THE ANALYSIS OF THE COMMUNITY O2O (ONLINE TO OFFLINE) OPERATION MODEL IN NANJING

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A Dissertation Submitted in Partial

Fulfillment of the Requirement for the Degree of

Doctoral of Philosophy (Management)

International College,

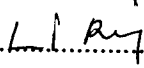**National Institute of Development Administration**

2017

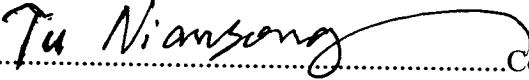# THE ANALYSIS OF THE COMMUNITY O2O (ONLINE TO OFFLINE) OPERATION MODEL IN NANJING

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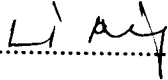
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ABSTRACT

Title of Dissertation	The Analysis of the Community O2O (Online to Offline) Operation Model in Nanjing
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With the popularity of Mobile Internet and E-commerce, the so-called O2O means the "last kilogram" the last kilometers delivery of products or services by integrating online and offline resources. Its core is to build a platform linking consumers and merchants or door-to-door services with community living scenes as its focus. It's true that O2O has developed into a phase in-depth, which has greatly met the increasing demands of consumers' "laziness" and stimulated the growth of consumption. As a result, it has been a hotspot to have an in-depth study on the business model and future development of community O2O based on the demands of consumers in the market.

The aims of the thesis are as follows: 1) to discuss the O2O operation pattern of Chinese E-commerce and its features; 2) to analyze the current development and existing problems of Chinese O2O operation pattern with the subjective understanding, development expectation, and existing problems in operation of community O2O from the perspective of consumers and enterprises in Nanjing communities as an example; 3) to explore the domestic O2O development layout with communities in Nanjing as the case.

Both qualitative and quantitative analysis are applied in the thesis. For quantitative analysis, facing there are 8.0573 million residents and 692 communities in Nanjing, questionnaires are distributed to some consumers and community enterprises in 65 communities at random to study their current demands for O2O. 40

communities in main districts with better economies, larger population and more people, 15 in suburbs and 10 in counties are chosen respectively. 872 out of 900 questionnaires were finally collected. For qualitative analysis, In-depth interviews on enterprises related to Suning, Jingdong and Guomei were conducted, aiming to find out the practical problems on community O2O which contain their current situation, development trend as well as future development direction and possible measures. 30 interviewees are involved, including 6 operators, 6 logistics staff, 6 delivery staff and 12 online shoppers.

The conclusion is that as a community-services-based O2O, the integration of resources around the communities is the most fundamental and necessary part of its development. The model of community O2O in Nanjing is operated by online orders and offline pickups, which has attracted a fixed amount of consumers and satisfied their demands with practical values to some degree. However, a mature community O2O model has not been formed yet. There is no doubt that community O2O is the trend of community business in the future despite many aspects needed to be improved. Due to its convenience to instant pickups, many residents are still optimistic about community O2O. What cannot be ignored is that many enterprises in Nanjing communities have not yet adopted the O2O model attributed to restrictions of capital, population and technology, which matches the basic reality of Nanjing. Therefore, the real value of community O2O can be realized by offering tailored services instead of the simple combination of online and offline. Only in this way can the bright and prosperous future of Nanjing community O2O be guaranteed.

As for following policies, on the basis of selecting partners, communities should focus on the diversion of online and offline consumers, relevant interests distribution and personal training so as to expand sources of consumers for diversified management and profit models. Meanwhile, an integrity standard system and a powerful information system are needed in order to achieve full channel marketing collaboration and make the management service project settings more reasonable and the logistics and delivery system more customer-friendly.

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CHAPTER 1

INTRODUCTION

1.1 Research Background and Significance

1.1.1 Research Background

With the rapid improvement of people's livelihood, the demand for various goods and services continues to increase. The way to maximize information exchange and sharing so as to deliver a variety of products and services to consumers has emerged as one of the urgent tasks for all industries. Virtual operation has become an inevitable trend, especially at the time featured by rapid development of new network technology and wide popularization of various social platforms and network trading platforms, which has greatly changed people's way of thinking and lifestyles and constantly promoted the transformation of the entire socio-economic model. With the rapid popularization of PC, the vigorous growth of the number of Internet users, online shopping has gradually become a brand-new way for consumers in their daily life. Coupled by the swift upgrading of 4G networks, smart phones and mobile terminals, the traditional Chinese retail enterprises taking offline retail store as their main sales channels are facing unprecedented challenges and pressure. As the growth point of B2B and B2C network e-commerce economy has been saturated, the directional flow of online directional has also become stable, O2O has emerged as a powerful network marketing model which has adapted to the whole network environment and produced a new life with a strong marketing model.

O2O (Online to Offline) refers to the integration of offline operation and consumption and online Internet e-commerce aimed to generate mutual benefit for buyers, sellers and the third-party network platform. The O2O model effectively integrates online shopping with traditional markets. In the context of the economic new model, enterprises should strive to form a further understanding of O2O operation mode, and actively adapt to O2O model so as to provide essential ideas for

their own reconstruction and advancement. Mobile Internet technology continues to advance, 4G technology and even 5G technology is under further development and research, cloud computing and other advanced concepts are putting into use, which will eventually become the essential foundation facilitating the extensive application of O2O in today's capital market. It is expected that O2O operating technology and operation model will be a promising field in the near future. As a product of the network-marketing model, O2O is designed to improve consumer satisfaction and increase customer loyalty by improving consumer experience. O2O has greatly expanded the breadth and depth of marketing, thus involving into a useful weapon in the front-line business of the current offline trading operation and bringing unprecedented opportunities for the further development of the entire e-commerce. Throughout the history of China's business development, some of the first group purchasing websites are basically the initial version of the early O2O model and the activities carried out haven't touch the essence of O2O. However, since a range of e-commerce platforms with Taobao as a lead started to vigorously carry out operation in relevant model, O2O model has been greatly expanded and widely used, which not only attracted consumers to buy products and to make comments on online platform, but also attracted a large number of consumers to the offline store to buy products, access services and obtain better consumer experiences. This model has maximized the integration and combination of online and offline channels, achieved the complement of the two models and promoted mutual benefits through the cooperation between the two modes. Besides, by integrating advanced concept and state of the art technologies, the model will promise better consumers experiences and services as well as generate handsome profits and promising future for enterprises.

In terms of time, Wal-Mart should be the first chain supermarket giant enterprises deployed "O2O" model in the field of supermarket. In 2011, Wal-Mart bought 20% the stakes of the "No. 1 shop" with 450 million, and Wal-Mart increased its stake to 51% in 2012. In 2013, the transactions volume of domestic O2O market reached 470 billion Yuan, an increase of 69% compared with that of 2012, showing a great momentum of development. In the era of E-commerce, O2O not only boasts a promising future in economically developed and densely populated cities, but also in the distribution-intensive communities that are close to office in the third and fourth

tier cities. Up to now, JingDong, Alibaba, SuNing Appliance, SF Express, BBK, YHDO, Hualian and many other Internet e-commerce companies, chains supermarket, courier companies have set foot in the field of community O2O. It is not difficult to see that the community O2O model has received widespread attention in the domestic market. At the same time, we must recognize the fact that our community O2O model is still in the exploratory stage without a complete business theory system. And there is still much uncertainty in the maturity, stationary, explicability of the business model. At present, the existing community O2O model includes community O2O model dominated by the e-commerce enterprises-, physical retail enterprises and the logistics enterprises. But long-term observation is necessary before we could make qualitative judgments on which one is better. For all the prosperity of the community O2O model, we must maintain an objective and clear understanding of the status quo of its development. Firstly, it is unfeasible for us to completely copy the initial success of community O2O model in the United States, Japan and Taiwan, China. Secondly, there is some certain blindness in the rapid development of the community O2O model promoted by different types of enterprises in our country. A range of drawbacks and problems have emerged in the rapid growing community O2O model. Thirdly, the width and depth of the theoretical researches of community O2O model in our country are still not enough, and the mature business model has not been formed yet. In short, the community O2O model is still in the exploratory stage, and there are still various factors affecting the emerging network business model. Coupled by immature theory of our community O2O model, the possibility and feasibility of how to copy the successful practice is still undetermined.

1.1.2 Research Significance

1) Theoretical Significance

The emergence of O2O model has not only generated huge profits for business in the short term, but also provided consumers with exceptional experience. However, it also has led to a range of problems: mass homogeneous products have been produced as a range of enterprises in their attempts to seize the market; credit risks have emerged as e-commerce enterprises borrow a great deal of money from banks to achieve scales expansion; no strict supervision has been put in place by

relevant department as some unscrupulous business take the advantage of consumers psychology to set all forms of consumption traps. Therefore, it is of paramount and positive significance for the long-term development of e-commerce and the favorable competition of the entire industry to analyze the status quo and potential problems of O2O model development and to put forward corresponding countermeasures. At present, most researches mainly focus on B2C, C2C and other theories, and few will come down to this new model of O2O. Therefore, this thesis will expound the development of domestic O2O model of community e-commerce enterprises as well as the feasible method of reasonable model construction, and then reasonable prejudgment will be proposed based on the specific prospect of O2O model.

2) Practical Significance

The practical significance of O2O model can be concluded in the following two points: First, you can provide customers with a judging criterion through online and offline channels. In other words, consumers can compare the value of products selling in the physical store and online shops and then make a choice upon their preference. In this way, customers can obtain the products they like while saving a great deal of money. Comparing with the traditional trading model, information flow can help customers receive the information of physical products and prices before entity or value exchange and trading has been achieved, thus facilitating the entity and value flow of products that in line with consumers demands and with practical value. Obviously, it is prominent competitiveness as it has successfully cut down ineffective loss. Second, O2O can cater for consumer's demands and maximize their satisfaction with the help of large data. The traditional physical store, however, cannot achieve this goal, because it is very difficult for them to collect user data. However, a large number of consumers' personal information including user information, payment information, etc., must be provided in the process of delivery, which serves as an essential link of O2O model. With these data, enterprises can make precise judgments on the whereabouts of goods, the demand for goods, etc., which is conducive to reasonable deployment based on these characteristics, and greatly improve the efficiency of marketing. For individual O2O business, it is easier to analyze each of the consumer transactions based on the obtained order data, but it is very difficult for the offline business. Therefore, it is of paramount significance to conduct an extensive

study of the O2O model to break the information restriction of offline stores for goods to be displayed and traded at any time and in any place.

1.2 Research Purpose

The research purpose of this thesis are as follows:

1) to analyze the O2O operating model of the current domestic e-commerce and its characteristics;

2) to take Nanjing community as an example to expound consumers' subjective understanding of, expectation for, users' habits of and common problems in the daily operation of O2O;

3) to explore possible O2O model catering for community development and proposing feasible suggestions.

1.3 Research Scope

1.3.1 Scope of Content

The scope of content includes two aspects:

1) The O2O operating model of the current domestic e-commerce and its characteristics;

2) Consumers' subjective understanding, expectations, users' habits and common problems in the daily operation of O2O.

1.3.2 Scope of Area

The main area of the research are Baixia district, Xuanwu district, Qinhuai district, Jianye district, Pukou district, Liuhe district and Jiangning district in Nanjing city.

1.3.3 Scope of Duration

The duration of the research is mainly focused on mainly focusing on the emerging period of e-commerce (2000-up to now) from year 2000 to now.

1.4 Expected Results

The research has several expected results, which are listed below:

1) Figuring out the O2O operating model of the current domestic e-commerce and its characteristics;

2) Analyzing consumers' subjective understanding of, expectation for, users habits of and common problems in the daily operation of O2O;

3) Concluding possible O2O model catering for community development and proposing feasible suggestions.

CHAPTER 2

INTRODUCTION TO RELEVANT THEORIES
AND RESEARCH MODEL

2.1 Relevant Research Theories

2.1.1 Consumer Behavior Theory

Consumer behavior refers to the act of finding, purchasing, using and evaluating the goods or services required. The study mainly focuses on the various consumer psychology and behaviors of different consumers, as well as the underlying behind consumer psychology and behavior so as to reveal the laws of consumer behavior, including the dynamic factors of consumer purchasing and consumption, consumer's mental activity structure and behavior patterns, factors affecting consumer behavior and so on. In short, the study of consumer behavior mainly focuses on the formation and development law of various types of consumer behaviors. The main research framework are as follows:
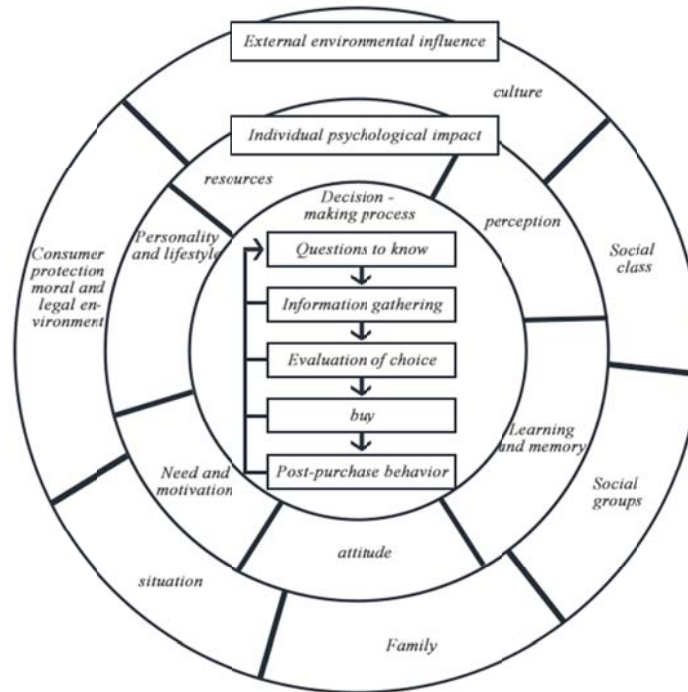
Figure 2.1 Main Research Framework of Consumer Behavior

Source: Wenting, 2014.

The theoretical basis of consumer behavior research includes Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Transaction Costs Economics (TCE), Theory of Planed Behavior (TPB), EBM model theory, Social Learning Theory, Risk Perception Theory, and Consumer Involvement Theory and so on. This thesis will focus on risk perception theory. In 1960, Professor Bauer introduced perceived risk into consumer behavior research to analyze consumer purchasing decisions and behaviors. According to the theory of risk perception, purchasing behaviors are viewed as a risk-taking behavior as consumers cannot figure out the result of their buying behavior when buying, in other words, consumers actually bear a certain risk. After the theory was proposed, many scholars have conducted a great deal of researches in this regard, mainly focusing on the nature, type, impact factors, measurement and strategies to reduce risks. In terms of the types of perceived risk, foreign scholars have conducted in-depth study. Some scholars classify the consumer's risk perception as financial, functional, psychological,

physical and social risks can be utilized to explain the above six risks. Therefore, the consumer perceived risk research would mainly be carried out from the following six aspects: financial risks, functional risks, psychological risks, physical risks, social risks and time risks. Financial risk refers to the risks incurred when product pricing is higher than the actual value or economic losses arising from quality problems; functional risk refers to the risk that a consumer discovers that the goods or services they purchased do not have the desired performance or are not as good as that of another merchant; psychological risk refers to the risk of emotional damage as a result of emotional decision-making errors; physical risk refers to the risk that goods or services posing to the health or safety of consumers or others; social risk refers to the risk of consumers being ridiculed or alienated by others due to their wrong decision-making; time risk refers to the time wasted due to goods repairing and replacement.

The factors affecting consumer's decision-making is of paramount significance among a variety of research subjects. It refers to the process of implementing the optimal purchasing scheme and making comments after the analysis, evaluation, and selection among two or more options, which are driven by certain purchasing motives. It is a systematic decision-making process, including determining demand, forming purchase motives, selecting and implementing purchase options and post-purchase. There are two well-known models. The first is the S-O-R model, the "Stimulus- individual physiology, Organism – Response", which was proposed by the Reynolds in 1974. According to the model, consumer buying behavior is caused by the stimulus arising from the consumer's own physiological, psychological factors and the external environment. Consumers' decision-making and purchasing behaviors are as a result of the stimulus of a variety of factors. Another is the classic Engel model, also known as "EBK model" proposed by Engel, Kotla and Kleb Weir in 1968. It was believed that outside information affecting by tangible and intangible factors was input into the central control system, which causes consumers to discover, notice, understand and memorize, and to filter and process based on personal experience, evaluation standard, attitude and personality stored in our brain and finally to produce decision-making scheme after the selection and assessment. A range of factors including income, culture, family and social status may affect the entire process of decision-making, research, evaluation and selection. After products

or services experiences, consumers will come to the evaluation and comments, and this conclusion will enter the next consumer activities as feedback to affect future purchasing behaviors. This mode is shown in Figure 2.2.
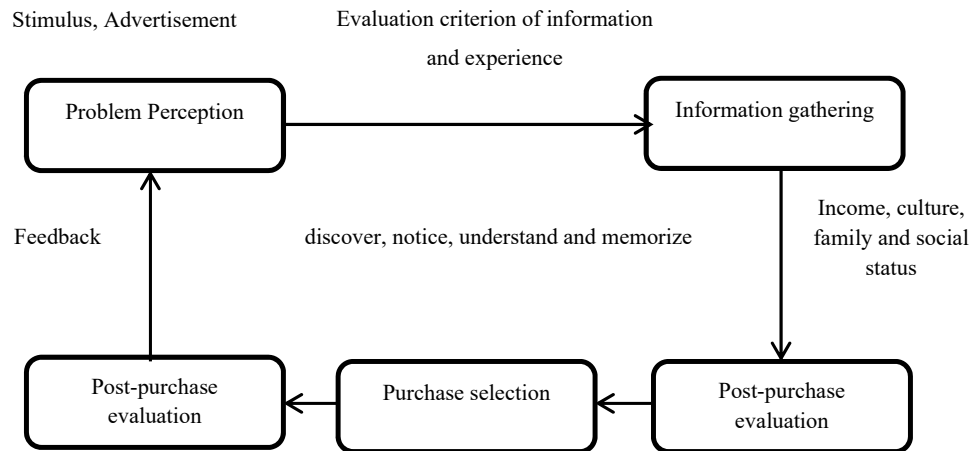
Figure 2.2 EBK Model

Sources: Yixiang, 2013.

2.1.2 O2O Model Theory

Domestic and foreign scholars have conducted extensive studies on the model. According to their research, model is a very complex organic system composed of many elements, which includes products, services and even the information between products and services. In other words, the model is a complete framework integrating product, services and information. Timers proposed the definition in 1998. After that, Applegate (2000) put forward different understandings on this basis. He redefined the framework elements of the model as ideas, abilities and values, and elaborated the interrelated relationship among them, which is a generalization of business structure from complex to simple. Subsequently, two famous scholars Weill and Vitale (2001) re-examined the predecessor's theory and work, and introduced all participants involved in the market to form a comprehensive analysis of marketing factors. Morris et al. (2003) pointed out that the model can be divided into three categories: economic categories (enterprises economic structure, namely the logic of enterprises profitability), operational categories (enterprises operational structure, focusing on the

internal processes and structure problems), strategic categories (mainly the overall development route of all types of enterprises, involving enterprises market positioning, competitive advantage and its sustainability). As the concept of the theory has been further developed and the connotation to be extended, the famous economist Oster Alder put forward a model framework consisting of 9 factors based on the core elements of enterprises development proposed in 2005. The model framework takes partnership network as the development trigger, views value proposition and value structure as the development ideas, regards products cost structure and distribution channels as marketing methods, and considers target customers and customer relationships as the standing points and sees core ability and income pattern as marketing methods. In China, some scholars have conducted further studies on this basis. Among them, Yuan Lei pointed out that the understanding level of this model was processing from simple generalization to comprehensive theory in 2007. He also held that the development of the model was more like a logical evolution from low-end to high-end, from chaotic to orderly. Ming (2015) analyzed the demand transmission of O2O model applications between users and enterprises. The user's needs are conveyed by means of O2O, and the O2O platform delivers the value to the offline enterprises, thus connecting the value transmission of physical products and virtual ones between offline enterprises and users which can be shown as follows:

O2O electric business company

Customer needs

Commercial value

Consumer

Online feedback and word of mouth marketing

Local line enterprise

Offline service and experience
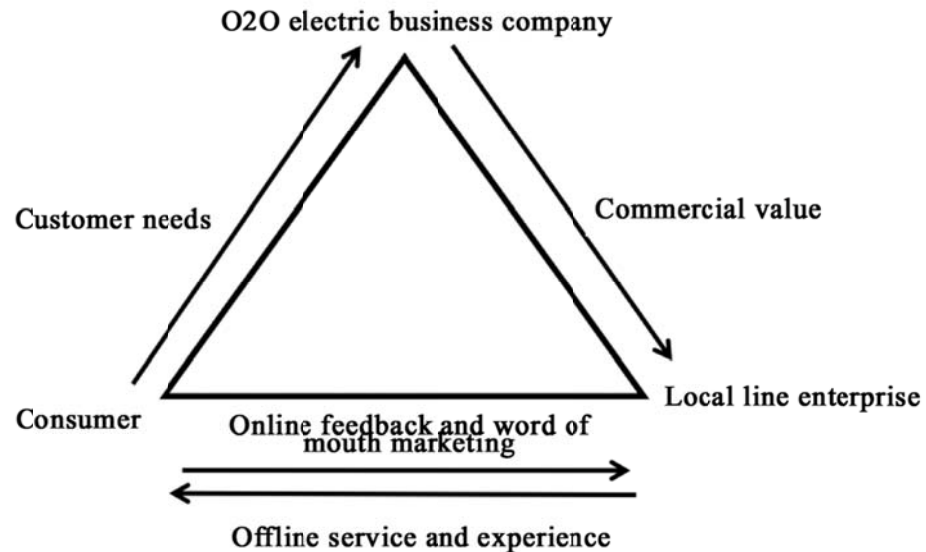
Figure 2.3 O2O Model
Sources: Ming, 2015.

Alex Rappel officially put the concept of O2O forward in August 2011 on a guest article in Tech Crunch. As it put that O2O (Online to Offline) has successfully achieved the effective combination of offline physical business and network and made network the first of strategic pass of a variety of transactions. It also provided offline enterprises with the opportunity to attract consumers through online channels; meanwhile, consumers can select and evaluate goods or services online, which in turn attracts consumers to access offline store experience. In this way, O2O can help to achieve the double settlement, improve consumers' experiences and expand enterprises scales in a short term. Suppose there are two kinds of retail channels in the market, one is the network retail channel (hereinafter referred to as "network channels"), which means boosting the product sales through online retail stores; the other is the new O2O physical retail channels (hereinafter referred to as "O2O physical channels"), which refers to achieve offline physical stores transaction and services by displaying products online. Assuming that the two channels operate independently and sell homogeneous goods, the network channels and the O2O physical channels can order from either the same suppliers or different suppliers. The ordering prices are agreed with the suppliers independently by the two channels. And

price, channel services, delivery time and travel costs have been confirmed to be important factors in customer's channel selection. The offline services provided by O2O physical channels include staff shopping guide, auxiliary orders, after-sales services and other offline experience, while those of the network channels include product information display, online consultation and after-sales services. O2O physical channels require customers to consume in stores, which would incur travel costs, while network channels are free of travel costs. if O2O physical channels and network channels involve in price competition, both would suffer losses in profits. Neither can benefit from the competition. As the price of O2O channel is significantly declining to the same level of those of physical channels, while the operating costs of O2O physical channel is much higher than that of network channel, it is impossible for the O2O physical channels, which has already in the brink of loss, to continue to compete in the market with price reduction. Although the operating cost of network channels is lower than that of O2O physical channels, the network channels cannot gain profits from the early price competition effectively. Therefore, the network channels and O2O physical channels will maintain the same price or similar situation. Compared with the network channels, O2O physical channels have some advantages over network channels in the aspects of physical store shopping guide and on-site experience. If the services advantages could be given full play, O2O physical channels can get rid of long-term losses as a result of low-cost strategy and improve customer acceptance with personalized services. Consumers with relatively low service sensitivity generally have higher price sensitivity. Therefore, they will be more willing to choose channels with lower costs, thus resulting in lower channel gross margin. If the channel does not have a higher sales volume, low-cost strategy will make it difficult for channels to make profits. On the contrary, customers with higher service sensitivity are less sensitive to price, and they will be more willing to pay more for better services and prefer to choose the channels with reasonable price and qualified services. It is generally believed that the price in network channels is lower than that in the traditional physical channels. And the profit margins of network channels are actually lower than those of the traditional physical channels. In order to maintain relatively higher sales volume to ensure profits, mature network channels will demonstrate the features of "big can of whoop ass". In other words, they will

establish the market inertia scales in the early stage, so that the huge customers traffic will bring them lower procurement cost than that of their competitors. At that time, they would adopt slightly lower prices than that of their competitors to form a vicious competition, thus defeating competitors in terms of scales. It is nearly impossible for O2O physical channels to win over network channel if only low-cost strategy be adopted in their competition. Therefore, it is urgent for O2O physical channels to target at customers with higher service sensitivities, employ integrated strategies taking prices and services into consideration to establish services advantages, and to reduce the loss risks as a result of low-price strategies.
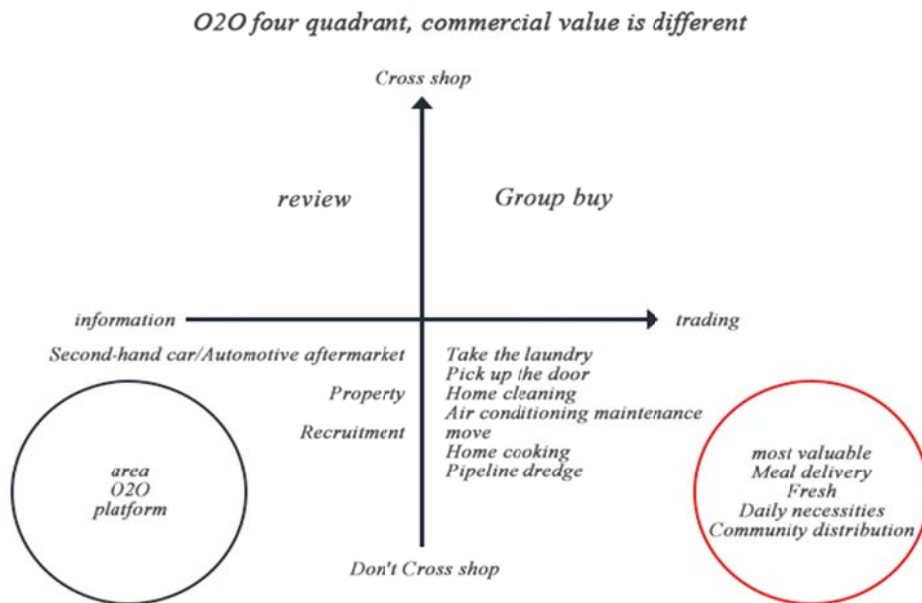
Figure 2.4 O2O Quadrant
Sources: Chang, 2015.

Typically, mature network channels have established stable, efficient logistics systems so that orders distribution can be completed within a short time, which has always been the advantage of network channels compared to the traditional physical channels. The non-immediate purchasing features of O2O physical channels determine that its order distribution must rely on logistics, which cannot be inferior to that of network channels. Although the business operating cost of O2O physical

channels are lower, there are some obvious disadvantages, such as small store size, limited radiation range, the type of goods, prices and sales will be restricted by the characteristics of community customer groups. As a result, it is essential for O2O physical channels to choose distinct products catering for the demand of community residents instead of generic products. Moreover, O2O community needs to take prosperous business districts which boosts large radiation range, sufficient customers traffic as their foothold. Customer will usually buy all necessary products at one time in prosperous business districts so that travel costs can be shared with other products. Meanwhile, customers can form a better understanding of O2O physical channels and the products they sell. As a result, channel visibility can be improved and customer acceptance of the channel can be boosted. However, there are also some disadvantages, such as the high business operating cost in shopping district and the risks of products without distinct characteristics being overlooked by customers among a full range of goods.

