, but the exact influence of each variable was not explored in sufficient depth. Therefore, in future research, it is necessary to dig deep into the relationship between variables and explore the internal mechanism of the interaction of variables from the details.

(4) Further research should continue to deeply explore the similarities and differences between the physical marketing environment and the online marketing environment, so that more accurate research can be carried out in the future. In this study, two hypotheses are not valid, and the preliminary prediction is caused by the difference between O2O online consumption and physical consumption, so the classical theories may not all be applicable to the rapid changes in the external environment. Researchers must have the spirit of daring to question, keep up with the changes in the general environment, and make the most reasonable, scientific and most applicable theoretical results for the progress of the research field.



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Appendix

Questionnaire on "WeChat Precision Marketing on customer loyalty".

Dear Sir (Madam) Hello!

Thank you so much for taking the time out of your busy schedule to fill out this survey! This is a purely academic research questionnaire, the purpose is to understand your satisfaction with the use of WeChat, this questionnaire is conducted in an anonymous form, please do not have any concerns, please try to answer with your personal actual feelings or opinions. Thank you for your cooperation!

Your age: A.15-20 B.21-25 C.26-30 D.31-35 E.36-40 F.>40

Your gender: A. Male B. Female

How long have you been using WeChat: A. less than 6 months B. greater than 6 months less than 1 year C. greater than 1 year less than 3 years D. more than 3 years

Which of the following consumption have you used WeChat (multiple choice): A. WeChat payment B. mobile phone bill recharge C. purchase movie tickets D. micro life members (follow public accounts) E. group purchase (eating, drinking and playing) F. lottery G. Didi taxi H. air tickets and train tickets I. others

Here are some questions about WeChat, please choose from strongly disagree, disagree, general, agree, and strongly agree. 1 of them strongly disagreed; 2 Delegates disagree; 3 for General; 4 Delegates agree; 5 Delegates strongly agreed.

Precision marketing					
1 The official WeChat client will release information to me according to my personal instructions	1.	2.	3.	4.	5.
2 Reasonable price for consumption from the official WeChat client	1.	2.	3.	4.	5.
3 The official client of WeChat will make product or service improvements according to my requirements	1.	2.	3.	4.	5.
4 I'm a member of some WeChat official accounts	1.	2.	3.	4.	5.
5 The official WeChat client will push product or service information to me in a timely manner	1.	2.	3.	4.	5.
Conversion costs	1.	2.	3.	4.	5.
Programmatic conversion costs	1.	2.	3.	4.	5.

6 Replacing other clients may take me more time and effort	1.	2.	3.	4.	5.
7 I'm not very familiar with the product or service offering process of other clients	1.	2.	3.	4.	5.
8 It is difficult to stop using the WeChat client	1.	2.	3.	4.	5.
9 Switching to a new client means re-establishing relationships and adapting	1.	2.	3.	4.	5.
Financial Switching Costs					
10 If I give up using WeChat, I will lose my existing credit rating and customer points	1.	2.	3.	4.	5.
11 If I give up using WeChat, I will lose the benefits and benefits I can enjoy	1.	2.	3.	4.	5.
12 I may have to pay extra for converting the new client	1.	2.	3.	4.	5.
Relational conversion costs					
13 I have established a good relationship with my contacts in WeChat	1.	2.	3.	4.	5.
14 I don't want to give up the contacts I've already established	1.	2.	3.	4.	5.
15 I will pay attention to the popularity and credibility of the WeChat account I use	1.	2.	3.	4.	5.
Loyalty					
16 If I consume again, I will also choose the merchant of WeChat	1.	2.	3.	4.	5.
17 I won't change WeChat easily	1.	2.	3.	4.	5.
18 I am willing to recommend WeChat merchants to my friends	1.	2.	3.	4.	5.
19 I am willing to make the decision to spend on WeChat again	1.	2.	3.	4.	5.

Thank you for your cooperation!