2.1.3 Asymmetric Information Game Theory Model

Game theory refers to a mathematical theory primarily concerned with determining an optimal strategy for situations in which two or more participants are involved. It is a kind of theory to study interactive decision-making. By analyzing the trade-off between itself and the other party, one can choose the behavior, which makes him dominant in the game. Therefore, the game theory model can help the game party to analyze the situation so as to take corresponding strategies, and ultimately obtain victory. According to the sequences of participates' actions, it can be divided into two types: static games and dynamic games. Static game refers to a game where participants take actions simultaneously or the latter game player is unable to know the detailed actions of the first player. Dynamic game refers to a game where participants take actions successively, and the latter player can know the choice of the first player. According to the information they gained, it can be divided into complete information game and incomplete information game. In general, what we call complete information game is a game where participants are aware of all the benefits of the other participants. While complete information game refers to a game where the participant cannot fully understand the benefits accurately or cannot

understand the benefits at all or cannot understand the benefits of all the participants. Based on the four-dimensional quadrant, game can be classified into the following four types: static game of complete information, dynamic game of complete information, static game of incomplete information and C

Table 2.1 The Category of the Game

Category	Static Game	Dynamic Game
Complete information	Static game of incomplete information Nash-Equilibrium	Dynamic game of complete information Sub game Perfect Nash Equilibrium
Incomplete information	Static game of incomplete information Bayesian Nash Equilibrium	Dynamic game of incomplete information. Perfect Bayesian Nash Equilibrium

Sources: Wenting, 2014.

Throughout the development of game theory, Harsanyi extended the Nash equilibrium from complete information to incomplete information, and created the research field of incomplete information game. He introduced the probability model on the basis of existing game classification to complete the transformation of incomplete information, and transformed the "incomplete information game" into "the complete but imperfect information game". Participants who take actions later in a dynamic game can obtain sufficient information about the previous participants and the participants who know the game beforehand are called the "perfect information game players". If all the participants have perfect information in a game, then the game is called "perfect information dynamic game". The participants who are not fully aware of previous game in a dynamic game are called "imperfect information game players" and the game is called "imperfect information dynamic game."

1) Game Theory and Hypothesis

The imperfect information dynamic game is an effective means to analyze online shopping. In network transactions, consumers and enterprises behaviors won't occur at the same time, that is to say, the information between consumers and enterprises, and the information among enterprises is not symmetrical. Therefore, it is imperfect information dynamic game. Suppose e-commerce enterprises in the consumer market should be divided into two categories: one is the traditional online consumption, that is non-O2O enterprises where consumers can only learn the product quality and enterprises reputation through the pictures and text description; the other is O2O e-commerce enterprises model where consumers can access real products so as to reduce the degree of asymmetric information and enhance consumers' confidence in their consumption behaviors. The offline experience includes tangible goods and intangible services. Tangible goods are usually clothing, shoes, electronic products whose quality can be examined offline via certain technique devices before being paid. While intangible goods, typically services are generally paid on the Internet and then go to the store for consumption.

The specific model parameters are as follows:

Pa: to offer the price of a single commodity with true quality information; Pb: to offer the price of a single commodity with false quality information including exaggerating of the nature of the commodity by referring the pictures of other goods, etc; Va: to offer the utility of a single commodity with true quality information; Vb: the utility of a single commodity with false information and the utility provided is more that that of a commodity with true information; Ca: to offer the cost of a single commodity with true quality information; Cb : to offer the cost of a single commodity with false quality information; Cd: to offer the cost of a single commodity with product experience, namely the cost of physical store, Wi-Fi, staff training and some other basic facilities. C: to offer the total cost; R: the risk cost related to customers' purchasing behaviors.

2) The Elements of the Game

(1) Game players: e-commerce enterprises, network consumers.

(2) Action set: the action set of e-commerce enterprises in the first stage is (O2O enterprises or non-O2O enterprises); the action set in the second stage

is (true information or false information), and the consumer action set is (believe or do not believe).

      (3) Sequences: not simultaneously, that is enterprises act first and online consumers act afterwards.

      (4) Game strategy: the strategy of e-commerce enterprises (O2O model, true information), (O2O model, false information), (non-O2O model, true information), (non-O2O model, false information) O2O mode, believed), (O2O mode, do not believe), (non-O2O mode, believe), (non-O2O mode, do not believe)

      (5) Revenue function

      The benefits of e-commerce enterprises (non-O2O model, true information, believe) = P_a - C_a; Consumer benefits (non-O2O model, true information, believe) = V_a - P_a;

      The benefits of e-commerce enterprises (non-O2O model, true information, do not believe) = -C_a; Consumer benefits (non-O2O model, true information, do not believe) = 0;

      The benefits of e-commerce enterprises (non-O2O model, false information, believe) = P_b -C_b; Consumer benefit (non-O2O model, false information, belief) = V_b -P_b -R;

      The benefits of e-commerce enterprises (non-O2O model, false information, do not believe) = -C_b; Consumer benefits (non-O2O model, false information, do not believe) = 0; (O2O model, true information, believe) = P_a-C_a-C_d;

      Consumer benefits (O2O model, true information, believe) = V_a-P_a; (O2O model, true information, do not believe) = -C_a-C_d; Consumer benefits (O2O model, true information, do not believe) = 0; (O2O model, false information, believe) = P_b - C_b - C_d; Consumer benefits (O2O model, false information, believe) = V_b-P_b; (O2O model, false information, do not believe) = - C_b - C_d; Consumer benefits (O2O model, false information, do not believe) = 0;

      (6) Information transfer: Suppose that in the game of selling a piece of goods or a kind of service, e-commerce enterprises will decide whether to provide an offline experience for the goods sold in the first stage. In other words, they will choose an operating model from O2O and non-O2O, which consumers can fully understand; In the second stage, enterprises will decide the authenticity of product

quality description which consumers can not fully understand; in the third stage, consumers will choose to believe the information provided by e-commerce enterprises or not.

　　　　3)　Operating Mechanism

　　　　E-commerce enterprises in the consumer's market will take actions first to choose an operating model (O2O or non-O2O), which can be observed by consumers, and then enterprises will choose to provide true or false information, which is difficult for customers to observe, and finally consumers will decide whether to believe or not. As shown below:
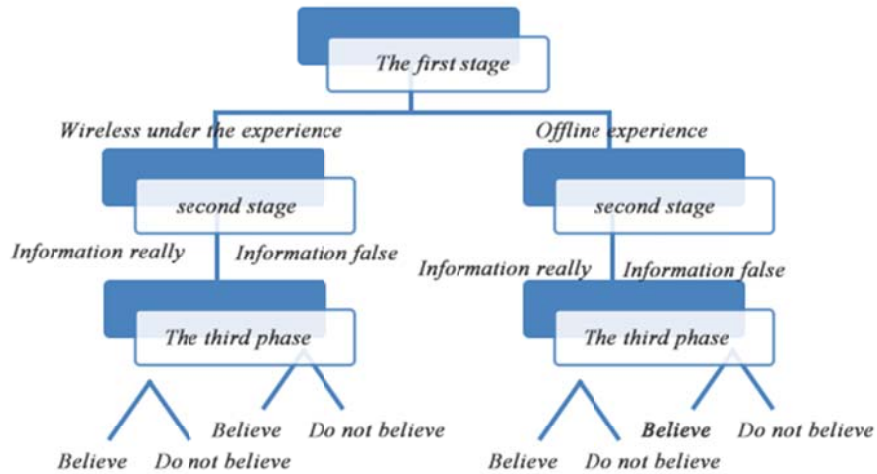
Figure 2.5 The Game Model of E-commerce Enterprises' Decision-Making

Sources: Wenting, 2014.

Note: A =Pa-Ca,　B=Va-Pa,　C=-C a,　D=0,　E=Pb-Cb,　F= Vb-Pb-R,

　　　　G= -C b,　H=0,　I=Pa-Ca-Cd,　J=Va-Pa,　K=C a-Cd,　L=0,　M=Pa-Ca-Cd,　N=Vb -Pb,　 = -C a-Cd,　P=0

According to the game between customers and O2O e-commerce enterprises as well as Non-O2O e-commerce enterprises in the judgment on true or false information, we came up with the matrix of game profit below.

Table 2.2 The Matrix of Game Profit

Category	Probability	Consumers	Non-O2OE-Commerce Enterprises	
			The Probability of True Information q	The Probability of True Information1-q
O2Oe-commerce	The probability of true information P	Believe t	(I, J),(A, B)	(I, J),(E, F)
		Do not believe 1-t	(K, L),(C, D)	(K, L),(G, H)
	The probability of false information 1-P	Believe s	(M, N),(A, B)	(M, N),(E, F)
		Believe 1-s	(O, P),(C, D)	(O, P),(G, H)

Sources: Wenting, 2014.

The researcher analyzed O2O enterprises and Non-O2O enterprises based on the above model:

1) O2O Enterprises

In the first stage of the game when e-commerce enterprises choose to provide offline experiences as an O2O enterprise, customers can recognize to a large degree the authenticity of the information provided in the third stage before they make decisions, as customers can know enterprises' choice. Therefore, most customers won't purchase the products selling by enterprises providing false information. In other words, the probability (1-s) that customers choosing not to believe will reduce to a number close to 1 as a result of information asymmetry, and the probability of

choosing to believe (s) will close to 0, therefore the profit of choosing to release false information will be

$R_1 = (1-s) * (-Ca - Cd) + s * (Pa - Ca - Cd)$, $(1-s)$ is approximately equal to 1, far less than that of releasing true information $R_2 = (1-t) * (-Ca - Cd) + t * (Pa - Ca - Cd)$. Therefore, the probability that enterprises release false information (p) is approximately equal to 1 while the probability that enterprises release true information $(1-p)$ to 0. As a result, enterprises will generally public true information and ensure product quality. That being the case, the profit expectation that customers choose O2O enterprises will be

$$E_1 = (1-p) * [(1-s) * P + s*N] + P*[(1-t) * L + t* J]$$
$$= (1-p) * [(1-s) * 0 + s*(Vb-Pb)] + P*[(1-t) * 0 + t*(Va-Pa)]$$
$$= (1-p) * s *(Vb-Pb) + p* t *(Va-Pa) \qquad (2.1)$$

If $E_1 > 0$, consumers will choose to purchase because when $(1-p)$ approaching to 0, t will approach to 1, E_1 is approximately equal to $(Va-Pa)$. Supposing customer's profits are over 0, we can call it a successful market transaction because Va-Pa ensuring the product utility over product price. Consumers will be satisfied with the product and the probability is approximately equal to 1.

2) Non-O2O Enterprises

When non- O2O enterprise choose to provide false information and consumers choose to believe in the second stage, the profits gained by consumers is Pb-Cb and consumers profit is Vb-Pb-R. Assuming if consumer profit is more than 0, that can be counted as a successful deal, that is R<(Vb-Pb), However, with consumers expectation for products become higher, the risk cost R will increase and consumer profit will be decrease and even below 0, in other words, consumers are not satisfied with the products. At that time, with the increase of consumer risk cost R, consumer expectation will increase correspondingly. If you want to increase the purchase risk cost R while making consumers complete their consumption, you must improve product quality so as to meet customer's expectation.

When Non-O2O enterprises choose to provide true information and consumers choose to believe, the enterprise profit is Pa-Ca, and customers profit is

Va-Pa. Assuming if consumer profit is more than 0, that can be counted as a successful deal, that is Va >Pa. When Va >Pa, consumers will choose to purchase. If enterprises choose to provide false information, the profit is $W_1=(1-s)*(-Cb)+s*(Pb-Cb)$, If enterprises choose to provide true information is $W_2=(1-t)*(-Ca)+t*(Pa-Ca)$, In the third stage, when consumers choose O2O enterprises, the profit expectation is $E_2=q*t*(Va-Pa)+(1-q)*s*(Vb-Pb-R)$, when $E_2>0$, consumers will choose to purchase.

3) The Operation Mechanism of Game Theory Analysis

The O2O model can be used to analyze the asymmetry of information consumption, reduce the risk perception of consumers, enhance the customer value and consumption intention, and analyze the advantages and problems of the operation mechanism based on game results.

First of all, from the perspective of favorable market development, when the supplier chooses not to provide an offline experience to become a non-O2O firm, it compares the benefits of the business choosing to publish real information and post false information. In the case of Pa> Pb, when Pa-Ca <Pb-Cb, more and more businesses choose to introduce inferior goods, provide false information, and the market's serious information asymmetry worsened the credibility of the business issues, and because of the difficulty of legal supervision and low cost of fraud and other reasons, to provide false information costs little and thus the vicious cycle of the whole market will form a lemon effect. When a merchant chooses to provide an offline experience as an O2O business, the merchant will know how to make the selection in the second stage, so that most consumers will not buy the merchandise that provides the false commodity information. The merchant chooses to publish the false information (1-p) is close to 0, that is, the business will generally choose to publish the real information and the probability of publishing real information is close to 1, and the probability of releasing the false information is close to o, which means the merchant will release real information to maintain the quality of goods, and promote the healthy development of the market.

Second, from the perspective of winning consumers, the profits expectation for consumers selecting O2O e-commerce enterprises:

$$E_1=(1-p)*s +(Vb-Pb) +p*t*(Va- Pa) \qquad (2.2)$$

The profits expectation for consumers selecting non-O2O e-commerce:

$$E_2=q *t * (Va-Pa) +q *s *(Vb-Pb-R) \qquad (2.3)$$

When consumers believe the risk cost R is relatively high, while the false information in the traditional e-commerce markets is still a pronounced problem, consumers will be more likely to choose the O2O enterprises with higher probability of profits.

At last, from the perspective of O2O profits, assuming the number of consumers selecting O2O e-commerce enterprises is N_1, then the total profit of O2O e-commerce enterprises is :

$$N_1*[R_1*(1-p) +R*p]\approx N_1*R*p\approx N_{1*}R\approx N_1*t *(Pa-Ca-Cd) \approx N*(Pa-Ca-Cd)>0$$, namely $N_1*(Pa-Ca)> C$, Therefore, only when consumers with enough consumers or enlarge the profits, can O2O enterprises take back the investment in the early stage and generate profits.

2.2 Theoretical Framework of O2O

After summarizing the above theories, this thesis summarizes the content of O2O model based on specific characteristics of the O2O website to form a self-defined consumption decision-making model and theoretical framework, as shown in Figure 2.5 below:

1) Demands confirmation. Consumers' purchasing demands can be divided into two types: one is an idea generated by certain practical requirements, and the other refers to the purchasing desire due to the stimulation of external information.

2) O2O conversion motivation. After confirming the demand, consumers will obtain the information through internal and external search, and process the information to further confirm the demand. O2O conversion motivation refers to the motivation of online purchasing and offline consumption as a result of information

search. According to the study of the reliability of the information sources, the O2O conversion motivation mainly includes attraction and reliability.

3) O2O purchase intention. It refers to the wishes or possibilities that consumers buy products or services in O2O website. After collecting relevant information, consumers will assess possible options based on this information, and finally choose one as the final purchase decision in several possible options.

4) Purchase options. After evaluating different possible options, consumers choose one of them and take the purchase action. In O2O decision-making model, purchasing choice refers to online booking and transaction.

5) Use and evaluation. Consumers go to the offline physical store for consumption with some kind of certificate, and make an evaluation of offline physical stores in the aspects of services, quality, environment, etc.

6) Disposition. If consumers are satisfied with the services, it will strengthen the consumer experience, which will have a direct effect on the next consumption. If not satisfied, consumers will be paying more attention to information search and program evaluation or give up this purchase in the next purchasing process.
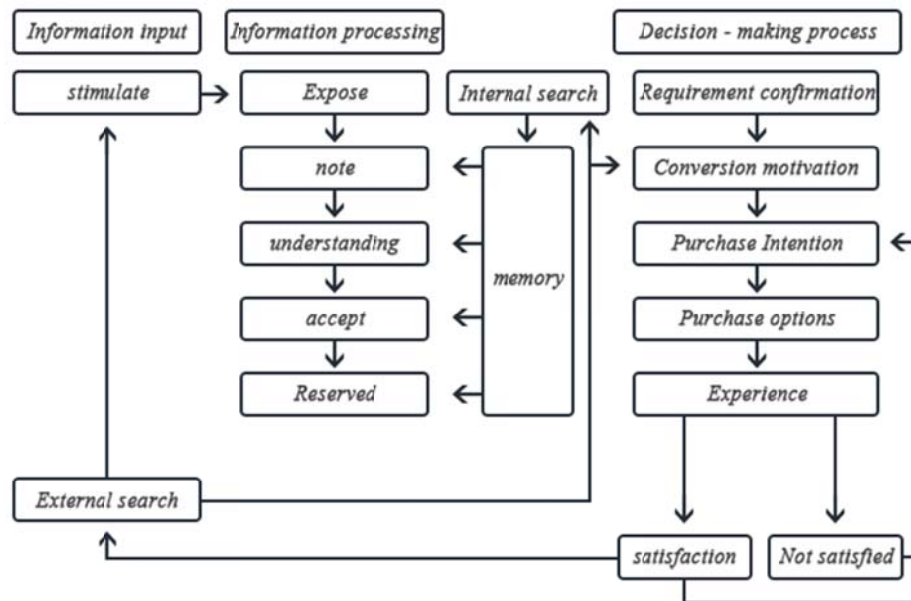
Figure 2.6 O2O Decision-Making Process Chat

Consumer's selective expectations for O2O are based on consumer's behaviors. It is a process of trial and error. Only by investigating the factors influencing these processes, analyzing the factors influencing the choice of enterprises and consumers in specific O2O operating and summarizing the gap between the subjective willingness and the actual demand, can we really understand the game of O2O among consumers, merchants and logistics, and finally can we form the O2O model suitable for community development.

2.3 Literature Review

The core of O2O lies in attracting online customers to consume in real stores. It is a combination of online payment with offline store experience, a discovery mechanism that leverages the advantage of the online platform to promote offline transaction. Initially, the concept of O2O was introduced to China in group purchasing and e-commerce marketing campaign focusing on life service. Later, the model has become increasingly popular among the traditional retail and e-commerce industries: Amazon, eBay and other foreign e-commerce giants have started to establish real stores; the domestic SF Express has opened 518 "Hey guest", the retail store of its network service community nationwide in May 2014 to dock offline services to online services. It is expected that the future market will boost tremendous potential with the wider popularization of the network economy, further interaction and integration of online and offline services. O2O means broadening the marketing channels and tapping new opportunities. To maximize the efficiency of O2O model, both the physical channels and the network channels are essential. On the one hand, the former needs to direct customers to the real stores by expanding network channels. On the other hand, the later needs to improve their consumer experience, enhance service quality and boost brand image by expanding physical channels. The O2O model of the physical channels generally does not produce new channels, but directly establish network channels by virtue of the mature technical resources and huge customer traffic provided by existing e-commerce platforms. O2O path of the network channels need to seek new physical channels, generally by establishing new entity stores, whose main function is to display the characteristics of the service rather than

the sales. This is a different channel from the traditional ones and will be called O2O entity channels in this article.

2.3.1 Foreign Related Research

Foreign research in this field largely started from the early 20th century, which mainly focused on the factors that influence the development of e-commerce, including the consumers' gender, income level, the degree of trust in network security, price sensitivity and so on.

1) First, let's see it from the perspective of consumer psychology. As early as 1999, Robert had conducted careful analysis on the situation of collective bargaining systems as well as its specific effects on macro-economy regulation. He also put forward explicit strategies on the basis of the above-mentioned research. The later studies also found that price, product cycle and customers' actual demands stand to be the three major factors that play in the group purchasing spree emerging along with the internet e-commerce. Kim and Benbasat (2009) employed Technology Acceptance Model that combines Internet and a technology acceptance model using the Internet and self-perception to examine whether socioeconomic characteristics, age, gender, and income level affect their online shopping behaviors. Krishnan and Aron (2003) studied the price mechanism of online group purchasing generated under B2B and B2C models according to the analysis model, and compared the influence of the two different price mechanisms on profit so as to make corresponding production and pricing decisions. Lai, Doong, and Yang (2006) analyzed the effect of market price on buyer in group purchasing and concluded that the level of price directly affected the level of consumer willingness to participate in group purchasing. Kauffinan, Lai, and Ho (2010) suggests that the price is not the only factor influencing consumer's decision. As he concluded, fairness is also an important factor that needs to be considered. Chiang believed the network channels established by manufacturers themselves are more symbolic than significant as even if the sales of network channel is 0, it can also constrain the pricing of sellers to reduce the marginal effect of double pricing. Cai divides customers into two categories: loyal to band and loyal to manufacturer. He also designs a scheme maintaining consistent price for both channels to reduce the conflict arising in two channels. Fu concluded that customers'

choice of channel depends on their acceptance of network channels and their travel costs, and he pointed out that establishing offline direct channel under Stackerlbeg's model would be the optimized option. The above analysis reaches the conclusion that price, channel services, delivery time and travel costs also at play in customers' choice of channels which in return influence the structure, pricing and profits of channels structures.

   2) Second, let's see it from the perspective of game theory. Zhu (2004) held that considerable transaction data can be retrieved on the internet, thus contributing to an e-commerce market with more transparent data. He also proved that open, shared online information might not always be beneficial for enterprises involved, instead it might be a double-edged knife. Leng and Parlar (2005) pointed out that charge-free delivery services has already emerged as an effective device as it refers to attracting and retaining customers who would lured by exemption from postage to purchase more in e-commence environment.

2.3.2 Domestic Research Progress

  At present, the research in this field mainly focused on the following aspects: O2O e-commerce model and the integration of e-commerce and a range of cooperates. The former is represented by Shi Chunjia (2013), Xu Xiaoqing (2014), Tang Guiwu (2014), Zhang Tianming (2015), Li Haolin (2015), Wang Ming (2015), Li Shenghong (2015), Wang Shiqian (2015) and Wei Lu (2015). And the later is represented by Jiang Jinxiao (2014), Jiang Xiaomin (2014), Sun Jiali (2014), Xiao Feng (2014), Chen Jing (2014), Liu Xiaohong (2015) and Chen Lu (2015).

  Since the emergence of O2O in 2011, domestic research in this field continues to deepen with the number of thesis published by the Institute increasing year by year. As of July 5, 2016, the total number of thesis published reached 32,868 in 2015 with as many as 14896 published in 2015 alone. The detailed numbers are as shown in Figure 2.7 below:
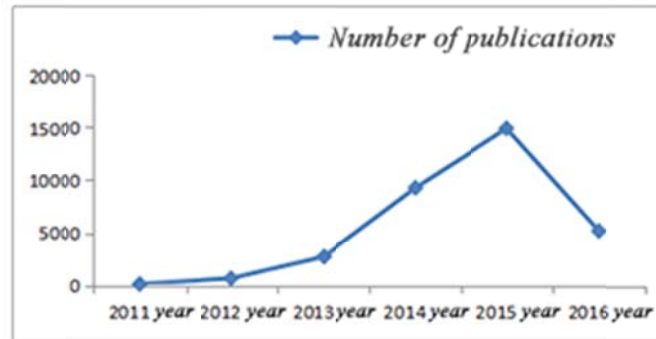
Figure 2.7 The Number of Research Thesis on E-commerce Published
Source: CNKI.

The concept of O2O hadn't attracted the attention from domestic academic circle until it was put forward in 2010. And most of its research focused on the O2O integration between traditional physical channels and network channels, the development of B2B and C2C as well as O2O development mode are as follows:

1) Firstly, let's go to the study of O2O electricity supplier model.

The first level is to compare it with the traditional electricity business. For example, proceeding with marketing content, conditions and capacity, Chunjia (2013) conducted the SWOT analysis on the marketing environment of company M from the perspective of business operations, the changes of products and upstream supply chain, service management and logistics support so as to enable the O2O marketing model of the company Xiaoqing (2014) summarized a range of domestic and foreign literature, and utilizes the research results of many experts and scholars on the operation of supermarket chains, experiential marketing and O2O. With the help of a random survey, he concluded the problems arising from the operation of supermarket chains. Guiwu (2014) made a qualitative analysis. He uses SWOT analysis to analyze the internal and external factors of O2O in China, thus constructing the SWOT quadrilateral for further analysis. Shasha (2015) for the first time put forward the factors that affect the connotation of the O2O model and makes an extensive analysis on the factors that restrict the current development of the O2O model based on the current situation. Tianming (2015) focused on the problems related to the construction of O2O model in e-commerce company community. Based

on the case analysis of the O2O model of Jingdong Group, he intensively discussed the development route, successful practices, possible problems and underlying causes in the process of implementing the O2O model in China's e-commerce communities. Haolin (2015) searches analyzed the recent literature about O2O model in CNKI in attempt to analyze the status quo of O2O model research, introduce the research focus of most experts in this fields and the current research progress by bibliometric method. Ming (2015) pointed out the existing problems by combing and summarizing the status quo of O2O e-commerce platform at home and abroad, and discussed the compatibility between the operating characteristics of home service industry and O2O e-commerce model, and proposed that an operating mechanism with "time management" as its core should be established in the e-commerce model of home service industry based on O2O model. Shenghong (2015) put forward the opportunities and challenges of online marketing and e-commerce based on an analysis of their development direction. She concluded that current development in chain retail enterprises shows a promising prospect, which will benefit of the further enhancement of the online-offline integration. Wang (2010) briefly described the O2O model and the development of retail O2O in China. In her studies, much emphasis has been given to the necessity of the transformation of retail O2O model and the possible difficulties and challenges that might occur in the process, which can be used as a reference for the O2O model of the traditional retail industry. Taking Hey Guest as an example, Lu (2015) analysis the advantages and potential challenges in the current operation of O2O community and gave targeted suggestions in this regard. Xiao (2015) explored the failure cases of O2O model in the field of fresh food industry and attempts to dig out the underlying reasons from the aspects of logistics distribution, target location, user habits, supply chain and standardization. By using chart of data collected both at home and abroad, she concluded the necessity for the development of O2O in the retail market of fresh food industry and proposed the possible O2O model and put forward some feasible suggestions.

2) Secondly, let's look at the integration of e-commerce with enterprises. Yixiang (2013) studies the O2O model in the furniture industry and constructs the consumers' decision-making model of furniture products purchasing under the O2O model. He also proposed a range of feasible recommendations for

furniture manufacturers and professional e-commerce platforms in their implementation of O2O strategy. Chunxiao (2014) explored the O2O marketing model in the business operation and management field of HY from three dimensions, thus putting forward several implementation strategies. Jintao (2014) comes up with insightful suggestions for Suning's cloud commerce model following a SWOT-CLPV study on its cloud commerce model. Yiyang (2014) found out the problems that hinder the operation of the tourism e-commerce in Henan province and proposed relevent suggestions and strategies. Xiaoming (2014) summarized the status quo of the leasing, consignment, joint operation and proprietary trading. In this thesis, the author put forward the basic structure of O2O model in general merchandise enterprises based on the four above-mentioned models following a comparison of the O2O model of Suning and Guomei. Jiali (2014) summarized the psychology and behaviors of online shoppers based on the O2O model of Yintai and concluded that the O2O model in general merchandise enterprises should be integrated with that of the traditional retail network. Jing (2014) proposed the function and limits of O2O model and gave some suggestion for enterprises based on an in-depth analysis on the O2O model of Suning combining the traditional retail and e-commerce retail model. Xiaohong (2015) focused on the case study of H company and discussed the different O2O model of three company of J, K, Y. He also pointed out the necessity of accelerating the transformation of business thinking, putting in place a complete credit system in a comprehensive manner and laying emphasis on the developing of the third-party software for a payment environment with high security and efficiency that in line with the current healthy e-commerce environment under today's economic and political context. Lu (2015) analyzed and discussed the development of O2O e-commerce model with Didi, an online taxi-calling app, and predicted the research direction of O2O e-commerce model.

3) The third is about O2O technology. As for this aspect, Xiaohua (2014) introduced the concept and characteristics of O2O model, and then discussed the necessity of the traditional retail industry from the perspective of mobile Internet and e-commerce, and finally put forward the corresponding countermeasures for the development of the traditional retail enterprises. Yunqian (2014) discussed the connotation and application of O2O operation mode at present stage, thus coming up

with four types of O2O operation mode. She divided the retail business into different categorical and carefully explains the choices of O2O operation mode. Limin, Yan, and Lisha (2014) analyzed the operating mechanism of O2O model and explored the online and offline fusion and symbiosis strategies with a view to provide a useful reference for the transformation and development of China's retail enterprises. Jiao (2014) summarized the successful practice and experience in the development of community O2O model and proposed her own suggestion. Donglai (2014) analyzed and summarized the current situation of electronic business platform, the internet platform of merchandise information and shared the years of useful experience in informationization in the industry, thus reaching the conclusion that the definition and development process of the third generation of electronic business platform.

   4) Fourthly, let's see the problems and challenges arising in the current e-commerce operation. Junfei (2015) analyzed the application of O2O model in retail industry, and explored the advantages and existing problems of the development of O2O e-commerce model in the retail industry so as to formulate effective solutions to the problem. Based on the successful O2O model of e-commerce, Hongtao (2015) analyzed the shortcomings of e-business in O2O model, and further studies the strategy of electronic innovation under the guidance of entrepreneurship. Yaxing (2015) briefly described the development of the O2O business model, analyzed the situation of domestic and foreign electricity business and concluded the definition and extended connotation of O2O e-commerce model, thus summarizing the relation model of O2O business model and the Value creation.

   Secondly, let's focus on the research of consumers' psychology in e-commerce model.

   Wenting (2014) analyzed of the status of O2O development and found a range of serious problems such as difficulty in gaining profit, low customer viscosity, and degree of homogenization. Based on the analysis of consumers' psychology and behaviors features under the open internet economic environment, he concluded that it is essential for O2O e-commerce enterprises to achieve the smooth strategic transformation in their operation mechanism to one featured by lower customers' risks and higher customers' values so as to reduce the risk as a result of information asymmetry. Guiwen (2014) attempts to construct a logistics network with real stores

as its core by virtue of the advantages of the nationwide traditional retail enterprises. Systematic route plan analysis has been made to generate innovative solutions for the transformation of the traditional retail enterprises and the optimization of logistics network. Lei (2014) further analyzed the internal and external circumstances of O2O by exploring the strategy Suning adopted in the process of advancing its e-commerce and the route chosen by Suning in its strategic transformation. The extensive discussion on the advantages and disadvantages of O2O in the fiercely competitive retail market has led to some strategies and guidance for e-commerce retail enterprises in their business development. Hao (2014) carried out in-depth analysis on the causes of potential risks and possible negative effects based on the quantitative analysis of risk assessment by using metrics in combination of major strategies with recognition, assessment, risk management and consistent cooperate management included, and further proposed some strategies to improve risk management. Qiaoyin (2014) analyzed the literature on O2O model and customer loyalty, and supposes some factors affecting customer loyalty to O2O model. By virtue of questionnaire survey and data analysis, it is proved that the factors affecting customer loyalty to O2O model include transaction security, website quality, conversion cost, customer trust, consumer experience, online word-of-mouth and so on. And then she proposed several favorable suggestions for enterprises to retain customers. Youcheng and Dongqiang (2015) focused on the shortcomings of existing researches, summarized the characteristics of O2O e-commerce and analyzed the constitute factors and operation mechanism of O2O commerce model in combination of 3W2H business model. Chang (2015) summarized the operational characteristics of the O2O physical channels and constructs a decentralized decision model for the O2O physical channels and network channels. Based on variate affecting channel prices and profits with channel decisions, service quality, logistics time and travel cost included, he also analyzed the price competition of dual channels and service competition scheme.

Third, studies of the asymmetric information and game theory.

Hong (2010) believed that it is a common phenomenon that consumers are cheated by enterprises in the C2C market as a result of over-hyping, which hinders the development of the C2C market. Therefore, he created a complete information static game model, improved the information transparency of goods to further enhance

market regulation, thus reducing information asymmetry the C2C market. Xijun (2006) analyzed the game of profit and loss between buyers and sellers in transactions with or without intermediaries. It is concluded that information asymmetry remains a common phenomenon in a real deal; however, intermediaries can help to reduce it, for example, to reduce the energy cost of searching certain products or targeted consumers for enterprises by using professional information services. Na (2014) discussed the causes and future development of O2O model from the perspective of game theory. Given some characteristics of SMEs, she put forward several reasonable suggestions in this regard. Based on the DEA and SWOT analysis methods, Zhiyi (2015) conducted an extensive analysis in the following two aspects: Taking 46 listed companies in Shanghai and Shenzhen as examples, she explored and examines the efficiency of the listed companies by using data envelopment analysis; based on the theory of C2R and BC2 model, DEAP2.1 is used to calculate the technical efficiency, pure technical efficiency and scale efficiency of 46 listed retailing companies in 2012 and 2013; based on the Malmquist index model, he calculates the total factor productivity of the sample company and its decomposition. Yanhong (2015) elaborated the operating characteristics of the O2O model, the status quo of O2O development and the financing needs of O2O start-ups. On top of that, she also analyzed the impact of O2O capacity on the financing of start-ups from four aspects: business behavior, product design, organizational culture and operational support. And further analysis has been support by the financing cases of O2O start-up where the author works.

2.4 Other Related Literature

Foreign scholars have a head start in the research field of e-commerce model and a dozen years of development has yield to broad and in-depth research in this field. Taking the research on consumer's psychology as an example, in order to conduct research on consumers' behavior, they have formed certain models mainly based on gender, income level, trust in network security and price-sensitive degree. As for the game theory, they mainly focus on forming B2C, C2C and other business models as well as seeking solutions to achieve balance when asymmetric information emerges among businessmen or between businessmen and consumers. In China, however, little research is about O2O. A range of researches, largely based on phenomenon analysis and the comparison between traditional business model, just draw a blueprint or point out the challenges before us or give suggestions on how to provide more opportunities for the offline sale of O2O in other fields. Although there is a load of research literature themed on the consumer's psychology and information asymmetry of e-commerce, they mainly take mature B2C and C2C as their subjects. Still quite little research is conducted from the perspective of the game between consumer's psychology and information asymmetry or the analysis of the O2O model. Therefore, this article will focus on the O2O model in Nanjing community from the perspective of the psychology of consumers and enterprises as well as its game.

According to the analysis of both domestic and foreign research literature, we can conclude that foreign scholars focus on the combination of practical innovation and theoretical research with an emphasis on the conclusions of system specifications; domestic research progress faster, but it is less innovative, systematic and comprehensive compared with foreign research. We have to admit that there is still a considerable gap between domestic research and foreign achievements in this regard. However, both domestic and foreign literature focus on the study of technology, model and behavior itself, instead of the operation capacity of O2O model from the perspective of corporate financing. They also ignore specialized analysis and research on the operation capacity of O2O, which is also the focus of this thesis. At present, there are many in-depth researches and studies on supply chain management, risk management and supply chain risk management. The general view is that supply

chain risk management is at the intersection of supply chain management and risk management. With the development of e-commerce, there are a small number of scholars have conducted research on the supply chain risk of e-commerce and the main theoretical basis is supply chain management and risk management theory as well. In this thesis, we mainly study the problems and countermeasures of community shopping in O2O model. Apart from taking advantage of the results in supply chain management and risk management, we also employ the research of comprehensive quality management, project management and information system management in the research on community management in O2O.

The traditional B2C model of E-commerce is "electronic market plus logistics and distribution", with consumers staying in the office or at home. All they need to deal with is the courier. But the O2O model is "electronic market plus to-store consumption" and what they need to deal with is the customer flow. It can save operating costs, take the advantages of the Internet to deliver good services and experience marketing and to improve the credibility and turnover rate. For example: the core strengths of beauty chain franchise companies is to buy products for free trial of new products, but because it is Franchise, so it is only available for members of the regional service stores. The problem cannot be solved by B2C model. At the same time, for chain franchise stores, O2O model can successfully solve the online and offline conflicts of interest while B2C model is unable to avoid the online and traditional franchisee channel conflict, especially the price conflict.

In summary, we can see that the O2O model enjoys a broad prospect for development, but it is also obvious that the academic community and the business community still retarded researches and applications in the product, service, specific business model level. But O2O is not only a product of an industry, so their research has its industry restrictions, lacking of comprehensive insight and not really touching the macro trend of future development featured by the effective integration of online and offline aggregation, the traditional economy and the Internet economy. With its sales exceeding one trillion yuan in 2012, Alibaba has become the world's largest electricity supplier, which announced that the Internet economy and the integration of the traditional real economy has already begun. Therefore, the study of the

development of O2O model under new circumstances is of paramount significance to promote the integration of real economy and the Internet economy.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Framework

Based on the theory of community O2O theory (consumer behavior theory, information asymmetric game theory, O2O model theory) and the summary of domestic and foreign research in chapter 2, this thesis concludes the following research framework:
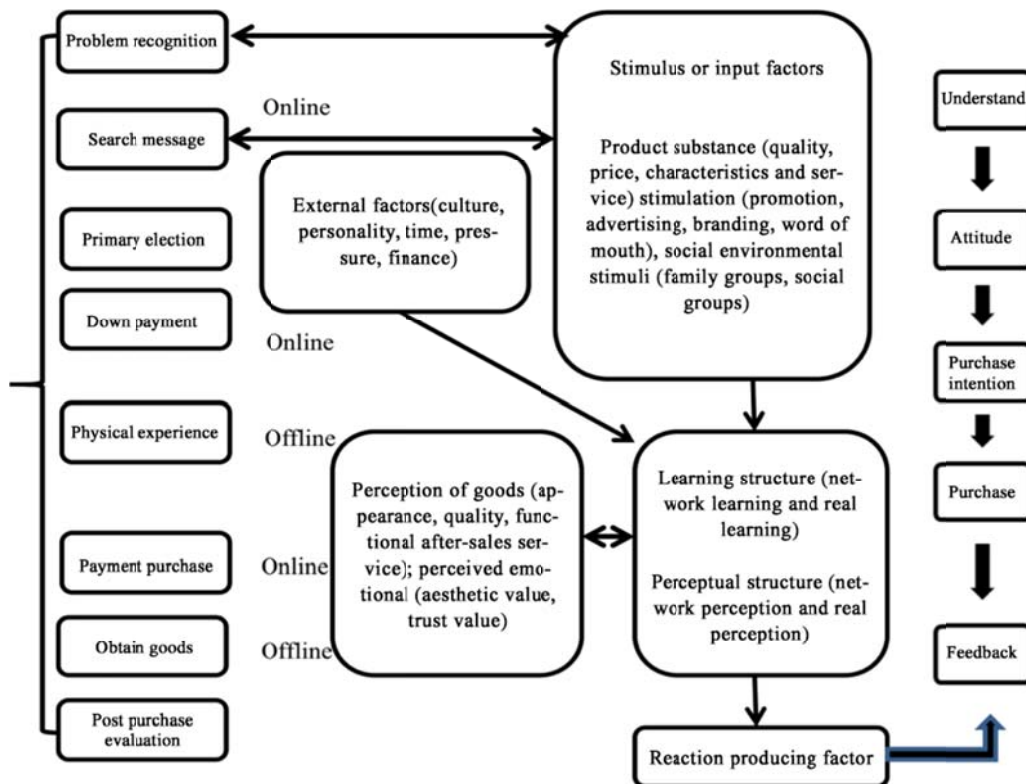
Figure 3.1 The Research Framework of this Thesis

3.2 Research Methods

3.2.1 Quantitative Research

3.2.1.1 Popularity Study

In Nanjing, there are a total of 11 municipal districts, 19 towns, 81 sub-strict offices, 774 community resident committees and 590 village committees. And the basic profile of the population as shown in the table below:

Table 3.1 The Population Profile in Nanjing's Administrative Region

District Classification	District name	Area	Total registered household	Total registered population	Permanent residents	Postal code	Government resident
Midtown Areas	Xuanwu District	75.2	13.8	51.08	65.2	210018	Meiyuanxincun Street
	Qinhuai District	49.2	25.9	71.96	100.49	210002	Wulaocun Street
	Gulou District	53.1	27.9	99.07	130.37	210009	Ninghailu Street
Southwest Areas	Jianye District	82.7	8	21.74	45.4	210019	Shazhou Street
	Yuhuatai District	134.6	7.7	21.8	39.13	210012	Yuhua Street
Jiangbei Areas	Pukou District	912.3	17.1	53.3	71.03	211800	Jiangpu Street
	Luhe District	1467.1	28.7	88.43	91.58	211500	Longchi Street
Southeast Areas	Qixia District	376.1	13.3	42.95	64.45	210046	Xianlin Street
	Jianning District	1572.9	30.6	90.91	114.56	211100	Dongshan Street

Table 3.1 (Continued)

District Classific ation	District name	Area	Total registered household	Total registered population	Permanent residents	Postal code	Government resident
Southern Areas	Lishui County	1067.3	13.9	41.05	41.09	211200	Yongyang County
	Gaochun County	792	14.2	42.17	42.43	211300	Chunxi County

Notes: Areas/km^2 , Total registered household/million, Total registered

population/10,000; Permanent residents/10,000

3.2.1.2 Sampling Method

Nanjing city can be divided into main districts (Baixia District, Xuanwu District, Jianye District, Xiaguan District, Qinhuai District, Gulou District, Yuhua District, Qixia District), suburbs (Pukou District, Liuhe District, Jiangning District) and suburban counties (Lishui County and Gaochun County), with a total of 692 communities. There are 64 communities and 2 village committees in Xuanwu District, 106 communities and 6 village committees in Qinhuai District, 43 communities and 18 village committees in Jianye District, 113 communities and 3 villages in Gulou District, 86 communities and 57 village committees in Pukou District, 84 communities and 132 village committees in Luhe District, 68 communities and 49 village committees in Qixia District, 53 communities and 17 village communities in Yuhuatai District, 124 communities and 75 village committees in Jiangning District, 27 communities and 91 village committees in Lishui County, 10 communities and 134 village committees in Gaochun County. Based on 692 communities in Nanjing, the author selected 65 communities at random to study the current situation of O2O, and the 65 communities include 40 communities in the main urban areas, 15 in suburb and 10 in county. The 40 districts in main urban areas have 4.5 million people, and the author selected 5 communities for each district in the main urban areas. Similarly, 15 districts including 2.6 million people were selected from suburbs areas, 5 districts including 800,000 from two counties were selected respectively. The details are as

follows: Xuanwu District (Suojin Village Community, Xinjiekou Community, Xuanwumen Community, Xuanwu Lake Community, Hongshan Community), Baixia District (Huaihai Road Community, Crescent Lake Community, Zhonghua Road Community, Daguang Road Community, Yinlong District), Qinhuai District (Confucius Temple community, the door of the community, Shuangtang community, Qin Hong community, Xujiaxiang community), Jianye District (Jiangxinzhou community, Shuangzha community, Sha Chau community, Nanhu community, the new river community), Gulou District (Central Gate Community, the Yangtze River Community, Hongqiao Community, Nanjing University Community, Jiangdong Street Longjiang Community), Xiaguan District (Jianning Road Community, Small City Community, Rehe Road Community, Rehe Road Community, Pagoda Bridge Community), Qixia District (Longtan Community, Qixia Community, Jing'an Community, Baguazhou Community, Ganjia County), Yuhua District (Ningnan Community, Tiexinqiao Community, Xishanqiao Community, Banqiao Community, Jiangshan District (Dongshan Street Community, Shangfang Street Community, Dongshanqiao Street Community, Lukou District), Liuhe District (Xinji Town Community, Hengliang Town Community, Chengqiao Town Community, Ma Jizhen Community, Zhuzhen Town Community) Town Community, Lushui County (Yongyang Community, Dongping Town Community, White Horse Town Community, Zhetang Township), Pukou District (Taishan Street Community, Yanjiang Street Community, Zhujiang Community, Yongning Community, Stone Bridge Community) Community, Jingqiao Town Community), Gaochun County (Chunxi Town Community, Yangjiang Town Community, Cooper Town Community, Liaoqiao Town Community, Gucheng Town Community).

3.2.1.3 Data Collection Tools

Based on relevant studies in literature, the author put forward the following hypothesis:

H1: Consumers are well aware of community O2O;

H2: Consumers are receptive to O2O development model;

H3: Consumers choose O2O products because they are more convenient and convenient;

H4: O2O products can design all forms of products and services meeting consumers demands.

The original intention of the questionnaire is designed to investigate the subjective attitude of community residents and enterprises in Nanjing and their expectation for the future development and current satisfaction degree of O2O operation in communities. Therefore, the designed questions are related to daily consumption habits, consumers' behaviors and desired access to services.

The contents of the questionnaires designed contain personal information, which includes income, age and gender; cognition survey, which includes awareness of community O2O; food service and life service survey, which include residents' demands for community O2O and practical difficulties; community service survey, which includes residents' demands for the whole service.

Questionnaires targeted at consumers were mainly distributed during the breakfast or lunchtime and exercise time in the afternoon. Questionnaires designed for residents in populous communities were mainly filled in on the spot and part were brought back home by residents to fill in and returned next day as a supplement. All interviewees were selected randomly. Questionnaires designed for enterprises were filled in on the spot.

3.2.1.4 Date Collection

The main urban area, suburb and suburban counties were selected as three independent areas from the whole of Nanjing community by means of sample survey, and five independent communities were selected for each of the independent areas. Aiming at consumers and enterprises in these communities, we have conducted comprehensive and in-depth investigation of their attitude and satisfaction towards community O2O. The questionnaire was mainly distributed during the lunchtime in the morning and the time for exercise in the afternoon. The random survey was targeted at residents in the populace community and questionnaires designed for enterprises were directly sent to the hands of middle managers filled in on the spot.

3.2.1.5 Data Analysis

Based on the results of the questionnaire, all data were input into computers to work out the number and proportion of residents and enterprises selecting each option, the average, maximum, minimum and so on.

3.2.2 Qualitative Research

3.2.2.1 Research Subject

The researcher conducted interviews with enterprises related to Suning, Jingdong and Guomei. The interview is mainly about some practical problems related to community O2O, including the current situation and future development of enterprises as well as the possible development directions and measures to deal with those challenges.

3.2.2.2 Interviewee

Managers of all operation department in enterprises related to Suning, Jingdong and Guomei have know the development process, business scales and the current situation and features of O2O operating model of the three enterprises giants as well as those of their own enterprises.

3.2.2.3 In-depth Interview

The researcher selected 6 operators, 6 logistics managers, 6 distribution managers and 12 online shoppers as main interviewees in an attempt to acquire relevant insights about O2O model and some suggestions of community O2O. The interview also aims at gaining some knowledge in the aspects of E-commerce O2O and its development features, consumers' subjective knowledge, expectations for O2O, users habits and the common problems in the daily operation of O2O.

The researcher designed different interview questions for different interviewees.

The contents of the interview for operators are as follows:

1) How much do you know about the current development of community O2O and what is your view on its future development?

2) Have Jingdong (Suinig and Guomei) ever tried to cooperate with your company and what is your comment on their related activities?

The contents of the interview for logistics staff are as follows:

1) What are the advantages of O2O compared to other communities?

2) What is your comment on the O2O procedure and which part is the most important one in your opinion?

3) What kind of problems have your company met while doing O2O business and how do your company deal with them?

The contents of the interview for delivery staff are as follows:

1) If your company plans to cooperate with Jingdong (Suning and Guomei), how do you think the information system, the supply chain and the delivery system should be built?

2) From the perspective of investing, will you choose to invest on e-commerce or offline retail entity?

3) The household appliance industry market seems to reach a saturation and do you think Suning's transformation to super stores is a good choice or not?

4) What are the current delivery systems in the market and what is the difference between them and O2O?

5) What are the advantages and disadvantages of community O2O in the aspect of delivery compared with common ones?

The contents for online shoppers are as follows:

1) How do you know about community O2O?

2) Have you ever tried community O2O?

3) What did you buy when you use the community O2O?

4) What kind of online shopping information attracts you most?

3.2.2.4   Data Collection

The researcher has adopted intensive interview and oral communications with respondents to collect facts materials. Direct interview and personal interview are the two major methods. Direct interview refer to the interaction and negotiation with specific department of enterprises, while personal interview refers to the private communication with some managers in specific department, which is mainly in the form of structural interviews. The questions and questioning approaches may be varying from interviewees to interviewees.

3.2.2.5   Data Analysis

All the records of these interviews have been collected and summed up without subjective judgment so as to maintain the subjectivity and fairness of the results. Some key opinions and data will be classified and summed in clear and

simplistic words or phrases. The similar or different opinions about community O2O will be classified and coded. All these data and results will be theorized in accordance with specific theory model and the actual situation of communities.

CHAPTER 4

RESEARCH RESULT

4.1 Development of E-commerce Platform and O2O Operation Model

As a combination of business and electronic flow, e-commerce consists of mall, goods, logistics and commodities, and all these elements require e-commerce platform as a technical support. Electronic platform refers to a virtual technology platform carrying out the marketing and operation of goods, the development technology and logic of which directly affect the operation and business model of e-commerce. In other words, the development of e-commerce platform and O2O logic constitutes the O2O operation model of e-commerce.

4.1.1 Connotation and Classification of E-commerce Platform

E-commerce platform, the online sales platform of e-commerce, refers to the virtual store established on the internet by enterprises and Internet companies engaged in goods circulation or other companies use the Internet on the network, which is mainly used for products publicity, promotion and sales and evaluation. E-commerce platform includes the platform established by commercial enterprises themselves as well as those online markets or online shopping centers set up by the third-party or technology companies for online transactions. Based on technology, the realization of the functions and operation models, e-commerce platform can be divided into different categories. From the realization of electronic business platform technology, the platform can be divided into the browser Web1.0, Web2.0, Web3.0, the development of technology ASP, PHP, JSP, and the integration with 3G mobile technology, intelligent mobile terminals, VPN And other mobile communications mobile power business platform. From the operation model, the platform can be

divided into virtual stores, virtual mall, and the combination with offline physical stores, online sales of physical enterprises, and industry public services.

From the perspective of the business model, the e-commerce platform has gone through three stages.

1) As the representative of the first generation of e-commerce platform. Ali Taobao is featured by purely online virtual shopping platform. With Alibaba Taobao as its representative, the C2C model has been attracting a large number of small businesses, with strong virtual market effect. As well as the B2C model represented by the earlier stage of Jingdong, purely virtual online market where stores are opened directly on the Internet and conduct cross-regional business covering a wide range with logistics network, self-built logistics system or commissioned third-party logistics as its basis.

2) Represented by Tmall and Jiangdong, the second generation of e-commerce platform is characterized by the initial O2O model integrating virtual online shopping and physical stores. The B2B2C model represented by Alibaba's Tmall, and the B2B2C model by the cooperation between Jingdong and other enterprises aim at combining the channels between online stores and offline physical stores, thus leveraging the advantages of online and offline stores. However, there are still loads of problems to dealt with, such as the conflicts between the online and offline organization infrastructure and channels, between their own products and competitive products, between the products prices of multiple stores. Only their problems are solved, we can fully utilize the online and offline resources and advantages.

3) The third-generation e-commerce platform represented by Suning, Guomei, and e-commerce enterprises are characterized by community-based customers and standardization. This online platform of these enterprises serves as the basis of the third generation of e-commerce platform. Some powerful physical retail enterprises establish their own online mall or launch their own online store with the help of third-party online platform. Most of these enterprises are targeted at community intended to provide high-quality goods and services to consumers in the region through integrated online and offline services as a way to compete with large e-commerce enterprises.

4.1.2 Operation Model of E-commerce O2O and E-commerce Platform

With the development of the third-generation e-commerce enterprises platform, the logic of O2O model logic becomes gradually clear: e-commerce integrates enterprises and consumers to achieve mutual benefits of e-commerce platform and offline enterprises. The steps to achieve the third generation of e-commerce platform are as follows: First, set up commodity information database. Commodity information and commodity-standardized pictures constitute a commodity information database platform gathering a range of retail enterprises by providing standard information for retail enterprises. Second, establish and optimize the ecological chain of commodity information. Retailers, suppliers and manufacturers constitute the ecological chain of commodity information, which closely integrates new product recommendation and procurement channels to form a B2B model basis. Third, achieve the combination of online shops and physical e-commerce. Retail products recommendation and the e-commerce mall of retail enterprises constitute the fast channel and entrance for consumers. And the combination of a store and an e-commerce provide a great deal of benefits and convenience for our consumers as well as business opportunities for retailers. Fourth, establish business chains. Commodity information database platform and free chain mode serve as the foundation of the third generation of e-commerce platform, integrating nationwide outstanding retailers based on their regions in line with the concept of physical enterprise combination. Fifth, achieve O2O model across the whole industry or market. By leveraging the complementary advantages of online and offline channels, the O2O free chain model can join the fierce competition with large online shopping mall.
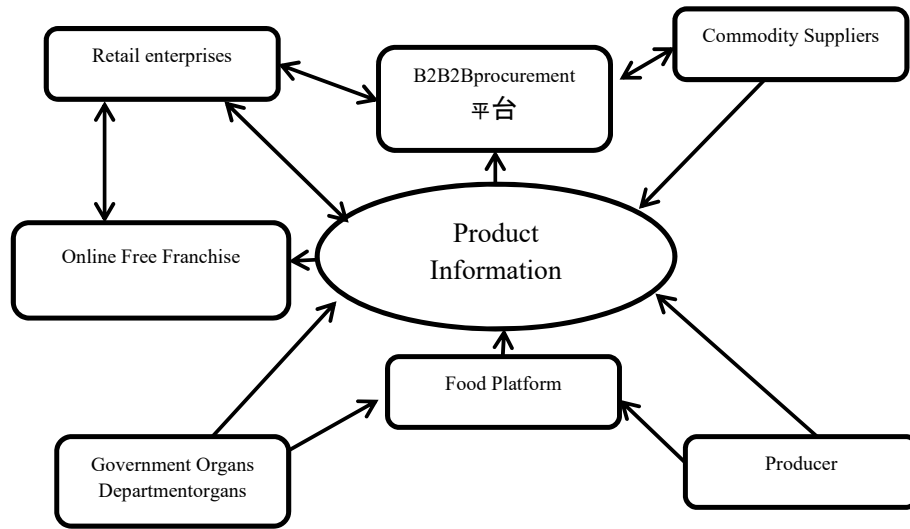
Figure 4.1 The Formation and Structure of the Third-Generation E-commerce
Enterprises Platform

Source: Xiaohong, 2015.
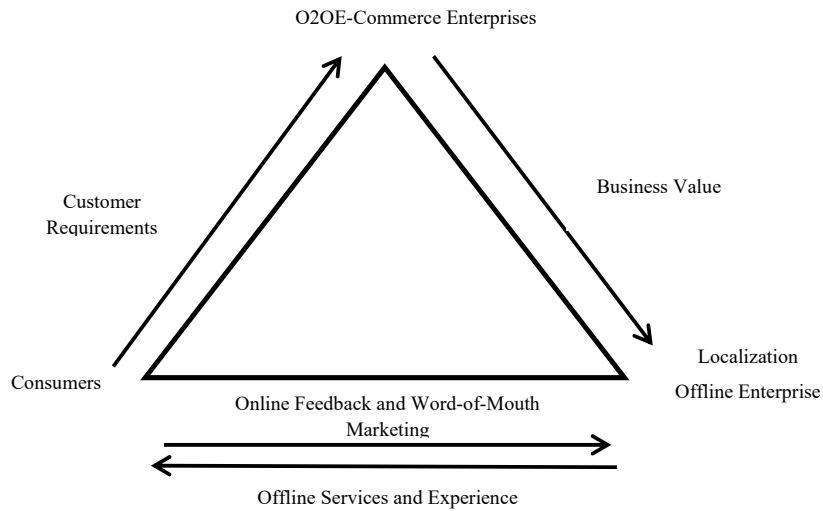
Figure 4.2 The Operation Mechanism of O2O Model

The traditional retail O2O model in the West has innovative practice in all stages: 1) entrance stage: social tools, own APP; 2) transformation stage: accurate E-coupons, sign-in function, APP display scene, scanning (code) shopping; 3)

transaction stage: scanning code to compare prices, virtual shopping cart, virtual shopping cart; 4) post-transaction stage: evaluation and order display.

O2O entrance	O2O transformation	transaction	post-transaction
mobile social tools	Accurate E-coupon	Code scanning to compare price	evaluation and order display
Mobile shopping center	Sign-in function	virtual shopping cart cart	
Mobile Information tools	In-store pattern	Store pick-up	
Own APP	Open store ERP		
	Scanning shopping		
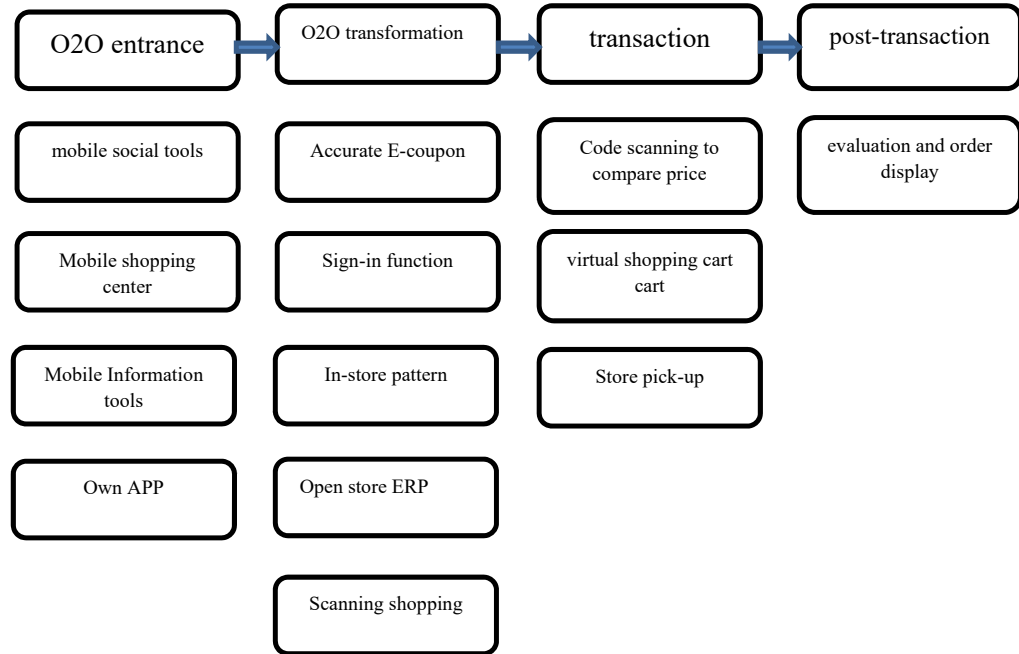
Figure 4.3 The Realization of O2O Operation
Source: Shasha, 2015.

First, the entrance stage of O2O. It mainly refers to a process of directing consumers to offline stores through online traffic platforms. At present, a variety of mobile terminals have become the main traffic entrance of O2O. Traditional retailers rely mainly on their own APP for O2O layout. A lot of requirements are needed for an own APP to become en entrance, such as network penetration, the level of information and investment and stronger integration of online and offline capabilities. The current domestic retail mainly is swaying between own APP and third-party O2O platform.

Second, the O2O transformation stage. It refers to a process of transferring the flow brought by the online entrance into real consumption. At this stage, domestic and foreign traditional retailers and O2O online platform utilize a range of traditional

marketing tools such as coupons, rebates and other tools as well as a lot of innovative tools such as Shopkick's real sign-up and Wal-Mart's in-store model.

Third, the trading scene stage. It mainly refers to a series of process from product selection to payment and transaction after consumers entering a store. This stage involves a wide array of O2O innovation applications such as Wal-Mart's own application code scanning, virtual shopping cart, lockers, etc.

Fourth, post-transaction stage. After the transaction is completed, the relationship between consumers and enterprises does not end. Since consumers will use mobile social media for word of mouth, and enterprises can use O2O external platform and own APP to provide services and maintain contact with them. Precision marketing, virtual membership card and Coupons can be used to enhance user loyalty. Consumers can share their orders, which can be used as a word of mouth marketing. On the one hand the evaluation of consumers can serve as a reference for the follow-up buyers, and on the other hand it can be used for product procurement, design and service improvement so as to provide consumers with better products and services.

4.2 Operating Model and Status Quo of Domestic E-commerce O2O

The O2O model of e-commerce includes more physical enterprises into the scope of e-commerce, achieves the integration of online and offline resources and helps to achieve maximum value. Through the e-commerce platform, the e-commerce with O2O model integrates all offline enterprises, facilitates the online display of all products information and implement all forms of commercial promotion approaches and attracts customers to experience in offline physical stores. However, domestic O2O operation model still remains in the early group buy model, but as the market changes, businesses are trying new marketing and operations approaches.

4.2.1 Operation Model of E-commerce O2O Operation

Operation model is the organization and operation approach and profitability methods of business activities, is the business practice adopted by enterprises in order to achieve corporate profits target. O2O model was originally defined as Online To Offline, that is, a model to attract online consumers to the offline stores for

consumption and experience through the e-commerce platform. As the foreground trading platform, Internet realizes the seamless connection of businesses, consumers and logistics. But with the connotation of O2O model keeps expanding, it can also be understood as Offline to Online, that is, a model to guide consumers by virtue of high-quality offline experience to online consumption for profitability. O2O model is not a simple online or offline guided consumption, but aims at maximizing profitability by integrating and optimizing online and offline excellent resources and docking the traditional business activities and e-commerce. At present, the field of research on O2O model is mainly concentrated on 12 large categories and 49 small categories with financial and enterprise economy included, as shown in Figure 4.4.

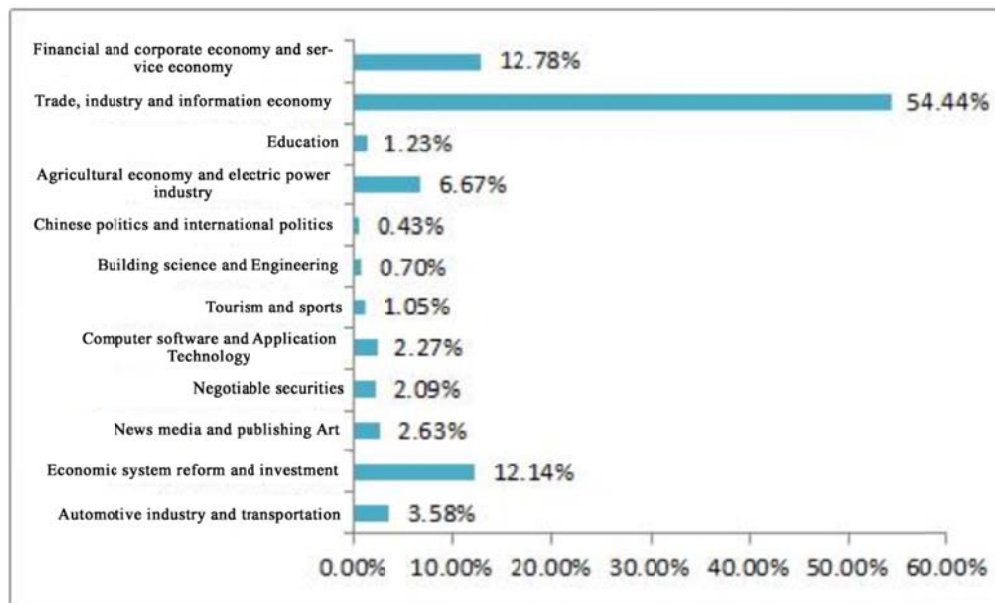**Figure 4.4** The Research Field of Domestic E-commerce Enterprise O2O
Source: CNKI.

From the above chart can be seen researches of domestic e-commerce enterprises mainly focus on trade, industry and information economy, accounting for about 54.44%, followed by the financial and corporate economy and service economy, accounting for 12.78% Again is the economic reform and investment, accounting for 12.14%.

According to the form of commercial platform marketing-commerce O2O operation model can be divided into group purchase website, taxi apps and life service platform such as Baidu Nuomi. Group purchase website is a typical O2O operation model, which changed the form of the previous network transactions and brought consumers access to low-cost goods and services experience. As one of the successful operation models of O2O model, taxi apps combines online order, offline experience and payment through third-party platform, which greatly integrates and optimizes the resources of the taxi market. Life service platforms represented by Baidu Nuomi achieve the docking of logistics, enterprises and consumers, which allows consumers order online in the forms of group purchasing or individual purchase, offline consumers integrate online and offline consumption by a combination of offline experience, logistics and distribution.

According to the direction of consumption flow, O2O operation model can be divided into online-to-offline model, offline-to-online model, offline-online-offline model as well as offline-online-offline model. E-commerce platform with different models has different forms of operation and marketing.

1) Online-to-offline Model

The so called online-to-offline model refers to a framework where enterprises establish an online platform which serves as an entrance for marketing and transaction after the business flow into online from offline, delivering corresponding services and experience for consumers. The model allows consumers browse information, select products, and make consumption decisions, place orders online and pick-up ordered products in offline physical stores. As the foundation of O2O operation, the platform must be equipped with powerful resources transformation capacity and online-offline interaction capacity.

In reality, many local life service enterprises have adopted this model. For example, the O2O platform ecosystem built by Tencent by virtue of the accumulated resources, convertibility and economic base. As for the O2O layout, Tencent has built a large platform for Tencent, and build the O2O ecological chain: taking WeChat platform as a big entrance, supported by Tencent map and WeChat payment as back-end and integrated local life services, such as the Dianping, Didi Chuxing and microblogging-based Gaopeng, thus building the closed loop of online-

offline interaction. WeChat can cater for a multiple demand with social platform and games included, guide business flow and create micro-red envelope, ticking and other scenes. Although the transition from a social platform to a consumer platform can be challenging, the mass social data that WeChat held cannot be overlooked because it provides a rich source of business flow. However, the supply and demand docking problem emerging in business flow is a major problem to be solved. And Tencent open payment and map API provide technical guarantee for third-party service providers to implement WeChat O2O and enable third party to play a more active role in the WeChat ecological chain.

2) Offline-to-online Model

The so called offline-to-online model refers to a framework where enterprises establish an offline platform which serves as an entrance for offline marketing and transaction to deliver corresponding services and experience for consumers. Meanwhile, it directs offline business inflow into online platform to conduct transactions, thus facilitating online-offline interaction and forming a closed loop. Enterprises with the model need to establish two platforms: offline physical platform and online Internet platform. The basic structure is to establish physical stores first, and then online shopping malls and finally to realize the simultaneous operation of offline physical stores and online network markets.

Actually, the O2O model is mainly adopted by physical enterprises; the O2O platform ecosystem built by Suning cloud business is the case in point. Currently, Suning cloud business has more than 1,600 offline stores, as well as acquisitions and co-built stores. On top of that, the network platforms represented by Suning Tesco have covered the traditional home appliances, 3C appliances, daily necessities and so on. In 2011, Suning Tesco strengthened the simultaneous development of virtual network and physical stores. According to the financial reports, the overall revenue of Suning cloud business in 2013 reached 105.292 billion yuan, an increase of 7.05%. Meanwhile, online and offline sales simultaneous growth is achieved, with Suning Tesco sales revenue exceeding 21.89 billion yuan, an increase of 43.86%, among the top three of domestic B2C. On the other hand, offline business increased by 6.36%, ranking first in the domestic retail industry. Suning cloud business put forward the business model of "business + retail + service

providers", which refers to a health development model featured by the win-win scenario among retail enterprises, consumers, suppliers and enterprises by seamlessly integrating offline experience and online convenience through the stores, PC, mobile phone and TV. The road map can be generalized as "one body two wings": taking the Internet retail as its body, O2O full-channel business model and online open-line platform as two wings.

3) Online-offline-online Model

The so called online-offline-online model refers to a framework where enterprises establish an offline platform first, and then deliver services and experience for consumers offline by business inflow from online to offline and finally allow consumers to complete transaction online. In reality, a range of group purchasing enterprises and e-commerce enterprises adopted the model, such as Jingdong Mall.

On December 2013, Jingdong identified O2O model as one of its important strategies for future development. The O2O ecological chain of Jingdong is as followed: first build online Jingdong Mall as its platform for marketing, and then integrate offline self-managed logistics system and physical enterprises to deliver offline services and experience for consumers and allow consumers to complete transactions on the online Jingdong Mall. Self-oriented Jingdong Mall has become a banner in the B2C field as well as the starting point and foundation of the Jingdong O2O. In the first half of 2012, Jingdong allowed Lashou network and other group purchasing websites move into its platform. In 2013 September, Jingdong take-away ordering site moved into Jingdong. Jingdong enhanced the operation of self-managed stores and provide consumers with low discount exclusive cards by integrating a wide array of high-end life services brands through outright purchase with a large amount of money.

4) Offline-online-offline Model

The so called offline-online-offline model refers to a framework where enterprises establish an offline platform first, and then direct business inflow from offline or conduct online transaction on the third-party online platform to deliver services and experience for consumers offline. In this O2O model, the chosen third-party platform is generally ready-made, influential social platform, such as micro-credit, Dianping, etc. On top of that, a number of third-party platforms can be borrowed for business inflow in order to achieve their business goals.

4.2.2 The Features of E-commerce O2O Model Operation

For the current research field of domestic e-commerce enterprises, we have conducted the following survey, as shown in Figure 4.5 below:
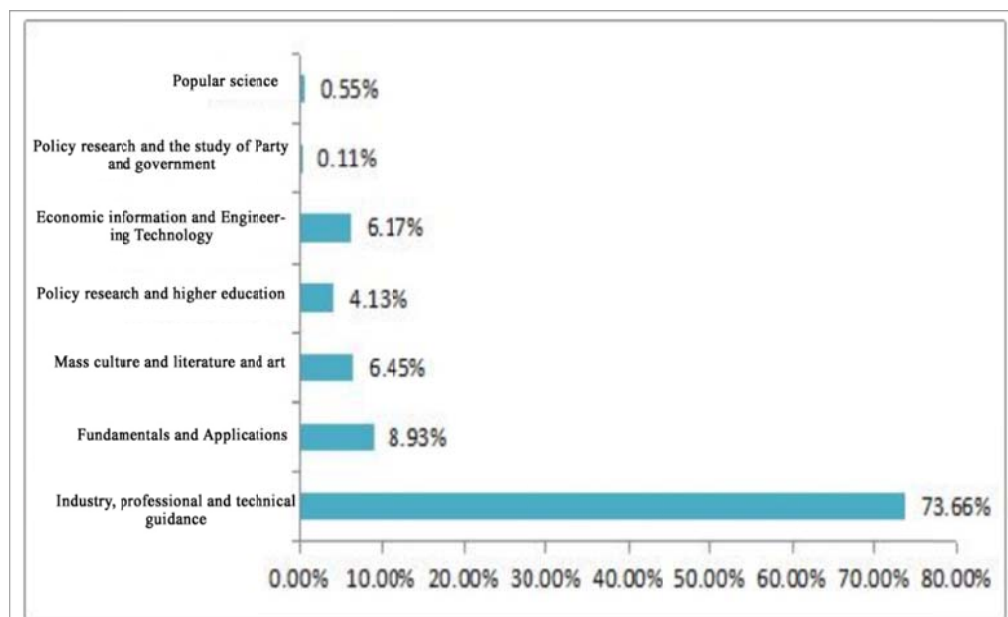

Figure 4.5 The Research Field of Domestic E-commerce Enterprise O2O
Source: CKNI.

As can be seen from the above chart, the current research field of domestic O2O e-commerce model mainly focus on industry, occupation and industrial technical guidance, accounting for 73.66%, followed by its foundation and application (8.93%),

mass culture and literature and arts works (6.45%), economic information and engineering technology (6.17%), policy research and higher education (4.13%), popular science (0.55%), policy research, party and government research are the least, accounting for only about 0.11% . Based on the analysis and summary of the above-mentioned research, the characteristics of O2O operation model can be summarized as the following three points:

1) Localization

The most important thing in the O2O business model is to attract customers to offline stores for consumption and experience, which are based on local services. Costumers are willing to try O2O consumption. In addition to accessible prices, convenience and practicality are another two indexes. Customers can place orders and complete payment online and select the nearest business offline, thus saving manpower and material resources. Dianping and Meituan are typical O2O operation, and both have launched distance calculation based on electronic maps, which is convenient for users to select the nearest business. This location-based business is a major feature of the O2O operation, which can be also employed as one of the effective means of self-promotion. Online marketing generally facilitates the first time O2O consumption experience before offline consumption completed. Therefore, one of the major characteristics of O2O operation model is the local business integrating online and offline channels.

2) Digital Marketing

In the O2O business model, enterprises release and update products information, accept orders, check product sales at any time and access customer preference through the online platform. By data monitoring, enterprises can control the market and adjust product information at any time. A t the same time, customers can select products in accordance with the product information provided by enterprises, make evaluation and give feedback for the products we purchased. All of this information can be monitored, and enterprises can also communicate with customers through these data, which has eliminated a range of shortcomings emerging in the traditional process of commercial communication between customers and enterprises.

3) Online Payment

Online payment is one of the dominated features of O2O operation model. Online payment establishes a closed-loop consumer chain. The completion of a transaction is the only reliable assessment criteria of consumption data. The profit value of business platform lies in customer payment. By controlling the data of customer online payment, the platform can control the value-added chain of the whole industry to generate more profit. Take Dianping, Meituan, Baidu Nuomi as examples. Taking advantage of online information, goods and logistics aggregation, these platforms help to bring practical profits for offline enterprises and consumers and generate a certain amount of commission from enterprises' profits to achieve mutual benefit, which is exactly the foundation of O2O operation model.

4.2.3 Status Quo of E-commerce O2O Development

The new strategies of Tmall and Jingdong are typical examples of a transition from online to offline, representing the trend of an extension from online to offline. At present, a range of offline physical retail enterprises has adopted various ways to carry out the attempt. By establishing e-commerce companies, they intended to implement the marketing and application of O2O by leveraging the advantages of offline physical stores, community-based and region-based and online sales. According to the analysis of the number of China's top 100 enterprises involved in e-commerce mall, it is found that there are still 21% of the top 100 companies do not get involved in online mall, 50% of the top 100 enterprises have their own online store and 11% of the top 100 enterprises have established their own third-party online stores, among which there are two top 100 enterprises establish online markets on the third-party platform. 9% of the enterprises have established their own online store and established online markets on the third-party online platform. China's online shopping mall chain is still in the primary stage of exploration, has yet forms its own models and development ideas.

At present, the localization advocated by the O2O model aims at providing various types of local life service for residents. O2O model has been extensively applied to the clothing, food, housing, and travel industries. According to statistics, as of the end of 2014, the number of all kinds of comprehensive O2O e-commerce

enterprises, industry-specific O2O model e-commerce companies and O2O related enterprises has reached 1,100. O2O model has been widely used in finance, catering, entertainment, tourism, automobile, car, logistics, retail, medicine, home appliance, fitness, hairdressing, hairdressing, wedding and other industries. O2O industry can be divided into four categories: community, car rental, tourism and catering, among which community O2O the most frequently mentioned, most promising and most potential field. Comprehensive O2O model of e-commerce enterprise is represented by Meituan, Suning cloud business, Alibaba, Jingdong Group and other enterprises. The O2O model e-commerce enterprise in the automobile industry is represented by Chinese Second-hand Car Trading Network, Kuidi and Didi. The O2O model e-commerce enterprise in pharmaceutical industry is represented by 3 Kang Pharmaceutical Company. Since 2013, a range of physical enterprises in domestic retail industry have poured into the O2O field, represented by Zhejiang Intime Department Store, Hunan BBG, Shanghai Hualian, Shandong Ginza and so on.

Figure 4.6 The Market Shares Distribution of O2O in 2015

Source: iResearch.com.cn

It can be seen from Figure 4.6 that the catering industry, entertainment and hotel industry in accounts for the dominant industry in China's O2O market in 2015. Among them, catering industry accounts for 42.51%, making up the largest part of domestic O2O market. Hotel services rank second with its market share reached 25.64% and Leisure and entertainment rank third, accounting for 25.38%. In addition, beauty and hairdressing account for 3.17%, parent-child 2.16%, and wedding class 1.14%. Although catering industry seems to dominant the O2O market, but with the expansion of the domestic market, department stores and even medical and health industries will also participate in the game.

Due to the characteristics of localization and online payment, E-commerce enterprises O2O model is well suited to the localized operation of community e-commerce, making community O2O a keen business model at the moment. A variety of commercial forces have settled in the community O2O. Nowadays, community O2O operations are concentrated in convenience stores, dry cleaners, fruit supermarkets, domestic services and takeaway services.

4.3 Operation Model of E-commerce Communities and Consumers Psychology

Community O2O business model can be divided into two categories, one takes community owned property companies as the core, integrating all sorts of services resources around the community to establish community consumption circle, such as "wisdom community" created by Franshion real estate and Einwin and Wankezhuzaizhe created by the Great Wall Property and Greenland property. Another one takes community convenient point as the center, using "life convenience goods + delivery service" as its main operation mechanism, such as the community 001, Shun Feng Hey shop, Jingdong shop as the representative.

O2O mode operation mode of community e-commerce enterprises is ultimately depends on whether this model can be recognized by customers, develop customer use habits and good consumption psychology, or meet the practical needs of customers. Therefore, it is very necessary to study consumers' consumption psychology and behavior during the research of community O2O model. In this thesis,

the author conducted in-depth analysis and investigation on consumer's consumption psychology and behavior for O2O based on the pre-questionnaire survey of e-commerce O2O communities in Nanjing. Community O2O model provides services for consumers in specific areas through localization, consumers' consumption behaviors happen around the community and consumption psychology manifests in the evaluation system for products and enterprises.

In this thesis, the author has conducted a survey of community residents' subjective attitudes and consumption behaviors for O2O in Nanjing in the form of questionnaires. A total of 900 questionnaires were dispatched to residents in Nanjing, 872 questionnaires were retrieved and the recovery rate was 96.89%. For the consumer survey 1: a total of 400 copies were distributed and 391 retrieved, the recovery rate is 97.75%. In the main urban areas, suburbs and suburbs, 327 (all recovered), 43 (recovered 39) and 30 (recycled 25) copies were distributed to the community O2O questionnaire, with valid questionnaires of 327, 43 and 21. For the survey table two: 500 copies were issued, 481 were recovered, the recovery rate of 96.2%. Of which 250 enterprises in the downtown area (250), 150 in the suburbs (140), and 100 in the suburbs (91 recovered). All the obtained questionnaires were counted according to the number of items and options, and the percentage of selection was calculated according to the statistical results.

According to the research, consumers with low and middle level income (2000-5000 Yuan) tend to go shopping online more frequently. Moderate and low-income groups have developed the habits of online shopping and ordinary working class will be more willing to try the community O2O model for shopping.
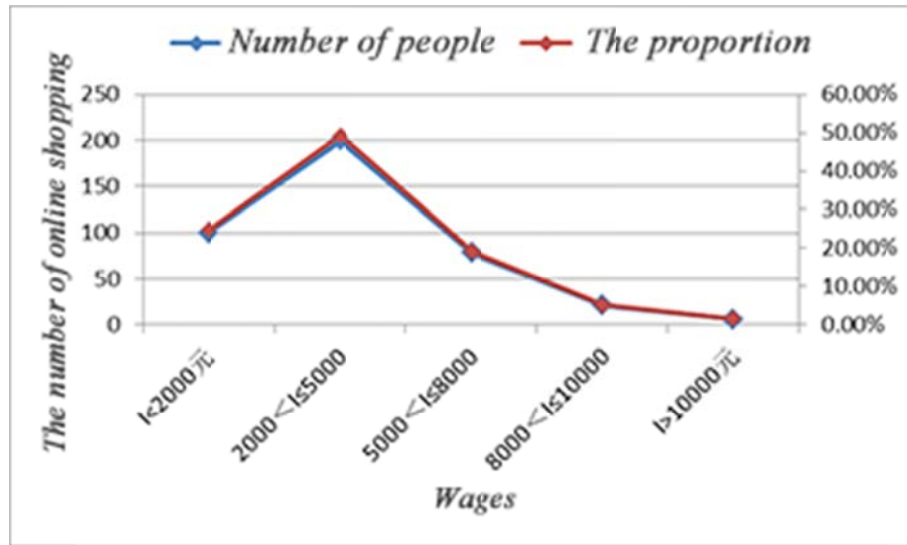
Figure 4.7 The Proportion of Online Shopping Frequency and the Amount of People

Note: I (Income level)

4.3.1 Features of Community O2O Model Operation

The current O2O operation model has attracted a range of consumers and enterprises by virtue of its distinctive characteristics.

1) Convenience and Accessibility

The advantageous location of community e-commerce enterprise is the major reason that consumers will be more willing to try this kind of business model. O2O business model can provide community-based services and convenience is the main factor in consumers decision-making process.

Ease of use is the perception of function and convenience of the activities. As consumers believe the consumption or experience that community O2O provides are convenient and trustworthy, the use frequency will be increase and customers will be more willing to engaged in this kind of commercial activities and to complete consumption.

Community O2O model affect individual factors

■ Service ■ Price ■ Timeliness ■ Other

6%
13%
54%
27%
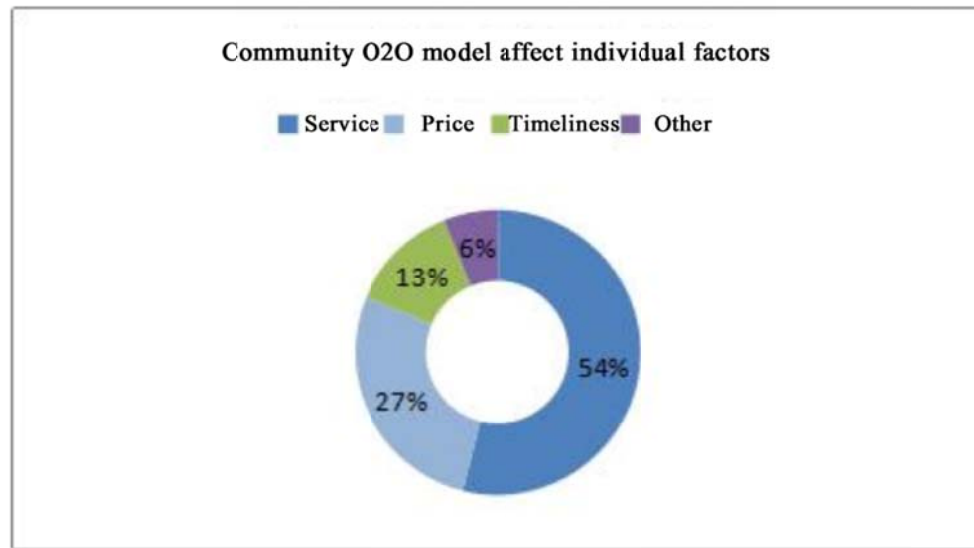
Figure 4.8 The Product Factors Consumer Focus under the Community O2O Model

The survey results showed that users are most concerned about the services provided by businesses (54%), followed by the price (27%). Users perceived ease of use, perceived function and trust significantly affect behavioral willingness, and the effect of perceived risk of consumer behavior intention is not so pronounced. Although most online shopping users are low income groups, but the quality of service is still an important factor restricting the development of O2O. Providing quality goods with accessible price and excellent shopping experience remain the major goal for business

On the basis of service, convenience is also the feature of community O2O consumption. Compared to the traditional sales model, online shopping network can provide 24 hours of business, you can always visit the site selection of goods, and provide door-to-door service, in line with rapid pace of urban life, eliminating the consumption of a lot of time and energy, even in Late at night, you can also choose to buy. At the same time consumers only need to follow the site to provide classified keywords, such as brand, material, color and size. You can directly according to their needs target screening, save energy. In addition, consumers pay freer environment, in line with the pace of urban life fast, eliminating the waiting time and physical consumption, in line with demand psychology.

2) Diversified Services Categories and Scope

Community O2O model because the foothold is local, through the provision of convenient and efficient form of payment, so that consumers can save the corresponding labor and incompetent costs. In the community O2O advantage perception, the survey found that, in addition to the user is very concerned about the ease of use, the geographical characteristics of consumer choice to measure whether consumption is also an important indicator.
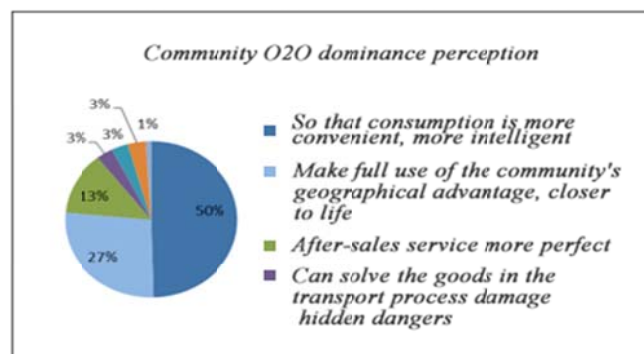
Figure 4.9 The Advantages of Community O2O Model Perceived by Consumers

Community O2O mode can provide a variety of services, including taxi, convenience stores, print shops, domestic service and catering services, in these services, can launch a regional service. For example, catering services, consumers in addition to meet the basic needs of the diet, but also hope that businesses can provide food with regional flavor of the project, so that consumers feel at home to a variety of regional characteristics of the food culture, greatly saving time costs. In the community O2O model, all kinds of businesses online to provide product information, in addition to improving the quality of product reputation, the need to take into account the commodity's personality and characteristics. Online business platform, filled with a large number of homogeneous goods and services, in order to attract consumers, many businesses to price promotions and other marketing to stimulate consumption, but lower profit margins, and even reduce the quality of goods, affecting the business of the credibility, is not conducive to long-term development.

3) Evaluation Leads to Similar Word-of-mouth

The survey found that consumers are most concerned with the evaluation of goods and services when they experience the community O2O business model. Goods and services all the information will be intuitively displayed in the electronic business platform, and the quality of goods, testing, brand awareness compared to the evaluation of the use of goods consumers experience the real experience, it is easier to get the user's trust. Online evaluation of goods and services and word of mouth can be said that many consumers use the report, the user reference to these information and trust, is the embodiment of herd mentality. Although the line of consumer goods, consumers focus on word of mouth and other information, online consumers still retain this mentality; the market recognition of the degree of word of mouth consumer choice is an important factor in online consumption. The face of online consumption of herd mentality, merchants in improving the quality of goods and services, but also launched a number of promotions, such as reviews and other marketing means to return is to improve the recognition of word of mouth.

Factors affecting consumer

	Evaluate	Brand	Price	Sales volume
■ Series 1	39.39%	24.30%	21.23%	15.09%
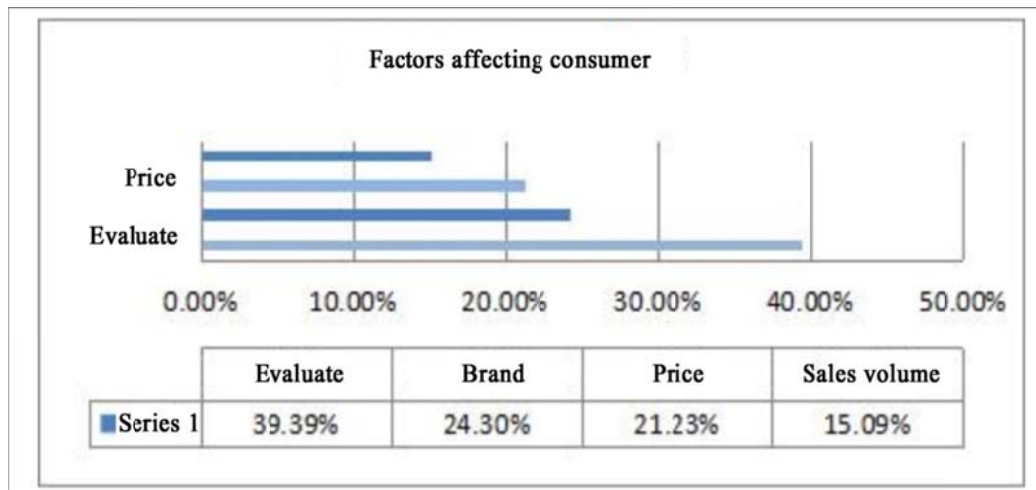
Figure 4.10 The Factors Affecting Consumer's Consumption Willingness

In reality, many consumers are lack of self-judgment, and they have no ideas of their own expectations for products, therefore, they have to make consumption decisions based on product sales volume online. The phenomenon is much more common in Taobao, Jingdong and other online stores. More and more

people pay sole attention to sales volume and they believe the products with high sales volume will sure be of good quality, thus leading to blind consumption.

4) Reduce Time and Distance to Cut Down Cost

When problems airing in the process of consumption, 50.23% of the respondents choose to return and refund directly, which is the most direct way to solve the problem and a lot of time and money can be saved. That's why it becomes one of the most significant reasons that consumers choose O2O offline consumption. As online shopping consumer experience, consumers develop a consumer inertia, not satisfied with the goods can be a direct refund or return, and line consumption compared to direct online consumer refund or save a lot of cost, this spending habits Followed to the latest form of consumption as a network of O2O consumption. Second, the respondents hope to be able to third-party payment platform to strengthen the management and coordination in this area, to avoid direct conflict and disputes between buyers and sellers, the consumption of the risk of effective control.
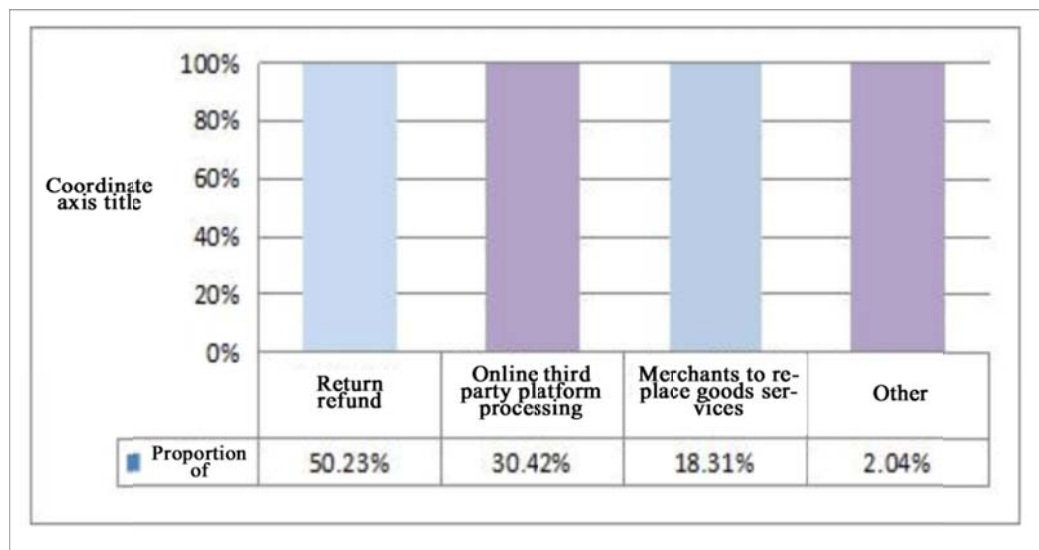
Figure 4.11 Comsumption Methods

From the analysis of respondents' consumption psychology, the study found that the consumer's willingness to consume O2O is more important on the basis of network consumption, which is an important characteristic of O2O based on local consumption and a beneficial factor for its future development. Second, the consumer

of the audience in the O2O model of consumption is amplified, the evaluation of goods and credit indicators of these indicators from the accumulation of large amounts of data behind the popularity of the network of consumers and the reputation of the gathering, the consumer to some extent Will be subject to the impact of product reputation and evaluation. Consumers in the O2O model is still maintained online shopping consumer psychology, such as consumer ease of use and cost savings.

4.3.2 Consumers' Subjective Opinion and Tendency to O2O Model

According to the results of questionnaires, we can conclude that consumers' offline consumption behaviors under the community O2O model have become mature. In other words, consumers have been accustomed to go shopping online. As consumers are mainly the working classes with a relatively limited personal time, online shopping has become the major channels of their daily consumption. Moreover, offline and online consumption are similar to some extent. However, when consumers' rigid demands can be satisfied with relatively low costs through offline shopping, consumers will be more willing to purchase offline.
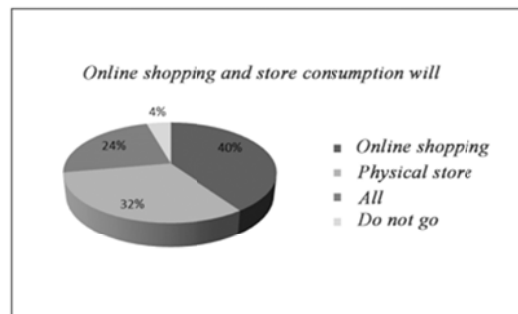
Figure 4.12 The Percentage of Consumers' Willingness of Going Shopping Online and Offline

As community O2O e-commerce enterprises model works well in integrating online and offline resources, satisfying consumers' daily rigid demands and conforming to the experience demands of current consumers, the number of local community-based O2O users is growing increasingly as the statistics shows.

1) Widespread Promotion Channels and Multimedia Social Platforms

According to research results, the frequency that consumers under the community O2O model concern online shopping is relatively higher, with 37.1% consumers following shopping information all the time and 41.43% focus on that information only when there is a need for consumption. That is, to some extent, in line with consumers' consumption psychology features that accessibility will be taken into account in consumers' decision-making under the community O2O model.

Focus on online shopping information

	Groupon	WeChat public number	Client APP	Not concerned
Series 1	41.18%	27.37%	24.04%	7.42%
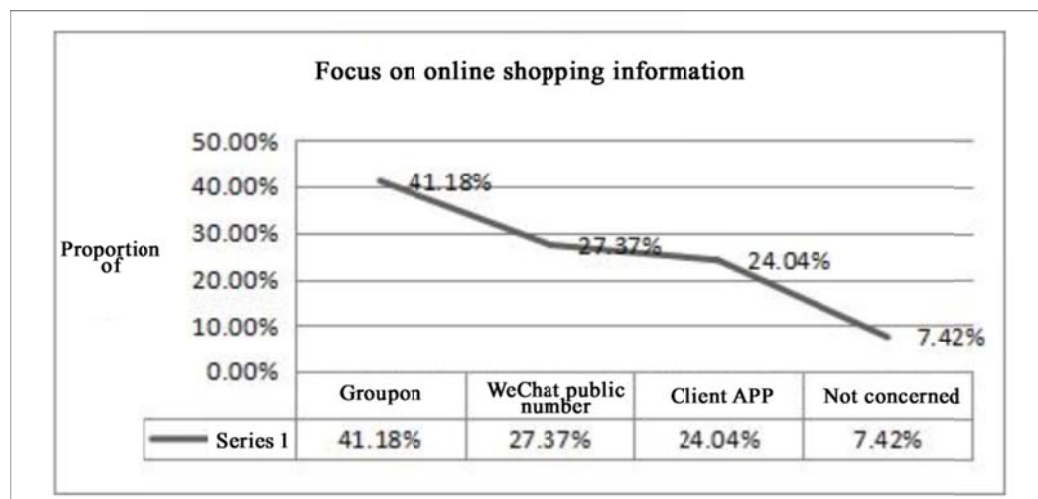
Figure 4.13 Consumers' Online Shopping Information Channels

According to the above research, we have found that most consumers will choose group purchasing website for consumption. For example, they will follow some WeChat public accounts for the latest information released by enterprises. Moreover, there is a growing number of consumers following O2O e-commerce enterprises platform directly through WeChat public accounts and purchasing on this platform. Actually, the phenomenon is related to the promotion approaches of community O2O. For example, property-centered community O2O will usually promote products and boost users accounts by persuading consumers to scan QR code

and follow WeChat public accounts. Meanwhile, the enormous WeChat users can also be served as a platform for community O2O marketing.

2) Logistics-based

Although the current community O2O model put forward a shopping model featured by offline experience without logistics, a range of life service platform O2O model represented by Baidu Nuomi, Meituan and Dazongdianping implemented home delivery services, cash on delivery and several promotion approaches, which greatly affected consumer's consumption behaviors. According to research in services projects of community O2O, consumers will be more likely to consume in catering, articles of everyday use and other life services, accounting for up to 50.4%. As consumers have developed their consumption behaviors as a result of the consumption model of group purchasing websites in the earlier stages, they expect enterprises under community O2O model can still cash on delivery and home delivery services; therefore, they are heavily depended on logistics.

Figure 4.14 The Willingness of Payment and Goods Delivery under Consumers' Community O2O Model

3) Mobile Payment

Under the O2O model, consumers tend to filter and select among a range of products online, and then to consume offline. The optimal payment approaches is online payment with certain discounts. According to the research, most

respondents chose mobile terminal to pay. That is related to the enormous mobile users base. On the other hand, it suggests that the development of all forms of APPS of purchasing websites is conductive to goods promotion, accumulating a certain number of users. That is to say, consumers are accustomed to shopping on mobile devices.

Shopping way choice

	Groupon	Mobile terminal APP	Both have	Unclear
■ Proportion of	32.38%	48.50%	15.00%	5.12%
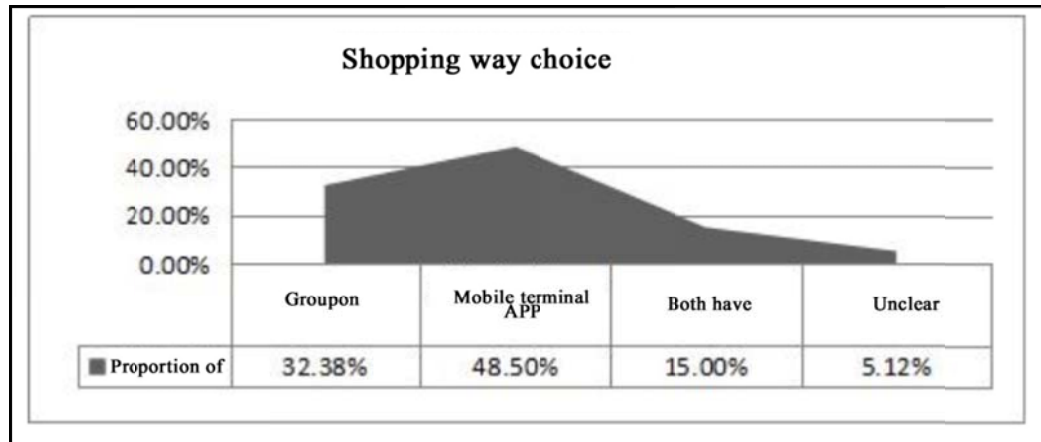
Figure 4.15 The Choice of Shopping Approaches

The rapid development of mobile devices makes mobile payment possible, and that is also one of the best consumption experience ways that O2O model can offer. Consumers can select the products they like, and pay money on offline channels in a easy and convenient ways. On the one hand, it can help consumers save money; on the other hand, it can also help enterprises increase brand popularity and acceptance so as to achieve precision marketing.

4) Group Purchasing

As a result of the development of earlier O2O group purchasing platform, the consumption model of group purchasing will still take root in the mind of consumers as they select consumption platform. Therefore, purchasing websites and all forms of mobile terminals Apps have become the first choice of our respondents, according to 56.42%. One of the main reasons why consumers choose O2O group purchasing websites is the enormous website users, mature commercial model, complete products evaluation system and particularly the relatively more comprehensive services provided by group purchasing websites. On top of that, the

higher-level consumption of group purchasing websites compared with offline products with the same level, as well as the considerable privilege and benefits offered to consumers make they more likely to choose O2O group purchasing websites.

	Business self official website	Group buying web-site platform	Depending on the purchase situation	Other
■ Proportion of	22.33%	56.42%	20.19%	2.06%
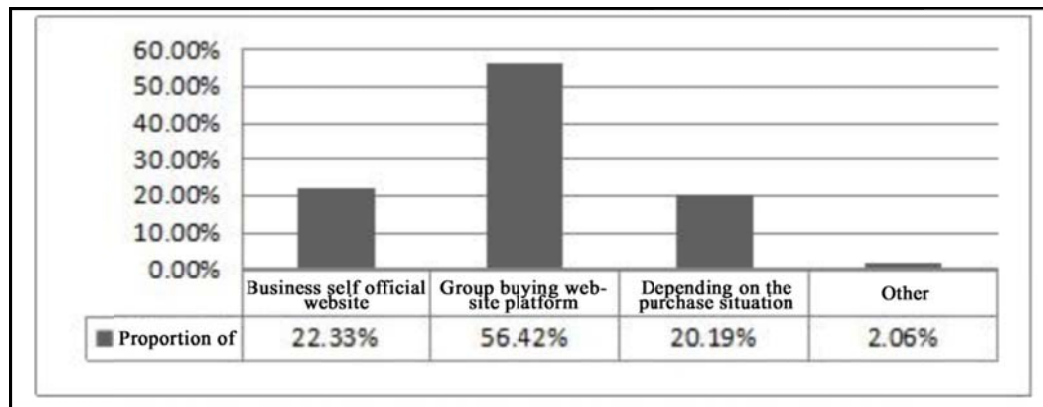
Figure 4.16 The Choice of Consumption Platform

Based on the above consumer's behavior analysis under O2O model, we can conclude that consumers heavily rely on online consumption model. As the tendency of multimedia social platform, consumers are more likely to take advantage of social media to browse and search for information released by enterprises. As a result of the convenience and benefits brought by social media, consumers are inclined to be influenced by social media platform. Therefore, online consumption has becoming more and more heavily independent on home delivery services and group purchasing consumption.

Based on the research of the age composition of consumers in Nanjing community, we find that people aged between 15 and 30 accounts for 92%, while people over 31 Years old are relatively less. As shown in Figure 4.17, that might be attribute to the fact that it is not so easy for older people to accept new things while young people may be the major driving force of online shopping.

77%

汉以上
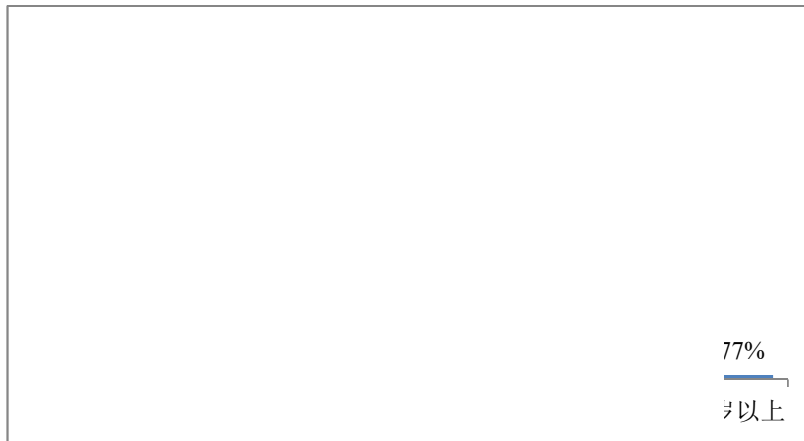
Figure 4.17 Consumers Age Composition in Nanjing Communities

Based on the research of online consumption frequency of residents in Nanjing communities, we can find that the consumption of frequency of most online shopping groups is between 4 and 9 times, among which 7 to 9 and 4 to 6 account for 43.52% and 37.59% respectively. On the other hand, the frequency below 3 and over 10 are relatively less, accounting for less than 19%. As the Figure 4.18 shown, the consumption frequency of current consumers has been maintained between 4 and 9, with a relatively smaller proportion of high frequency and low frequency. The results demonstrate, to some extent, that online shopping has emerged as a major power of current consumption approaches, which is also an obvious evidence of resident's livelihood.

Figure 4.18 Frequency of Online Consumption of Nanjing Community Residents

It is shown that 41.43% consumers follow up online shopping information on an occasional basis, which consists of a relatively large proposition of this group. However, there are still 31.71% consumers will pay a constant attention to online shopping as shown in the Figure 4.19. That suggests that the market potential of this group is still quite huge. Besides, the percentage of consumers paying little attention to group purchasing and being not familiar with group purchasing is almost equal, accounting for 27%. That is to say, this group should never be ignored either. Therefore, it is reasonable for enterprises to enhance promotion campaigns and activities.
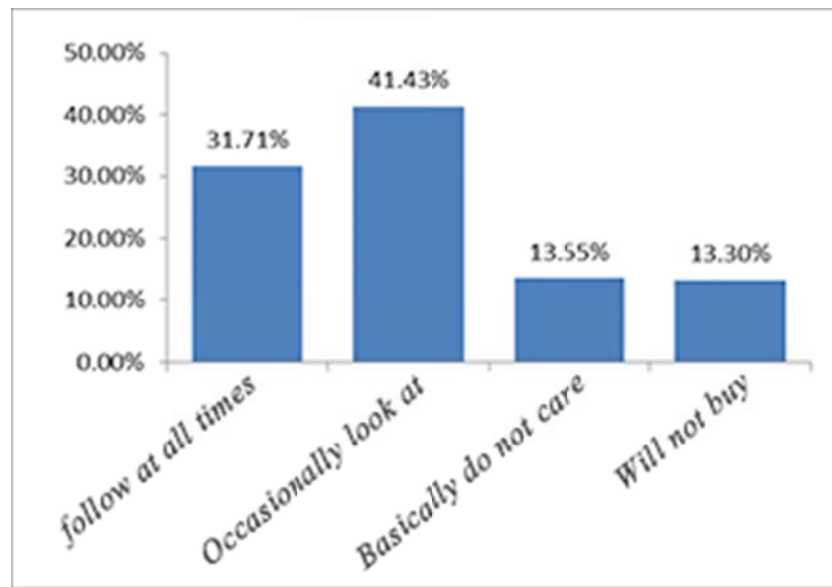
Figure 4.19 The Status Quo of Nanjing Community Residents' Attention to Online Shopping

Based on the question of O2O model in consumers' mind, we can conclude that most consumers have a biased opinion of O2O as they have yet developed a comprehensive understanding of the operation mode of O2O. As we know, most (41.18%) consumers acquire online shopping information from different websites, and a large number of consumers collect information from We Chat public accounts (27.37%) and Apps (24.04%). As the Figure 4.20 shown, website information remains the major channel for current consumers to acquire shopping

information, at the same time, We Chat and a range of other emerging shopping channels have also dominated half of the market. It also demonstrated that consumers more easily accept emerging shopping approaches.
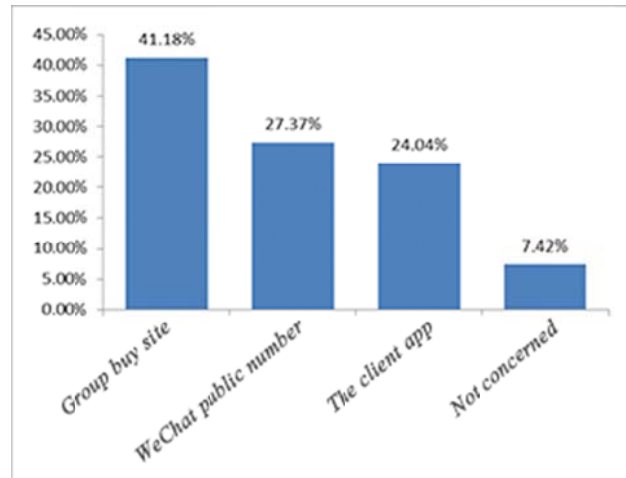
Figure 4.20 Information Channels for Online Shopping of Nanjing Community Residents

As shown in the above Figure 4.21, we can see that 40.41% consumers prefer online shopping, 31.71% consumers prefer physical stores and 23.53% believe both are acceptable. Of course, 4.35% consumers would choose neither. That is to say, online shopping and offline consumption are of equal significance. As online shopping is more likely to be accepted by consumers, traditional physical stores are still of paramount significance.
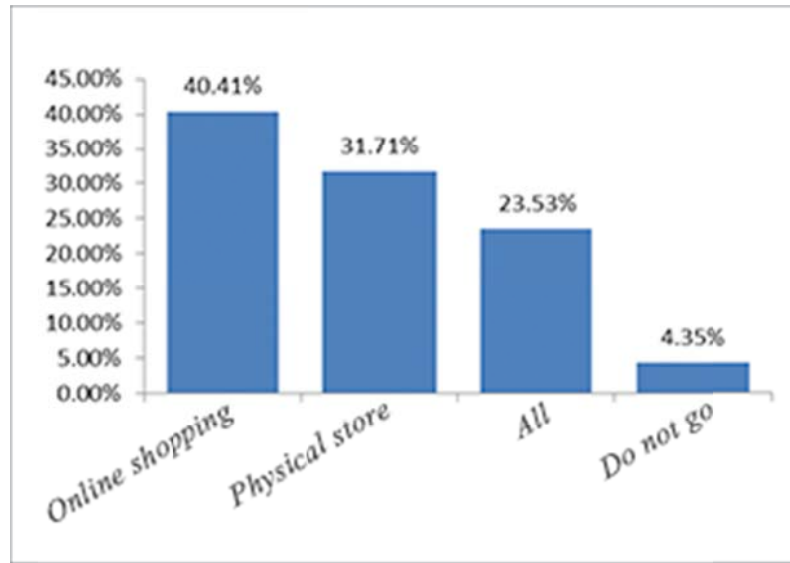
Figure 4.21 The Expected Consumption Ways of Consumers in Nanjing Community

As for the question that the most important point in the online-offline interactive business model of community e-commerce enterprises, most consumers think the answers are products and services, then price and efficiency. When it comes to the most important factors in community consumption. The answers are consumers comments (39.39%), brands (24.30%), prices (21.23%) and sales volume (15.09%), among which consumers comments is in the majority. As shown in the Figure 4.22, consumers evaluation is of dominate significance to the sales of products, in addition, brands, price and sales volume should also be taken into consideration.

Figure 4.22 The Focus of Online Shopping products of Nanjing Community
Residents

As for the services provided by community e-commerce enterprises O2O model, a large majority of consumers select life services products (25.83%) and consumption (32.48%), and then catering services (24.04%) and social services (10.49%). The least choices are appliance maintenance (5.37%) and others (1.79%). As shown in Figure 4.23, food, clothing, consumption and travel are the main focus of consumers. Moreover, with the improvement of people's livelihood, social services on the spiritual level have gradually caught the attention of consumers.
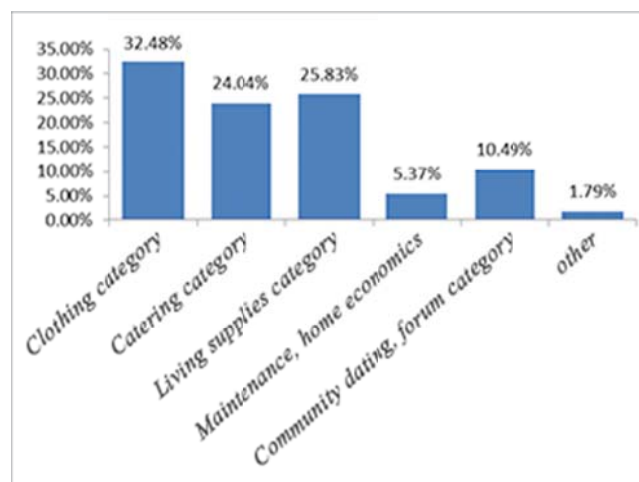
Figure 4.23 Expected Services Projects Provided in Nanjing Community Consumers

As for the advantages of community e-commerce enterprises O2O model, most consumers believe that is because community O2O model is close to people's life as a result of its favorable geological location, help enterprises to discover (3.32%) and resolve (3.07%) consumers concerns about product quality and the potential damages in products transportation (3.07%) as shown in Figure 4.24.
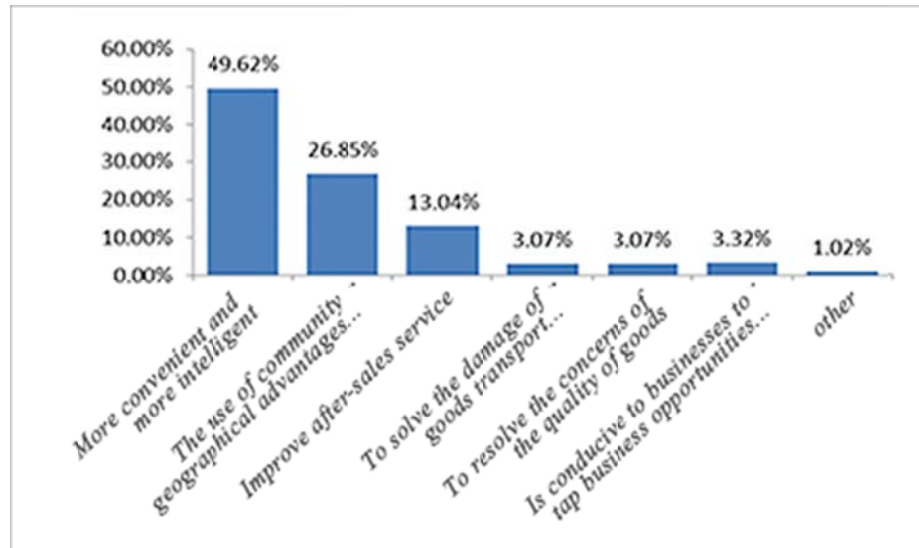
Figure 4.24 The Advantages of Nanjing Community O2O Model

As for the question that "you will pay what kind of products through online channels", the answers are relatively evenly distributed, mainly focusing on snack food, lotion and everyday chemicals, accounting for 31.46% and 21.48% respectively. Beverages (17.14%), fresh food (13.04%), grains and oils (6.14%) and others(10.74%) rank in between third and sixth place as shown in the Figure 4.25. The result is closely related to the consumption habits of common people. Because people will be more likely to buy light and handy everyday products in near supermarkets and shopping malls, while they will buy grain, oil and other cumbersome products in community stores.

The bar chart shows:
- Tobacco and alcohol drinks: 17.14%
- Washing daily: 21.48%
- Leisure snacks: 31.46%
- Cereals and Oils: 6.14%
- Fresh: 13.04%
- other: 10.74%
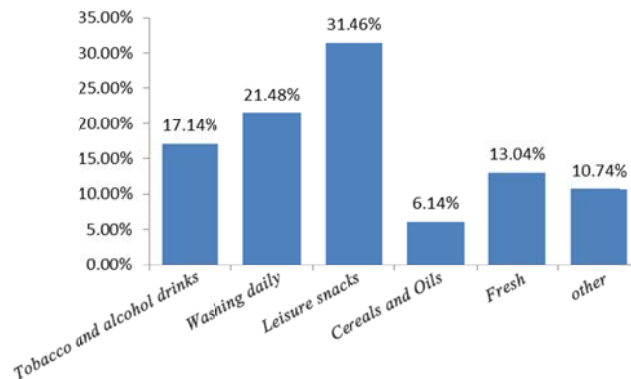
Figure 4.25 The Products Categories of Consumers' Online Shopping in Nanjing Community

As for the tendency of payment methods, most consumers will choose online payment such as mobile payment and online banking payment, then the third-party payment. Consumers are less likely to choose bank remittances. 68.11% consumers would like to choose cash on delivery, 31.89% will choose online payment, 95.32% home delivery services and 4.68% self pick-up.

Life services dominate consumer's community consumption, among which package pick-up and delivery, snack food, beverage, fee payment of water, electricity, air condition and coal are the most popular services provided in community. But consumers are more interested in home delivery services and cash on services. However, 60.2% consumers confessed that they are totally unfamiliar with community services O2O, 27.55% said they heard about the concept and 2.04% acknowledged they are quite familiar with the concept. The results suggested that common consumers are not quite concern about the concept of O2O. As for the advantages in services of community O2O, most consumers will focus more on whether community can provide rapid and convenient services and whether consumer's evaluation is effective in consumers' decision-making, accounting for 68.37% and 43.88% respectively. Precise products information (33.67%) and competitive prices of community O2O (25.51%) should also be taken into consideration according to the research.

Based on the answers to the question that "How do you know online shopping services community?", it showed that most consumers (60%) get to know the O2O model through network media channels (33.75%), friends and relatives recommendations (35%) followed by television advertisements (15.32%) and posters or single pages (12.54%) as shown in Figure 4.26.
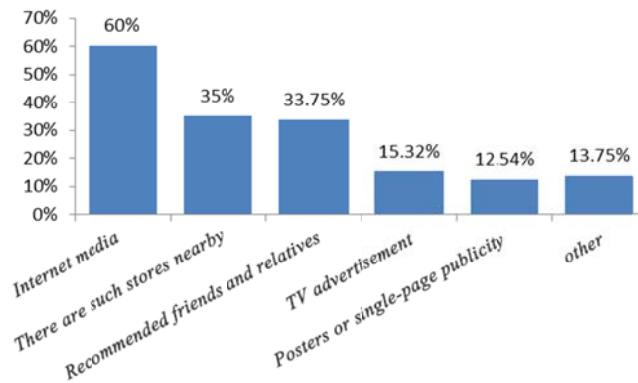
Figure 4.26 The Channels that Customers Get to Know Online Shopping Services Community Stores

As for the most satisfying services provided by online shopping service community stores, express sending and receiving, products repurchase, mobile phone replenishing and products experience are the most satisfying services, accounting for 61.43%, 51.43%, 47.14% and 47.31% respectively. As shown in Figure 4.27, mobile phone replenishing and express sending and receiving are the top two concerns of consumers in their daily consumption as they are quite relevant to their day-to-day needs.
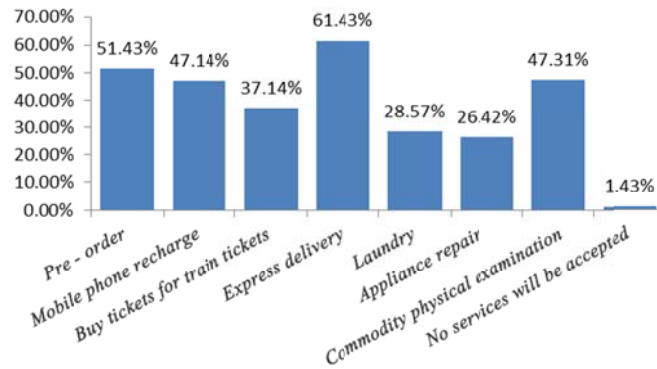
Figure 4.27 The Most Satisfying Services Provided by Current Online Shopping
Services Community Stores

Daily commodity dominates the products categories provided by community O2O online services community stores, accounting for 71.56% while fresh food, electronic products, clothing, shoes and bags account for 48.47% and 42.23% respectively as shown in Figure 4.28. In other words, the reason why the consumption of daily commodity dominates consumers' everyday consumption is that those products must be used for every day, while other products once bought can be used for a rather long time.
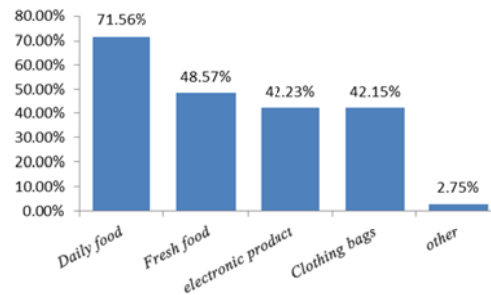
Figure 4.28 Product Category of Community O2O Online Shopping Services

4.3.3 Physical Enterprises' Expectations and Cognition for the Development and Operation of O2O Operation

The researcher distributed 500 questionnaires 2 and retrieved 481. Over 450 of 500 enterprises choose to try the model at proper time. Based on the above statistics, supermarkets and community chain stores have a general understanding of community O2O model and are optimistic about the development of the model. In light of the lack of knowledge about the model, only a few enterprises have adopted the model. The number of supermarkets and community chain stores is between 1 and 5 in those surveyed communities (93.76%), only a few communities (1.66%) have 11 supermarkets or community chain stores. When it comes to e-commerce business, it shows that over 70.06% enterprises have conducted e-commerce enterprises and 82.54% express that they intent to set foot in the "O2O" field. Furthermore, 32.85% have started to pay attention to the development of community, 54.89% of which believe the development of community O2O is promising. Although most of (86.90%) enterprises in the investigated regions have yet tried to establish partnership with Jingdong, Suning, Guomei and other e-commerce enterprises, they are optimistic about the community O2O model of three e-commerce enterprises giants. Based on the results of 500 questionnaires, it is shown that retail furniture industry and catering industry account for 44.91% and 25.36%. Moreover, these enterprises are relatively small, and the staff number of 94.59% enterprises is between 0 and 50 and that of only 2.70% enterprises is between 300 and 500. Most of those enterprises (35.55%) implement O2O model for 1 to 3 years. The result correspondents with the reality, but it is possible that some enterprises confused traditional e-commerce with O2O model. These enterprises participate in online operation mainly by building partnership with online enterprises, only a few (4.78%) through self built website, PP and We Chat.

As for the problems emerging in operating O2O business, 17.46 enterprises think that the franchise fee is too high, 7.07% think the effect is unsatisfying, 48.02% think it will take a rather long time to receive the payment, which posts a threat to business operation, 25.57% think the verification procedures are too complicated, 21.00% think the security and reliability of operation are inadequate, 13.31% think O2O has have a negative effect on common customers, 14.76% think O2O has

challenged the service performance in busy times and 12.27% select other factors. The result is shown in Figure 4.29.
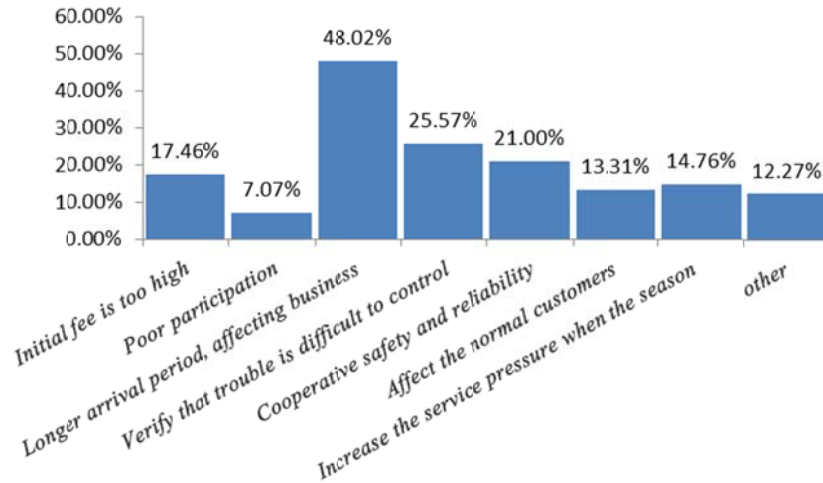
Figure 4.29 The Problems Encountered in Enterprises' O2O Business Operation

When it comes to the payment methods in conducting O2O business, 33.06% choose Alipay, Tenpay and other third party payment platforms and 42.20% choose online e-currency payment. While online WeChat payment and PP payment (20.37%) and offline cash payment (17.46%) and POS (6.65%) have become alternatives for many consumes. As for the services, available in enterprises online platforms (or offline physical stores), about 49.27% mention advertisements and other promotion methods, 25.16% services feedback, 39.29% big data analysis and suggestions, 11.46% information system, 17.46% online customer services and 13.10% others as shown in Figure 4.30.
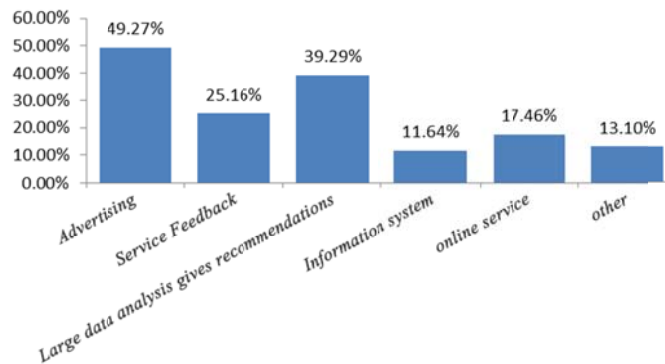
Figure 4.30 Available Services Enterprises Provided or Supported on Online

          Platform or Offline Department

As shown in Figure 4.31, as for the resources enterprises can get in their cooperation with Jingdong, Suning and Guomei, 53.22% enterprises mention the network sales platform, 64.86% refer to broadened available services categories and 44.49% mention wider services areas. As for the key links in O2O, 22.25% consumers select payment, 18.92% choose marketing, 37.84% mention offline services, 8.73% choose docking methods and 12.27% select other options.
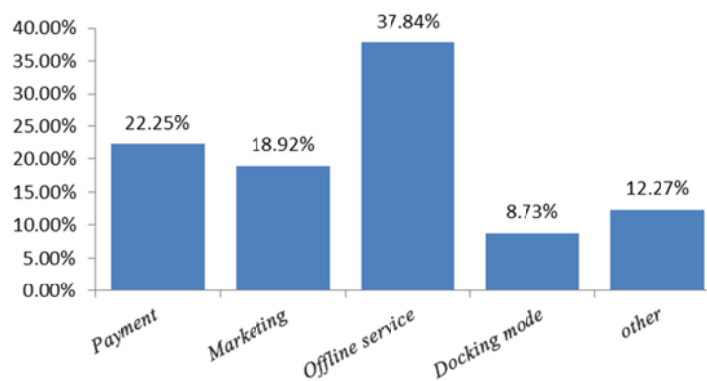
Figure 4.31 The Key link of O2O

When it comes to the possible difficulties emerging in the cooperation with Jingdong, Suning and Guomei, 44.49% mention the relatively higher sales commission volume, 51.35% the lack of technical talents, 34.93% the lack of e-commercial enterprises information technologies and marketing skills, 17.46% the relatively low degree of recognition of the O2O model, 39.92% the inadequate knowledge about the model and 21.21% others. The results showed that talents and sale commission volume serve as one of the most fundamental reasons limiting enterprises' cooperation with the three e-commercial enterprises giants. It is worthy of mentioning that talents are the essential factors in enterprises' development at any time.

As for the advantages of community O2O model, 32.02% mention the transition of retail trade to community O2O model, 48.86% to city and town O2O model, 70.89% mention the impact of e-commerce development to Internet, and 62.79% mentioned the development of mobile internet. As shown in Figure 4.32:
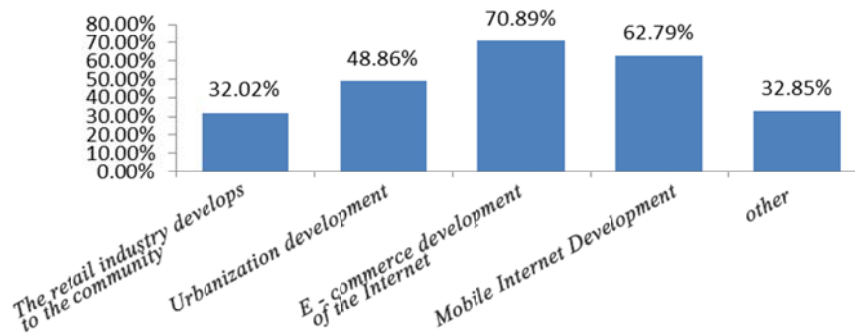
Figure 4.32 The Advantages of Community O2O Model

As for the business fields of the current community enterprises, we can find that retail furniture industries (44.91%) and catering industries (25.36%) are the two main business fields as shown in Figure 4.33. The result is basically in line with the expected services of consumers for online shopping and community O2O. On the

other hand, the proportion of entertainment industries, medical industries, tourism and other industries are relatively small.
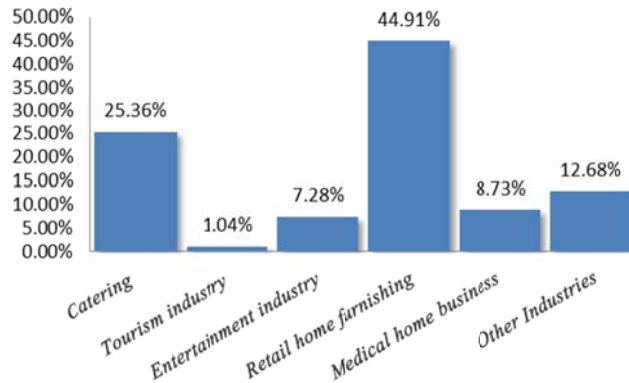
Figure 4.33 The Business Field of Physical Enterprises

Based on the survey results of community delivery system, we conclude that delivery distance (79.21%), products weight (64.86%) and products categories (69.02%) are the three main factors dominate the delivery system as shown in Figure 4.34.
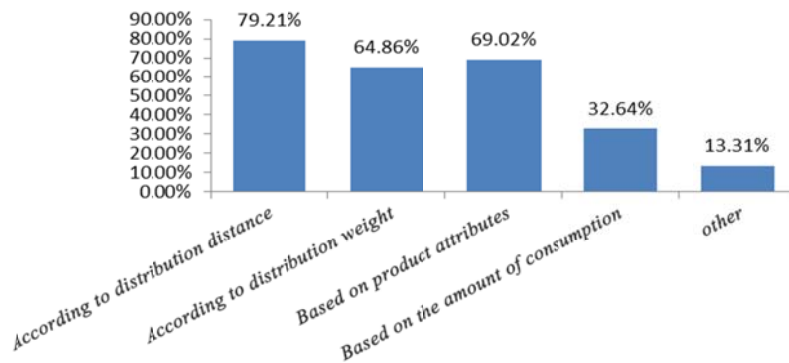
Figure 4.34 Factors Affecting Enterprises' Delivery Approaches

4.3.4 Possible Problems in Community O2O Operation

Based on the questionnaires about consumers subjective understanding of O2O model, habits, physical enterprises' expectation and understanding for the development of O2O operation, it can be concluded that the O2O model operation exists the following problems:

1) Suspicious Attitude Towards the Honesty of Community O2O Model

Without users or traffic, operation is impossible. At present, O2O has been widely recognized by residents in Nanjing communities, however, there is still a large number of residents have never heard of O2O. And there is a considerable difference among residents in cites and residents. Although a range of enterprises have adopted activities campaigns and floor promotion teams to promote their own O2O brands, but community O2O mainly provides for local residents. Therefore, providing more qualified and effective services for consumers should be the focus of O2O model and an experience-oriented O2O should be our goal.

At this moment, a range of integrity questions and post-services problems related to group purchasing websites has become even more serious in network media and consumers' daily life. According to the survey results, it can be concluded that the current community O2O model has encountered the same problems with a wide range of group purchasing websites. For example, consumers are suspicious about the information authenticity, service quality, products return and exchange. Therefore, eliminating these concerns of consumers have become one of the essential problems for e-commerce enterprises.

2) Suspicious Attitude towards Enterprises Certification

Boasting a large number of qualified resources serve as the fundamental advantages of O2O operators. However, O2O operators sometimes will lower the bars of qualification examination for enterprises, thus leading to some negative effects on consumers' interests.

One of the underlying reasons should be the inadequate qualification examination for group purchasing websites, however, the lack of understanding for O2O operation model should also be taken into account. For example, in order to increase users base, broaden business areas, some group purchasing websites have been consistently expanding their services so as to provide more services and products

for consumers, however, the products and services quality have no guarantee. O2O itself focuses on the business model of localization operation, only wen we can ensure the quality and efficiency of the products and services we provided, can we maintain a long-term relationship with consumers. If O2O operators have trouble in keeping in mind this point, it will be inevitable for them to make some mistakes in their strategy making.

3) Inadequate Innovation of Community O2O Model

The relatively clear O2O profits model will inevitably lead to stereotyped development model. Group purchasing websites are the example in point. As we can see, the development of domestic group purchasing websites generally adopted the same pattern, thus resulting to the so-called "thousand groups competition". As a result of the homogeneous competition, the winter of group purchasing industries comes earlier.

4) Difficulty in Achieving Community Services Standardization

As the distance in community service is relatively short, users will be likely to abandon online channels once some problems arise in online services. For example, in laundry, housekeeping and other services, users will be suspicious of the "closed" services procedures, if online services have no advantages or unsatisfying, it will be rather difficult for users to develop high frequent using habits.

At the same time, as the service quality of community O2O is easily influenced by emotion, environment, personality and learning capability, it is difficult to achieve rapid replication. Meanwhile, different communities vary in their geographic features, group characteristics and consumption habits. Therefore, it is nearly impossible for O2O enterprises to simply adopt the standardized services models. In other words, they have to invest much more money and time in the whole process.

How to obtain further understanding and more knowledge of the current O2O model in improving the efficiency of enterprises self-development and in rapid industries integrating? What is the following development trend of O2O? What kind of measures platforms have adopted? How to select appropriate O2O model? Based on the above investigation, we have conducted in-depth interview with the decision-

makers, senior managers, staffs and consumers about their views of O2O, the results as shown below.

Table 4.1 Personal Information Statistics of Respondents

Category	Name	Company Name	Position	Sex and Age	Working Years
Operator (10)	Mr. Zhang	XQ Co., Ltd.	General manager	Male, 46	8 Years
	Mr. Li	AN LLC	Vice General manager	Male, 51	12 Years
	Mrs. Guan	XQ Co., Ltd.	General manager assistant	Female, 44	7 Years
	Mr. Wang	XQ Co., Ltd.	General manager	Male, 38	6 Years
	Mr. Zheng	XQ Co., Ltd.	Vice General manager	Male, 39	11 Years
	Mr. Liu	YC Company	Vice General manager	Male, 36	10 Years
	Mr. Hu	AN LLC	General manager	Male, 42	7 Years
	Mr. Xi	AC LLC	General manager assistant	Male, 49	9 Years
	Mrs. Xu	YC Company	General manager assistant	Female, 50	6 Years
	Mr. Fan	YC Company	General manager	Male, 46	10 Years
Logistics Operation (8)	Mr. Wang	XQ Co., Ltd.	Logistics Manager	Male, 46	5 Years
	Mr. Zheng	YC Company	Vice Logistics Operation Manager	Male, 38	4 Years
	Mr. Liu	AN LLC	Logistics Operation Manager	Male, 36	6 Years
	Mr. Hu	XQ Co., Ltd.	Vice Logistics Operation Manager	Male, 37	5 Years
	Mrs. Xi	AN LLC	Vice Logistics Operation Manager	Female, 41	8 Years
	Mr. Xu	XQ Co., Ltd.	Logistics operation Manager	Male, 45	11 Years

Table 4.1 (Continued)

Category	Name	Company Name	Position	Sex and Age	Working Years
Distribution Operation (6)	Mr. Wang	YC Company	Logistics operation Manager	Male, 49	9 Years
	Mr. Li	AN LLC	Logistics operation Manager	Male, 42	8 Years
	Mr. Wang	YC Company	Distribution Manager	Male, 36	4 Years
	Mr. Ding	XQ Co., Ltd.	Vice Distribution Manager	Male, 38	5 Years
	Mrs. Zhang	YC Company	Distribution Manager	Female, 43	4 Years
	Mr. Zheng	AN LLC	Distribution Manager	Male, 39	5 Years
	Mr. Liu	YC Company	Distribution Manager	Male, 40	4 Years
	Mr. Hu	XQ Co., Ltd.	Distribution Manager	Male, 38	5 Years
Online Shopping Experiencer (6)	Xiao Li	Company Clerk	Clerk	Male, 29	6 Years
	Xiao Wang	Public Institute	Clerk	Male, 27	4 Years
	Xiao Liu	Hospital	Doctor	Male, 26	3 Years
	Mr. Zhang	Private Business Owner	Boss	Male, 28	5 Years
	Mrs. Wang	Company Clerk	Clerk	Female, 32	2 Years
	Mr. Zheng	Freelancer		Male, 34	5 Years

Based on the results of the above listed questions, the following problems can be concluded:

1) Inadequate Strategic Perspective for O2O Model

At the decision-making level, although the decision-makers are generally aware of the fact that current O2O has entered a stage of rapid development and it will develop in full speed in the next 5 and 10 years, and the real problem is how to seize this opportunity, a lot of decision-makers cannot consider the problem from a strategic perspective and they cannot keep in line with the future-oriented development trends and ideas. Moreover, a number of enterprises still remain the traditional single-line online or offline business model can cannot adjusted themselves into the new thinking environment of community O2O featured by " Internet +". Some of them have recognized that O2O has led to the emergence of new business model and the urgent need for social interaction. Based on the general environment, there is more cooperation than competition and more opportunities than challenges, instead of subverting or being subverting. For example, the development of Suning has undergone two phrases: in the first phrase, O2O suffered considerable challenges and difficulties, and in the second phrases, O2O embraced a great amount of opportunities. In the near future, O2O will penetrate from the first-tier cities to the second and third-tier cities. The core of O2O not only lies in improving efficiency or optimizing industrial channels. When it comes to the questions related to community-level consumers, they confess that the demands of consumers have yet been fully satisfied. Given the advantages of traditional offline channels featured by interactive, trust, experience and new economy, catering consumers demand has become the fundamental feature in O2O model. Enterprises should be aware of the fact that the current O2O requires us have the capability to operate UAV while the offline O2O require us to have the capability to drive tractor. Only when you are equipped with these two weapons, can you manage O2O well. The current community featured by a large number of elders, children and pets. Community stands to be the largest occasion for yellow page, therefore, the connotation of community O2O should not be limited by property management; instead, it should be expanded in the direction of cooperation, combination and coordination. Therefore, all enterprises should redouble

their efforts in the above three aspects so as to explore a model fitting for the above features.

2) Lack of Innovation in the Restructuring of O2O Operation Channels

In the management level, they all have recognized that the current business model has no longer been a obstacle. As a kind of local service, community O2O services must cater the customized demands for users by taking the advantages of Internet tools. Furthermore, they must bearin mind both the online and offline channels so as to take satisfying customers demands as its core. They think code scanning; online purchasing and offline picking up are not enough for a complete O2O model. More importantly, managers should take into account the way of leveraging Internet to provide users with more convenient experiences and customized services. For example, Sunning put forward a development model featured by "one body, two wings, three clouds and four ends" in the end of 2013. "One body" means Suning will focus on forging an Internet retail model, which is in line with the "Internet +" put forward by premier. "Two wings" means building online and offline platform, namely the online retail channels and offline physical stores. "Three clouds" means data cloud, dig data cloud and big computing cloud, the final ends of which is to bring more convenient services and experiences for consumers through physical stores, mobile ends, PC ends and home Internet, thus integrating the four links of consumers' consumption behaviors. Standing from the point of consumers, they put forward the above model, coordinating the development of purchasing, after-sales evaluation and services assessment. At present, the retail industry has transformed from one centered on channels and products to one focusing on users. Now all enterprises are striving to establish a model targeted at the expected products, channels and values of consumers by maximizing community activeness, promoting service standardization and improving supply chains efficiency. In a word, enterprises should pay more attention to consumer's experiences and deliver the customer-oriented concept throughout all links of O2O.

3) Employees Simply Focused on Whether O2O can Bring Salary Improvements

From the perspective of enterprises consumers, the most obvious evidence for them is the increasing business amounts and scales as well as growing

salary. Meanwhile, they have also recognized that platforms, products and services are the three essential components of O2O. Much more products and services based on logistics, data and finance will be available for consumers, whose final ends is to provide superior experiences for partners and consumers. They believe the O2O in an age of "Internet +" should center on the nature of industry and core capability so as to achieve in-depth integration of the most advantageous elements and resources from both online and offline. For example, logistics clouds sharing can largely eliminate the redundant construction of social logistics resources and reduce redundancy. The cloud-funding model will change the entrepreneurship ecology. Actually, Internet can be used in each and every link to improve in the formalization level, operation efficiency and resources relocation of real economy for incremental value. That is what we called holistic O2O model.

4) Consumers Paid More Attention to Services Rather than the Connotation of O2O Services

From the perspective of consumers, they pay much attention to consumption experiences rather than the adopted model. They would like to acquire the latest special offers information, consumer activism consultation services, restaurant, tickets, car or hotel booking services, 3C digital devices, home furniture and luxuries online order placing and offline delivery services. Consumers' evaluation is closely connected with enterprises performance. With the development of O2O, a large number of consumers have gradually become accustomed with the consumption model of O2O. At that time, the relationship between business and consumers is no longer as simple as before. Previously, consumers will select the stores they like before consumption, but now they will select one store for consumption after a comparison between different stores on O2O platform, without little knowledge about the actual situation of the store. Therefore, whether the store can provide qualified and satisfying products and services for them become the most concerns for consumers.

4.4 Possible Solutions and Feasible Suggestions for the Potential Problems in the Development of Nanjing Community O2O

4.4.1 Possible Solutions for the Potential Problems in Nanjing Community O2O

Based on the possible problems in O2O model operation, the following solutions through a wide range of channels can be concluded:

1) Solutions for Integrity Difficulties in Nanjing Community O2O Model

First of all, from the perspective of the overall development of O2O industry, we should work to build a comprehensive integrity system. For example, the third-party organization should be responsible for the supervision of O2O operators and evaluate their integrity degree based on the feedback and other investigation results. The evaluation results should be shown for consumers in time to reduce their insecurities and uncertainties. Meanwhile, much attention should be attached to maintain their reputation. If the Industrial and Commercial Departments received consumer's complaints, they should respond immediately and punish involved illegal business operators and announce the results in public.

Secondly, from the perspective of consumers, they should learn more about O2O websites for business credibility and be more cautious about consumption. Consumers should be more careful in front of low-price products or services.

Thirdly, innovating working conception, forging integrity operation and increasing consumer's loyalty. The current O2O operation model of Nanjing community basically focuses on community convenient stores. In other words, everyday life products and delivery services center the main operational institution of its O2O model. According to the survey results of Nanjing community residents; subjective psychology and usage behaviors for community O2O, we conclude that residents have gained a general idea about O2O model and younger people may have a further understanding about it. At the same time, convenience is one of the major reasons why consumers choose O2O model. And with the improvement in people's livelihood and the even more intensive competition among e-commerce enterprises, consumers will require higher level services (54%). And then they will take price into

consideration (27%). As a result, enterprises should work hard to provide multiple services so as to improve consumer's satisfaction and loyalty.

(1) Improving Services Quality Evaluation and Enhancing the Communication with Consumers

In each product shelves or shelves, and even in the specific implementation of its development process, through regular communication with consumers, to listen to consumer perception of service and the quality of service provided by the views and suggestions. And then for consumer feedback, internal research and discussion, develop appropriate countermeasures and standards, so that in the next exchange can be improved or satisfactory feedback. The process of establishing an effective service quality evaluation process is shown in Figure 4.35. This process can provide consumers with an in-depth understanding of the degree of business knowledge and the main nodes concerned, so as to improve consumer satisfaction Degree and the company's service level to provide information. No matter in the process that products were put in the shelves for sell or taken off the shelves, or in the process of products developing, enterprises should maintain interactive communication with consumers on a regular basis, and remain open to consumers' expectations for products or services as well as suggestions in services quality. And then enterprises should conduct internal analysis and discussion so as to formulate corresponding strategies and standards for improvements and positive feedback in the next communication. Furthermore, a comprehensive and effective approval procedures of services quality should be established as shown in Figure 4.35. Through this process, we can form a deeper analysis on consumers' knowledge about businesses, thus providing insights to improve consumers' satisfactions degree and enterprises' services level.
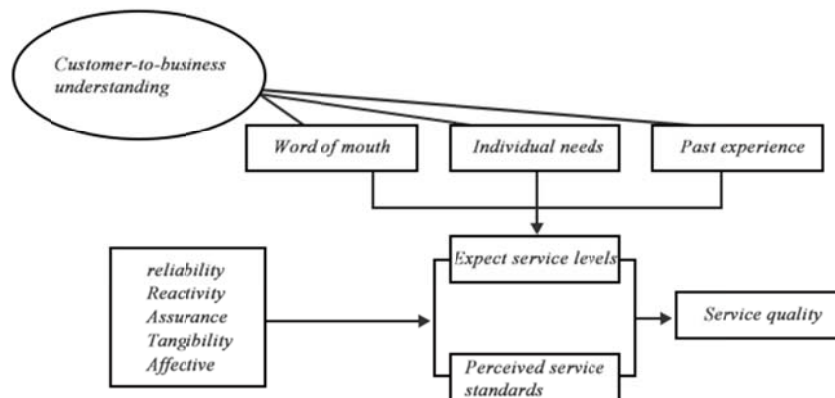
Figure 4.35 Services Quality Evaluation Standards

(2) Adjusting Department Setting and Establishing Complete Services Organization System

All enterprises should complete their own internal department establishment system. The department establishment should be in line with the specific features of all departments to ensure the smooth manufacturing process and provide overall services for different consumers. As for the building of service organization system, enterprises should actively learn the successful practices of those full-fledged enterprises in the same or similar industries. Business should strive to further complete the design of specific standardization process of services links of O2O, figure out the possible problems in these links and actively readjust business structure framework so as to ensure the smooth management and deliver effective processing of specific implementations among a variety of departments.

2) Solutions to the Qualification Related Problems of Nanjing Community O2O Model

First of all, upholding the principle of local management, it will be relatively easy for O2O operators to approve business qualification.

Second, we should conduct cooperation with the local business sectors or consumer associations to facilitate the process of business qualification and business behaviors. In the event that business credit problems arise, relevant departments should work to solve them in time. With the supervision and binding relationship, business behavior will be more standardized.

Third, we should strengthen supervision. Taking the advantages of goods with distinctive local characteristics, enterprises should strive to dig out consumer demands and improve business reputation. Community O2O consumers can log in website to select appropriate products at any time. Meanwhile, door-to-door delivery services are also available so as to keep in line with the rapid pace of urban life and save a lot of time and energy. Furthermore, consumers will have more freedom to choose appropriate colors and styles. For this reason, some community O2O products distinguish themselves with obvious local characteristics. At the same time, it is quite important to meet the daily life demand of the consumers. According to the survey results, consumers' choices in community O2O main dependent on convenience and intelligence (49.62%), and few people mentioned business opportunity digging-out (3.32%), goods or services quality problem solving (3.07%), and the potential hazards of goods transport (3.07%). Therefore, it is essential for consumers to cater the everyday demands for consumers while maintaining supreme products or services quality as well as sound reputation.

Fourth, we should broaden sales channels and improving brand awareness. With the rapid development of the network information age, more and more online consumption ends have come into the life of consumers. Coupled with the arrival of 4G and even 5G era, over 37.1% consumers can use the phone to follow real-time online product information and shopping experiences; and Consumers will more often choose O2O model for consumption, for example, consumers will usually inquire about whether there is online group purchasing activities. At the same time, according to the survey for the access to O2O channels, most consumers (60%) say they normally get information through network media channels; therefore, businesses should broaden their business scales and sales channels. For example, they can take advantage of a large number of We Chat public accounts and other forms of publicity to promote themselves so as to improve their brand image.

Fifth, we should take "food" as its center, and "daily necessities" as supplements so as to improve the consumption frequency of consumers. The expected services of Nanjing community O2O consumers are mainly focused on food and beverage, accounting for 50.4%. Therefore, the enterprises with community O2O model should seize the great opportunity and make full use of the huge market. They

should provide more products and services catering the practical needs of consumers. For example, apart from door-to-door delivery services and cash on delivery services, they can also provide hosting package pick-up and management and other value-added services, which will definitely enable consumers to get a better consumer experience, thereby increasing sales.

Sixth, redoubling our efforts in strengthening the third-party risk control to eliminate and reduce consumption disputes. Consumption disputes, with products quality and products prices, are inevitable between business and consumers. Traditionally, these problems can only be solved by themselves offline, however, the current community O2O model enable us to solve these problems through online consultation and products return and exchange services, thus help us save a great deal of time and efforts. According to the survey, about 50.23% respondents choose to return and refund directly as products or services problems arises, and the proportion is relatively large, so this requires enterprises pay more attention to product quality and improve their services. That is to say, they not only do a good job in pre-sales services, but also should pay attention to after-sales service so as to minimize the occurrence of these problems. At the same time, the third-party regulators of community O2O platform should take the responsibility of examining enterprises qualification and operation situations. As for the problems reflected by consumers, they should also send someone to conduct further investigation and verification, and strive to rectify it. If some enterprises refuse to rectify the platform, they should cancel the qualification of these platforms so as to eliminate network risks.

3) Solutions to Inadequate O2O Innovation Capability

The first solution is diversified business model. For example, we can provide a variety of services with house renting, car renting and garment customization included. On top of that, the profit model can be very flexible: some charge for Firefox, some for enterprises and some for advertisements. The business strategy is to be determined in line with the specific circumstances of local conditions; therefore, symbiotic coexistence and mutual benefits can be achieved.

Second, we should focus on business ideas. O2O operators cannot just focus on the low-cost route, but also should take advantage of their own media advantages to help businesses tap some value-added services. Many enterprises do not

quit the diversified business system, but as a result of inadequate promotion, the services they provided did not help them get the users. At this time, O2O operators can work together with the commodity inspection agencies to promote the development of diversified business.

Third, O2O itself lay great emphasis on the operation model of offline experiences, however, the existing group purchasing websites do not grasp this essence, instead, they just rely on low-cost strategy to attract users. The O2O itself can be conductive and manageable, such as, the offline physical stores customer consultation and free experience links. The key lies in whether O2O operators and businesses are innovative enough to make full advantage of them.

Fourth, implementing differentiated consumer management to improve service efficiency. Differentiated management is very important to improve customer satisfaction and service quality; therefore, community O2O businessmen should grasp the actual and potential needs of different consumers through various channels. We can use the "Internet +" and other advanced technologies to analyze the data of consumers' consumption so as to dig out the consumption habits of different types of consumers, and estimate the demand of different types of consumers based on these data; These data should be consolidated with those gathered by market surveyors from the market for a comprehensive understanding of the actual and potential demands of consumers. In short, only with differentiated strategies to customize the different consumers demand can we improve consumer satisfaction in a more effectively and effectively manner, thereby enhancing consumers' loyalty to enterprises' products and services.

Fifth, striving to gather further market information and forging quality service concept. Market information is the fundamental and necessity for businessmen to engage in marketing. Therefore, the community O2O businesses must be targeted at and gather the current market information at home and abroad, on top of that, detailed summary and analysis, timely feedback from the market are also essential, which serving as the basis for occupying a favorable position in the increasingly competitive market. Various businesses should strengthen the breadth and depth of information collection and implement feasible and operative strategies based on the characteristics of O2O platform. Specific practical measures can include organizing

regular consumers for free picnic, providing them with free new product experience services or striving to provide refined business products.

4) Solutions to the Difficulties in Standardized Replication for Community Services in Nanjing

Let's face the challenges; community O2O should pay more attention to develop the consumption behaviors of all parties involved. In general, only when we can coordinate the interests of enterprises, property and street administrative offices can we ensure smooth business promotion and then carry out value-added services to achieve profitability in the mature market. Therefore, compared with the traditional e-commerce, community O2O has to face more interest parties. In addition to consumers, enterprises, property and street administrative offices all should be taken into consideration. At the same time, the competent departments should promote public services O2O from the perspective of strengthening community management.

Since it is very difficult to standardize O2O model replication in this community, we should innovate ways of working, gain insight into consumer needs and dynamics, maximize the value of each region as much as possible. By providing enterprises with information on the use of goods and some special tips for free, we can trigger the consumers' demand for products experience and consultation; therefore, enterprises can dig out the selling points of their products. For example, jewelry business can provide such consultation on jewelry collocation so as to narrow the distance between businesses and consumers and win the support and loyalty of consumers, thus making follow-up consumption possible.

4.4.2 Construction Strategies of Community O2O Model

As concluded the determinants of O2O products purchase decisions based on the qualitative analysis, the author proposed an interpretation model to analysis the purchasing tendency of O2O products (As shown in Figure 4.36). The model shows the formation process of the purchasing tendency of O2O products, which serves as important factors affecting consumers' consumption behaviors. On top of that, all forms of information also influence consumers purchasing behaviors and acceptance. On the one hand, information can directly influence consumers' attitude, on the other

hand, information can affect consumers' conviction, which will impose indirect influence on consumers' attitude.
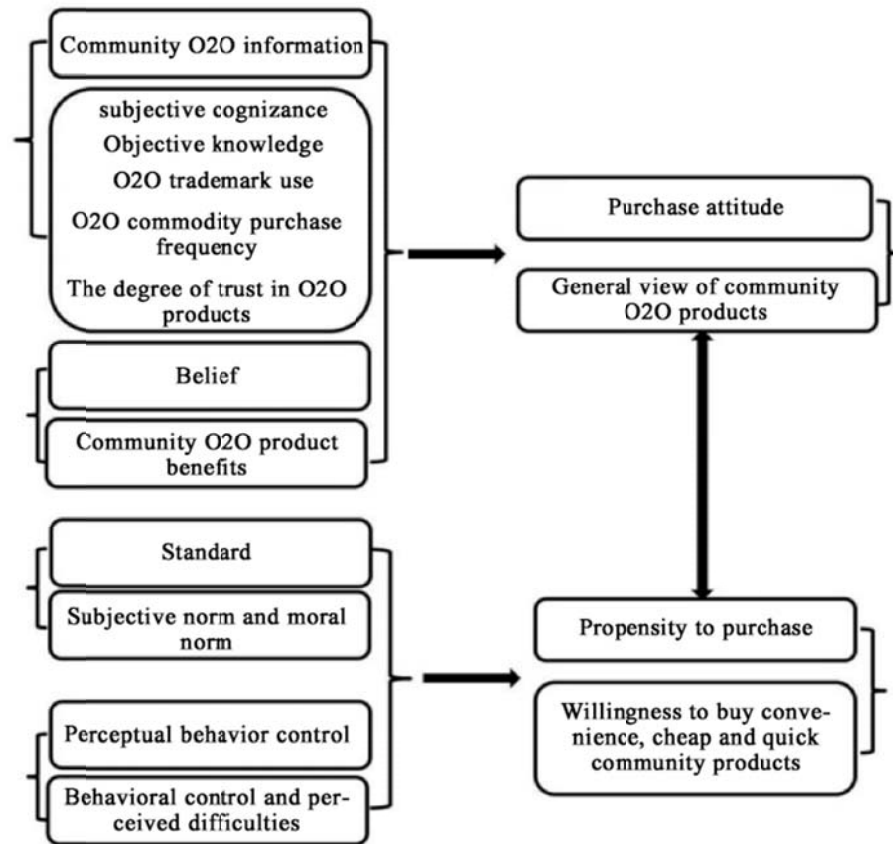
Figure 4.36 The Interpretation Model of O2O Product Purchasing Tendency

Based on the O2O decision-making model, O2O decision procedures can be divided into the following phrases: phases

1) Demand verification. Consumer's demands can be triggered in two ways: one is triggered as a result of a kind of specific personal demand, and the other is by the external information stimulation.

2) O2O conversion motivation. As consumers verified their consumption demands, they will gather information through internal or external channels and further process that information to further verify demands. The connotation of

O2Oconversion motivation refers to the motivation of online purchase and offline consumption as a result of information (including both online and offline information) collection. According to the research of the online information credibility, O2O conversion motivation mainly consist attraction and reliability.

3) O2O purchasing desire. It refers to consumer's desire or possibility of purchasing products or services in O2O websites. After gathering relevant information, consumers will propose possible options based on this information and finally select one in several possible options as the final purchase decision. O2O conversion motivation and O2O purchase intention are affected by environmental factors and personal factors. Environmental factors mainly include online characteristics and offline industry categories. The online O2O characteristics of catering O2O websites consist of cheap discount and reputation. Different characteristics of the consumer will have different conversion motives and purchase intention. At the same time, different Offline industry types, that is, different offline restaurants also have an impact on consumer purchasing decisions. The impact of individual factors of consumers mainly includes perceived risk and life style. Perceived risk includes dimensions of financial risk, performance risk, time risk and social psychological risk. In this model, perceived risk is simplified to financial risk so as to achieve effective control over perceived risks. Life style includes diet habits, social gathering, shopping style, quality orientation, attention information, health habits and nutrition habits.

4) Purchasing decision-making. After an evaluation of different possible options, consumers will select one of them for consumption. In the O2O purchasing decision-making model, purchase selection refers to online booking and transaction.

5) Using and evaluation. Consumers can come to restaurant for consumption with certain certificate and make evaluation of the services, quality and environment provided by offline restaurant.

6) Deposition. If consumers are not satisfied with the consumption experiences, it will have a positive effect on the next consumption experiences; if not, they may pay much attention to information collection and option evaluation or just give up this kind of consumption approach

CHAPTER 5

CONCLUSION AND SUGGESTIONS

5.1 Conclusion

1) In most of the third and fourth tier cities, consumer awareness of the community O2O model is still in the concept stage and a vast majority of residents lack the basic understanding of community O2O model, let alone the operating method, usage and construction approaches of O2O model. However, most of the surveyed consumers, especially white-collar workers and young people show great interests in community O2O model. Furthermore, consumers show intensive interests in the following categories of offline community business, such as life services with snack foods, tobacco, alcohol and beverages and daily chemical included; community services with package delivery, domestic service, news thesis and magazines, books, medicine and water, electricity, heating and coal fee payment included; catering services with Chinese food, features snacks and dishes included. In the start of e-commerce enterprises community O2O model, life services and community service should account for heavier proportion and the site should be selected in the appropriate community. Second, only a few local supermarkets, community enterprises in most third-tier or fourth-tier cities have adopted O2O model. But they all showed strong interests in community O2O model and expressed positive attitude towards the development of the model. But they also expressed their concerns, which mainly include technology "short plank", inadequate professional talents, inadequate information and marketing techniques in e-commerce enterprises, logistics and delivery.

2) Low price is still the focus of marketing in the O2O model. As a result of the differences in eating habits between Chinese and westerners, even the mature O2O model in the catering industry didn't achieved success. For example.

Only Dazhongdianping, similar to yelp, has formed relatively good reputation in Chinese market. Actually, this can be attributed to Chinese dinning culture. The reason why group-purchasing model can gain popularity among the general public is that is in line with our eating habits and consumption habits. Therefore, based on the research results, we can conclude that low price will remain the core of O2O model.

3) As implementing the O2O model, chain retail enterprise should take their own business characteristics and practical capability into consideration. The operating model and applied practices should be given more emphasis. It is necessary for us to view O2O model from the perspective of the overall development of enterprises development. It is inevitable for enterprises to encounter a wide range of challenges in forging the O2O operating model. Nevertheless, chain retail business must take full advantages of their own advantages in physical stores and grasp the practical demands of customers so as to provide more high quality shopping experiences for them. At the same time, it is also fundamental for them to enhance their network platform, speed up the building of logistics and distribution system and facilitate online-offline integrated development.

As making marketing strategies, enterprises should take the lifestyles of targeted consumers into consideration. Especially in the catering industries, dishes styles, flavors, tastes are essential in catering the special needs of different consumers. Furthermore, an in-depth clustering analysis of consumers' lifestyles can help enterprises make targeted marketing strategies so as to provide differentiated services. On top of that, market segmentation is also conductive for enterprises to grasp the dynamics of targeted markets, reasonably allocate enterprises resources and improve market competitiveness.

4) The three giants should redouble their efforts in conducting O2O technology and talents training for community enterprises and give more funds support, thus successfully delivering their products and services to the ordinary people. It is also conductive for enterprises to increase their markets shares and competitiveness.

Actually, reputation is also extremely significant for O2O model and the future O2O model will be more featured by social marketing. That means reputation will be a significant link in this process. The success of Dianping is not a coincidence; instead, it is an inevitable result of the Internet world. Online shopping has

experienced a process from one featured by great uncertainty and risks to one featured by great potential. And reputation is one element throughout the development of online shopping. Although online shopping is becoming increasingly secure and reliable, the products consumers obtained are not as good as described; therefore, reputation has naturally become an important index for reference. In the time that O2O is prevailing, reputation marketing should also be attached considerable significance in the catering industry. Although reputation is not the main factors effecting consumers' purchasing intention, products with good reputation will generally have higher O2O conversion motivation and purchasing desires compared with those with relatively poor reputation based on the survey results.

5.2 Research Results Analysis

First of all, all the survey results are in line with consumption behaviors theory. Because consumers' consumption is directly influenced by consumption demands, which will stimulate consumers to make consumption decisions. However, there will be two circumstances: one is that the demands were satisfied, and the other is over satisfied, which means as the more consumers purchase one products, the less demands for the products. Actually, the consumers' satisfaction degree to these products is a reflection of satisfaction effects which varying from person to person. As enterprises can take full advantages of the measurement of satisfaction effects of consumers in different regions and during different periods, then they can generate considerate profits so as to facilitate the development of enterprises. Although residents in Nanjing communities have yet formed an extensive knowledge about O2O, but for some who have online shopping experiences, they express positive opinion towards the model. But more consumers focus on whether it can bring more benefits or convenience to their daily life. Other resident's comments and evaluation will also influence their engagement degree and acceptance level. Nanjing is a city governing 11 districts with Qinghua, Jianye, Gulou, Yuhuatai, Qixia, Jiangning, Luhe, Lishui and Gaochun included, 81 streets and 19 counties. The population of Nanjing totals 6.4872 million by the end of 2014, with an area of 6587.02 square meters. Therefore, residents' consumption level and cultural deposition are different from

those of other countries. Furthermore, as a result of varying economic development and population mix among different communities in Nanjing, residents' attitude towards community O2O will be slightly different. However, the difference will be reduced with the ongoing development of network and accelerated moving forward of urbanization, community O2O will be expanded form first tired cities to second-tired or even third-tired cities, from prosperous business circles to rural suburbs markets.

5.3 Research Strategies and Suggestions

As the development of current "Internet +" continues to accelerate, all O2O operators can not focus on one city or from the perspective of one level in planning their development strategies. As this article is based on situation of Nanjing community O2O, it cannot provide a very comprehensive analysis for the current community O2O development of the country as a whole, is can also reflect the status quo of that of the country because the conflicts between online and offline channels marketing as well as channels management are the two challenges that enterprises have to deal with in implementing O2O in Nanjing or in other parts of the country, therefore, the factors need to be considered and the tasks need to be fulfilled are exactly the same. The following are some possible solutions that can provide some insightful and feasible perspective for enterprises:

Firstly, enterprises can learn from the successful practice of Suning, enterprises can adopt the online-offline price comparison approach to generate a consistent online-offline price perception. At the same time, we will also take the differences between online and offline channels into consideration. Based on the distinctive features of both online and offline channels, enterprises should match appropriate products and sell different products in different times so as to attract users' attention and stimulate consumption in the long term. Meanwhile, operators can adopt different marketing channels in line with customers with personalized demands by consumers' consumption behaviors analysis, thus improving maintenance and marketing effects.

Secondly, Operators need to make adjustment in the fields of assess management, supply chain management and support platform. If enterprises change

the previous volume statistical methods of single channel sales in appraisal management, and divide the completion of an order into order placing, delivery and inventory providers who will contribute different proportion of sales performance. When it comes to the supply chain management, as offline channel will be restricted by regions, the conflicts between inventory structure and customers mix will lead to inadequate inventory efficiency or frequent inventory transshipment, which will generate considerable difficulties in achieving collaborative sales and inventory sharing between online and offline channels.

5.3.1 Policy Recommendations

E-commerce enterprises community O2O model is the core of the construction of system, but even the perfect system cannot guarantee the success of e-commerce company community O2O model. At the start of community O2O building period, an e-commerce company must conduct scientific analysis on consumers' consumption capability in the target areas prior to the exploration, manage online and offline interactive customers flow during the exploration and timely make adjustment in accordance with the management situation.

First of all, enterprises should select the most appropriate partners. As selecting partners, both e-commerce companies and community companies should be taken into consideration. Both sides need to redouble their efforts in maximizing the advantages and making up for the disadvantages of both sides for win-win results. Otherwise, the failures of e-commerce company community O2O model will not only bring investment losses, but also affect the main areas of business and pose a threat to the company's development. For community companies, it might be better for them to select those online e-commerce companies that can provide great technical supports, equipped with large platform, numerous membership basis and powerful logistics and distribution as partners, which will come a long way to facilitating the construction of a reasonable information systems and achieving seamless docking. On top of that, the relatively large platform, considerable membership basis as well as powerful logistics and deliveries provided by e-commerce enterprises can help to optimize the logistics and delivery systems of community enterprises.

Secondly, much efforts should be make in guiding online and offline customers traffic. E-commerce enterprises and community enterprises attach great significance in guiding online-to-offline and offline-to-online customers flow driven by community O2O model. Besides that, online-offline interactive customers flow also stays at the core of the building of full channels sales platform under the community O2O model. Therefore, the current O2O model operators should further enhance promotion; improve residents' awareness of e-commerce enterprises community O2O model and its advantages. Furthermore, many efforts should be make in improving consumer's recognition and engagement of community O2O model, community online supermarkets and community We Chat malls.

Thirdly, enterprises should eliminate the advantages of single customer source. Actually, the official websites are the best example of generating added value by replacing advertisements and counters costs with operation costs. In this way, consumers can search for more products information to keep in touch with the latest stores dynamics. Most importantly, Consumers will form a relatively higher reputation for the network marketing shop and eliminate their insecurity for the store reputation. Meanwhile, official websites can help to guarantee the legitimate rights and interests of customers, as they can resort to products descriptions and announcements released on the websites and take legitimate measures to safeguard their rights and interests whenever conflicts or disputes occur.

Fourthly, enterprises should strive to forge multiple operating and profit model. Although O2O profits model is relatively clear, it is inevitably lead to homogeneous development patterns. While the O2O operating models in other countries are relatively multiple and diversified. For example, house renting, social taxi renting and customized services are all available. Furthermore, the profit model is rather flexible, with some charging for users, some enterprises and some advertisement. The specific operating strategies are determined in line with the specific conditions of local communities. Only in this way, mutual benefits and synergistic development can be achieved.

Finally, many efforts should be made to construct a complete honesty system. Just as the CEO of Iduona put it, "Honesty is an essential component of success as well as an kind of intangible wealth." The building of a complete honesty system is of

immeasurable significant to the practice of entrepreneurship-oriented e-commerce practice and even the positive development of the whole e-commerce industry. We should conduct strict qualification examination for O2O businesses through 315 Certificate Authority and other official platform so as to elevate certificate standards. Legitimate business license and relevant procedure should be approved.

5.3.2 Suggestions on Channel Marketing and Site Selection

In the above chapters, the researcher conducted theoretical analysis on the concept, connotation and characteristics of community O2O. The concept and development prospect of O2O model is also covered in the previous chapters. Furthermore, we have conducted survey on the characteristics of consumption psychology for community O2O. From the perspective of consumers and offline communities, the researcher analyzed the business setting, information platform building and logistics, which offer insightful perspectives for the business positioning, marketing direction, service setting, cooperation contents and cooperation points in the construction of e-commerce enterprises community O2O model system. Based on the above comprehensive analysis and the current situation of domestic O2O development, the author has proposed the systematic framework of e-commerce enterprises O2O model (As shown in Figure 5.1) which is divided into the following four parts: Information system building, full channel sales agreement, business and services setting and logistics and delivery system optimization.
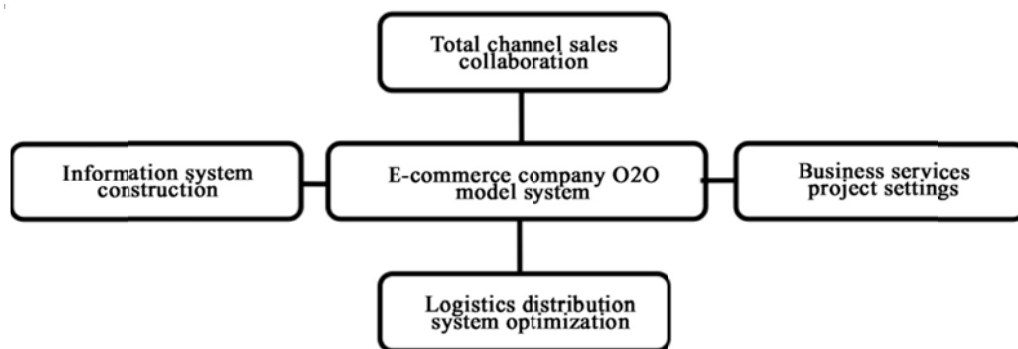

Figure 5.1 The Community O2O Model System of E-commerce Business

The above four interactive and inseparable elements are of essential significance in the construction of e-commerce community O2O model. Among others, information system building serves as the premise of smooth operation of all links involved, while the achievement of community full channel retail collaboration is the development direction and ends of both parties, as well as the new business growth point of the partnership. The business services of all range of online markets and offline communities stay as the core of a successful community O2O model. Logistics and delivery system optimization is the real driving force of the implementation of e-commerce enterprises community O2O model.

1) Collaborative Sales Through Full Channels

The full channels sales of e-commerce enterprises community O2O model integrate Internet, mobile Internet and physical stores. By seamless integration of the three channels, consumers are accessible to online and offline products and services without restrictions in areas and time. E-commerce enterprises can provide a large number of products for community supermarkets by leveraging the advantages in procurement of a wide range of suppliers. Thus, community enterprises can select the most appropriate products to expand their business categories and maximize business scales. At the same time, operators can expand their markets shares by providing knowledge of e-commerce business techniques and management philosophy. By providing intelligence supports with community online markets business positioning, marketing, sales site selection and products selection, it can successfully eliminate community's enterprises' uncertainty and insecurities so as to adopt to the role of e-commerce enterprises. WeChat markets and WeChat public accounts can enhance the interactive connection between community and users. It is believed the interactive connections can enhance users' engagement and loyalty so as to obtain more sales opportunities. However, enterprises must redouble their efforts in logistics and delivery, distribution and management. For example, specific staffs must be assigned to manage online and offline orders, store and classify distributed products to ensure those products deliver the hands of customers in time and without damage.

2) Management Services Project Setting

Business services are the driving force to attract consumers to purchase products and services in both online and offline physical communities. It is also the key to maintaining and increasing consumer engagement. Actually, the business services provided by online sales platforms and offline physical communities are different in the implementation of e-commerce enterprises community O2O model. As businesses select products, they will first select those best-selling goods. As the current offline communities are no longer small-size supermarkets, but a combination of a wide range of community services as to increase consumer engagement and loyalty. As setting offline physical community business services, enterprises should reasonably adjust the ratio of selling products in accordance with their location, the main customer groups, the age structure of targeted customers, etc. Secondly, enterprises should expand their business and improve consumer engagement and loyalty. In other words, community should be more community-friendly and strive to build itself into a convenience center for residents. A wide range of services can be added into their business scales, such as catering, domestic service, package delivery, news, thesis and books, lottery tickets, ticket booking, public utilities premium collection, recharge and so on.

3) Logistics Delivery System Optimization

Different from traditional logistics and distribution model, the logistics and distribution model of e-commerce company community O2O mode will take the logistics strength of both e-commerce companies and community companies into consideration. In particular, when designing and planning logistics and distribution solutions, city's economic development, order volume, radiation range, distribution distance and other factors should be taken into consideration based on the features of local conditions. The logistics and distribution solution of e-commerce enterprises community O2O model includes independent distribution provided by one party, cooperative distribution provided by both parties and the distribution provided by third party outsourcing logistics companies. An effective coordination of these distribution methods can greatly improve logistics efficiency, lower cost and enhance customer satisfaction. Time-limited point-to-point logistics and distribution is an important embodiment of the distinctive features of e-commerce enterprises

community O2O model. It is also an important means to improve the customer loyalty and boost sales volume. Furthermore, order time, order amount, order delivery distance, coupled with the city's economic situation, population distribution and income must be taken into consideration in enterprises set the standards of free point-to-point logistics and distribution. At the same time, paid point-to-point logistics and distribution is designed to meet customer individual needs, thus becoming one of the important links as e-commerce enterprises community O2O model engage in differentiated competition and provide personalized services. It can also be viewed as a new growth point. Paid time-limited point-to-point logistics and distribution costs should be charged based on the economic development and income level of residents. Distribution and delivery distance and fees should also be identified.

5.4 Research Prospects

In the markets with relatively mature network channels, it is quite difficult for independent O2O physical channels to survive and grow. The combination of "low prices" and "high cost" will result to lose in a rather long time. Therefore, the following three aspects must be taken into consideration as enterprises are in their exploration of O2O physical channels.

1) Operation Models of O2O Physical Channels

If O2O physical channels are operated in the model featured by independent channels, they will face fierce competition with the traditional channels and network channels. That is to say, they must open selling channels, expand business, increase consumer's acceptance and invest more money, which is involved in higher risks. Enterprises adopted this model must take products categories, services, logistics and traveling time into consideration as making decisions. If enterprises do not choose O2O physical channels as independent operating channels, but cooperate with network channels, then they will form a full-channel mode with network channels as the core and supplemented by O2O physical channels. If there are not adequate funds, by cooperating with network channels, enterprises can take full advantage of both the traditional physical channels and the network channels to provide qualified O2O services and experience and lower the threshold of O2O

channel development.

2) Products Categories of O2O Physical Channels

O2O physical channels should choose to sell customized, differentiated products, and it is not necessary for them to adopt low price strategies, which are generally adopted by network channels. Instead, they will try to make them more competitive by virtue of supreme on-site experience, logistics, and after-sales service. Bearing mind both the price and service, they have formed a more distinctive comprehensive strategies "feature goods + feature services", which has effectively improved customer acceptance of the O2O physical channels and promoted sales.

3) Site Selection of O2O Physical Channels

Community O2O is based on community, which is conductive to reduce the capital risks. The key to community O2O is to select the appropriate products that are relevant with people's everyday life, instead of unpractical commodity display. The site selection of O2O physical channels means that the community is indispensable for community O2O. By leveraging the popularity and population traffic, we can achieve the goal of promotion

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APPENDICES

APPENDIX A

AN SURVEY OF THE KNOWLEDGE OF CONSUMERS AND ENTERPRISES FOR COMMUNITY "O2O MODEL"

Hello! O2O e-commerce model has gained increasing popularity in recent years, and the classification and business scales of O2O markets have been more specific and reasonable. In the process, community O2O has earned considerable advantages. For this reason, we have make the following questionnaires. We do appreciate your cooperation and efforts to finish this questionnaire. The questionnaire will be anonymous and your answers will only be used for data analysis. Thank you so much for your cooperation!

NOTE: community O2O e-commerce business model refers to "community online to offline", which is a kind of localized e-commerce model providing group purchasing, maintenance and other community-related services for consumers. Please sign "√" to mark your answers.

One: Personal Information

1. Name:

2. Sex: A. Male_____,   B. Female_____

3. Resident:

      A. Main district (Baixia district, Xuanwu district, Gulou district, Qinghuai district, Jianye district, Xiaguan district, Qixia district, Yuhuatai district);

      B. Suburb (Pukou district, Luhe district, Jiangning district);

      C. 2 counties (Lishui county and Gaochun county);

4. Age: A.15-19, B. 20-25, C. 26--30 D. 31--35   E. 36--40   F. over 41

5. Whether you have subscribed the enterprises Wetchat account of Jingdong, Suning or Guomei? : A. Yes,   B. No

6. Your salary A.<2000 B.2000-5000   C. 5001-8000   D. 8001-10000 E. >10000

7. How often do you go shopping online? A. <3   B.3-5   C. 6-8 D. 9-10   E.>10

Two: Knowledge About Community O2O

1. Do you know community?   A. Yes   B. No

2. Do you know community O2O model?   A. Yes   B. No

3. Have you ever tried O2O comsuption model?   A. Yes   B. No

4. What kind of products or services have you purchased through community

     O2O model?

        A. every-daily products

        B. fresh food

        C. life service

        D. catering services (you can choose more than one options)

5. If the enterprises or supermarkets adopt O2O or community O2O model, would

        you like to purchase products through their official websites or WeChat markets?

        A. Yes   B No

6. Will you follow online shopping information?

        A. Always   B. Sometimes   C. Seldom   D. Never

7. What do you prefer? Online shopping or physical stores consumption?

        A. Online shopping   B. Physical stores consumption   C. Both   D. Neither

8. Do you think online products or services order and offline consumption is reliable?

        A. Reliable   B. Not sure   C. Unreliable   D. Don't know

9. What kind of online consumption information will you usually follow?

        A. Group purchasing websites

        B. WeChat public account

        C. APP

        D. Don't follow

10. Do you think community O2O is more practical compared with Ali, Meituan or

        other O2O websites?

        A. More practical   B. Less practical   C. Almost the same   D. Don't know

11. What do you think is more important in the commercial model of community

        online offline interaction?

        A. Service   B. Price   C. Efficiency   D. Others

12. What do you think is more important in community consumption?

    A. Evaluation   B. Brand C. Price   D. Sales volume

13. What industries do you think community O2O model should be applied into?

    A. Clothing

    B. Catering

    C. Everyday life products

    D. Maintenance and domestic services

    E. Community friends making, BBS

    F. Others

14. What do you think is the advantage of community O2O model?

    A. Making consumption more easy, convenient and intelligent

    B. Taking full advantages of location, closer to residents' life

      Core complete after-sales services

    D. Being able to fix possible transportation damages

    E. Eliminating the concerns over products quality

    F. Conductive to business opportunity digging out, facilitating the development

      of regional business

    G. Others

Third: Catering Industries

1. Do you have catering demand?   A. Yes   B. No

2. What kind of food do you prefer?

      A. Chinese fast food

      B. Western fast food

      C. Specialty

      D. Special snacks

      E Others (You can choose more than one answers)

3. The expected consumption level:

      A. High level   B. Middle and high level C. Low level

4. Expected per capital consumption:

    A. Less than10 Yuan B.10—15 C. 16—25 D Over 25 Yuan

Four: Life Services Investigation

1. The products in your community include:

     A. Tobacco, alcoholic or beverage

     B. Daily chemical

     C. Leisure food

     D. Grain and oil

     E. Fresh food

     F. Others (You can choose more than one option)

2. Your consumption level   A. Low level   B. Middle level C. High level

3. Would you like to purchase fresh fruit, vegetables or meat in enterprises websites or WeChat Malls?

     A. Yes   B. No   C. Not sure

4. The expected payment and package picking up approached:

     A. Cash on delivery

     B. Online payment

     C. Door to door delivery

     D. self-picking up

Fifth: Community Services Investigation

1. Would you like to include water, electricity, air condition or coal fee recharge services in community enterprises websites? A. Yes,   B. No

2. Would you like to include domestic services in community enterprises websites? A. Yes, B No:

3. Would you like to include books subscription, medicine, lottery or book purchasing in community enterprises websites?   A. Yes,   B. No

4. Would you like to try community package delivery and picking up services? A Yes] No

APPENDIX B

INTENSIVE INTERVIEW OF THE COGNITION OF ENTERPRISES OPERATORS TO COMMUNITY "O2O" MODEL

A brief introduction to the Interview: As we review the development of the Chinese retail industry in the early half of 2015, we can easily come up with those buzz words such as "e-commerce enterprises", "O2O" and "full channels". From the perspective of the whole industry, e-commerce has been posing threats to the traditional retail business. In order to brave the challenges as the emergence of O2O model, the current retail enterprises are striving to searching for the transformation of O2O model. For example, Suning has adopted the new model featured by physical stores +e-commerce enterprises+retail services providers". As the current investment in this field is still inadequate, the effect is not so obvious in a short term. But according to some research, it is believed that mobile internet has made the online-offline interaction among individual consumers more easy and available. In the age featured by the emergence of O2O model, how should the traditional offline retail O2O be implemented? What's the difficulties and challenges faced by the current domestic offline physical stores in their transformation? Is there any value for the investment in offline retail physical stores? Selecting 10 enterprises operators, 8 logistics managers and 6 distribution directors and 6 online shoppers as interview, we have conducted the following interview in an attempted to acquire more information about O2O operating model.

Operators: (10)

The first interviewee——XXX, General manager of the Marketing and Management center, XXX company

Interview time: November, 17th, 2015 15:00-16:00

[Q1] What do you know about the current development of community O2O model and what do you think about the following development of community O2O model?

Key point: As the IT industry is developing by leaps and bounds, C2B, B2B, B2C and C2C coexist and enjoy their respective market shares and development potential. As numerous capital consistently flow in, the whole O2O industry is taking place fundamental changes. In the long term, the Internet industry will completely change the traditional industry based on original buying and selling. In the future, the market value of the Chinese O2O market will at least reach several billion or even tens of billions on a year basis. In addition, the annual value will over trillion Yuan. That is to say, the Chinese O2O industry is still in on the initial stage of its development.

[Q2] Have Jingdong (Sunning and Guomei) ever conducted cooperation with your company? Do you have any suggestion for the activities implemented by these companies?

Key points: Several companies have somewhat impacted by the above-mentioned enterprises by far. Suning, Guomei and other traditional retail enterprises take advantages of their own offline stores, online platform and online-offline integration to achieve the transformation of O2O. For example, Suning had built the model featured by the same price between online and offline across all range of products and throughout all channels on 8 June 2013, which symbolizes the full run of O2O model in Suning. Standing from the point of Suning, it has helped Suning break the status quo of physical stores along the way of their transformation in their competition with their own electronic channels and facilitated the innovation and development of retail industries.

With O2O model, the physical stores under Suning are no longer stores with single selling functions, but Cloud Stores, a new type stores integrating demonstration, experience, logistics, after-services, entertainment and marketing. Cloud Stores will integrate free WIFI, e-price of a full range of products and mulch-

media electronic shelves. Internet and IOT technologies will be employed to collect and analyze data of all kinds of consumption behaviors, pushing ahead with the development of big data age of physical retail industry. Convenience stores and supermarkets have established their own electronic stores in a short time, moving ahead with the transformation and upgrading of the traditional retail industries. It has not only brought great convenience and benefits for consumers, but also brought win-win results for traditional retail industries and the whole electronic business market. In addition, it has also provided a practical approach for traditional enterprises in their way to integrate into Internet. Jingdong O2O has fundamentally renovated the operation manner of traditional retail stores. On the official online stores website of Jingdong platform, consumers can search for the nearest stores under its name for shopping by LBS positioning. In addition, the connected Warehouse system can help convenience stores establish online shopping malls, fresh food supermarkets and cold drink stores, which can largely enrich the products categories, change the existing product structures and deliver multiple sales model. In the near future, pre-sale model will come into being, which enables enterprises purchase and produce in accordance with the actual demands so as to achieve "zero storage".

[Q3]What's the advantage of O2O compared with other community?

Key points: "Compared with the traditional profit-oriented platform, O2O lays much emphasis on community exchanges and the building of interactive community culture. O2O is open to entrepreneurs nationwide and consumers. At the same time, O2O is designed to deal with the actual demands and life service requirements of community residents.

[Q4] What do you think of O2O procedures? What do you think is the most important link?

Key points: With the population of Alipay and WeChat payment, a wide range of enterprises have started to establish their own complete O2O loop by virtue of the two platforms. On a phone, a company can establish connections with users directly, integrate online and offline channels and form a full circle. Based on data analysis, precision marketing, online users will be attracted to consumption offline. However, it is still too early to talk about big data and precision marketing. Because the most

important task at this time is to develop customers' payment habits and make them followers of their public WeChat accounts.

[Q5] What kind of problems have your companies encountered in conducting O2O business? What are your measures in dealing with these challenges?

Key points: The most pronounced problem is inadequate innovation. The relatively clear profit model of O2O will tend to lead to homogeneous development model. Therefore, only multiple operation models can lead to long term coexistence and mutual development. In addition, O2O operators can not only focus on the low-price strategies, but also pay attention to help enterprises dig out a wide range of value-added business by virtue of their advantages in media.

[Q6] If your company is going to cooperate with Jingdong (Suning and Guomei), what do you think will be the possible strategies in the building of information system, supply chains and delivery logistics?

Key points: As for the differences in operation, the driving force of Jingdong O2O is online platform and its end is the extension of convenience stores and logistics. O2O enables the large scale extension of Jingdong's products categories. The driving force of Ali O2O is enterprises (online Tmall stores and offline Yintai brand stores, and the ends are physical stores experience and logistics self-pickup services.

The tenth interviewee——XXX, General manager of the Marketing and Management center, XXX company

Second: Logistics Operation (8)

The first interviewee——XXX, Director of logistics operation of Marketing and Management Center, XXX company

[Q1] From the perspective of investment, what would you invest? E-commerce or offline retail physical stores?

Key points: It depends on the specific areas. As for the whole industry, I will take the following factors into consideration as choosing the investment areas:

First of all, the enormous development potential of the market; second, the decentralized and extensive competition landscape across the whole industry; third, the high level of information asymmetry between buyers and sellers(a huge margin

potential) ; fourth, the whole consumption chain cannot form a circle under online circumstances, for example, product and services delivery must be achieved under offline circumstances. If all these conditions are met, both e-commerce and physical stores are good options.

[Q2] Can you give up some example of relatively successful enterprises in the O2O field among the retail enterprises that you know? Do you think it is reasonable for enterprises to build their own e-commerce platform?

Key points: Frankly speaking, there is no one successful example in the application of O2O in the whole domestic physical retail industry. As for my personal experience, there are quite a lot conditions that need to be meet to build a qualified O2O. It is actually, from any perspectives, of no meaning for enterprises to establish e-commerce. However, it is necessary for retail enterprises in their pursuit of long term development, especially in the context of full channels. That is to say, enterprises must provide a sales system that can trigger integrative business at any time, while self-build e-commerce system can help enterprises summarize, collect, analyze final assets, customers' information. That is extremely important.

[Q3] Do you think it is a right choice for Suning to transfer as a "Super Store" at the time when the furniture industry has already saturated?

Key points: As a competitor of Suning, I do not want give too much comment about Suning. From the perspective of theory, Wanda's O2O is feasible. However, the largest obstacle for Wanda is the concept, strategies and management culture of its founders.

[Q4] What do you think is the advantages of online and offline? What about Jingdong's performance in this aspect?

Key points: Transformation is actually an extremely complicated process and of great risks. For any enterprises, the transformation of any enterprises depends on the changes and development trend of the external environment. In addition, much effort should be made to assess whether their resources of their own platform and teams can support this transformation. In a sense, the performance of many enterprises is far from satisfactory. Online work can avoid a wide range of unnecessary consumption, while it also brings some risks. However, through offline

channels consumers can see the real products, but they will also have to cover more cost. Jingdong has targeted at the online market from the right beginning.

[Q5] What measures and strategies Jingdong and Suning have adopted in the aspect of O2O logistics in 2015?

Key points: As the influence of Jisuda continues to grow among the whole industry as well as consumers, the featured logistics service has recognized as a cutting edged product of O2O. O2O, as its name refers, means online to offline, which suggests that only with the O2O model exclusive to Suning, can Jisuda grow and evolve. The success of Jisuda is out of the question with two requisites. One is the close connection between products and consumers. Second is the close connection between courier and consumers. By virtue of the advantages of physical stores, Suning has fixed these two problems. Big data is used to predict warehouse amount, and the best seller's products can be delivered to the physical warehouse under Jisuda in advance. To ensure the short distance between products and consumers, the physical warehouse is exactly the delivery point equipped with full time couriers and part time couriers. As if there are orders, couriers will deliver goods immediately. Based on the powerful O2O system, Jisuda continuously speeds up its delivery efficiency and over 60% delivery can be finished in one hour. The fastest delivery can be achieved in a dozen of minutes. The delivery speed that was count by days has evolved into one counting by minutes. At the same time, Jingdong focuses on improve consumer's experiences by virtue of its effective logistics system. Leveraging the advantages of powerful logistics, information technologies and platform power, Jingdong has successfully integrates online and offline warehouse, sales channels, services and consumers to bring out more effective supply channels, digitized management between online and offline consumers and extensive retail channels. With years of tests and upgrading, the self-built logistics system of Jingdong has gradually become open to platform enterprises, which stands to be a competitive advantage and solution compared with similar products in the market or on other platforms.

[Q6] What do you think is the features of the O2O model of Jingdong in its development?

Key points: The strategy of Jingdong's O2O can concluded from the following five aspects: First, the store-based logistics services. Currently, Jingdong can provide 3-hour delivery services, while one-hour delivery services will be become standardized services and 15-minute delivery will become paid services as O2O service appears. Second, Jingdong will provide full stage membership services and marketing, integrating online and offline membership, to create new benefits for membership. Third, the cooperation between Jingdong and external traffic, for example, WeChat can be used to attract external traffic for physical stores. Fourth, services extension. By virtue of services extension, new retail model and ales model can be brought out, which is one of the concerns of physical stores. Based on the above targets, Jingdong will establish two platforms, the one is the local life -oriented platform based on LBS, and the other is APP where all stores can be found with the help of map. All these services will be accessible in Jingdong map and WeChat end to achieve services value.

[Q7] What should be taken into consideration in building O2O model?

Key points: O2O model is of great significance to commercial enterprises, especially at an age when retail industry is experiencing a new round of industrial revolution. First, the popularization of wide band, internet, logistics, payment, personal credit, intelligent cellphone and tablet; second, the development of per capital GDP has changed the fundamental nature of products; third, the preference of consumers and behavior changes. That is to say, consumers' purchasing behaviors more and more rely on convenience, localization and efficiency. The three factors have completely changed the landscape and appearance of the current retail industry. The current domestic industry has the following characteristics: first, the dominant buyers market (the right of consumption is transferred into the hands of consumers who have already be aware of their own significance). Second, consumers have begun to use a wide range of new technologies and data, and they also started to conduct data analysis; third, the use of new technology makes for the first-time consumers a leader of retail enterprises (the exclusiveness to technology of retail enterprises is dissolving). The retail industry age featured by full channels is coming, and the

capability to retain consumers is essential. To reach this target, retail enterprises must keep inline all along the way and the achieve seamless integration between and conversion of online and offline. That is to say, O2O or more accurately full channel model, is necessary. The traditional retail industry is gradually becoming a knowledge-intensive, customers assent-intensive industry.

The eighth interviewee——XXX, Director of logistics operation of Marketing and Management Center, XXX company

Third: Distribution and Operation (6)

The first interviewee——XXX, Director of distribution of Marketing and Management Center, XXX company

[Q1] What do you know about the current distribution system? Do you know the difference between O2O and those systems?

Key points: Based on the e-commerce environment, there are three model to construct domestic logistic delivery system. First, e-commerce and the traditional commerce share a set of logistic delivery system. Second, e-commence enterprises construct their own logistic system. Third, e-commerce enterprises commission all their logistics services to third party logistics enterprises. The third-party logistics refers to the third party is responsible for the effective management for the intermediate links in accordance with the commission of suppliers and retail sellers. The main models for O2O platform of takeaway are generally the two categories: delivery by enterprises themselves and delivery services provided by platforms.

[Q2] Do you know how Jingdong, Suning and other large e-commerce business operate based on what you know about O2O community?

Key points: First, the comprehensive, scattered and weak social viscosity means that community O2O is a strong operating platform. Community O2O services can be divided into four main categories: local services, local consumption, logistics, community social. As O2O deals with a wide range of areas, and it is quite difficult to integrate all links of O2O. These are the most prominent difference between O2O and local websites. On top of that, the comprehensive operation of O2O is rather difficult. The past practice reminds us that the vertical websites are likely to grow rapidly as t comprehensive websites encounter bottlenecks. For example, we have seen the

regional real estate vertical sites, the development of these sites is much faster than the pace of development of local portals. Third, looking for low-cost operation of the entrance will be the key point for the next few years. The ability to operate in a community means acquiring the cost and relative viscosity of the user.

[Q3] What's the advantages and disadvantages of community O2O and common O2O model in distribution?

Key points: First, for consumers, O2O model can convey business-specific information that allows consumers to quickly access information on the surrounding life services. As the O2O mode of consumption is featured by online booking and offline consumption, now consumers enjoy more and more diversified consumption approaches, therefore convenient but high-grade consumption is popular among consumers. By appointment, consumers can avoid crowded waiting in line, which can great improve consumer satisfaction. For consumers who will compared to various levels of consumption and grades, the comparison of businesses on platforms can help them obtain the most useful information and get more options. Second, the building of O2O platform allows businesses to sell themselves out, which is an effective advertising platform. Reservations for businesses means income and profits, the more booking, the more business income. The consumption order can also be arranged in accordance with the appointment order. Third, the O2O service platform can also benefit a lot from consumers, enterprises and services providers. However, the development of O2O has yet mature, it still challenged the problem of integrity, business qualification and the lack of innovation.

The sixth interviewee——XXX, Director of distribution of Marketing and Management Center, XXX company

Fourth: Online Shopper (6)

The first interviewee——Mr. Li

[Q] What do you know about "O2O" model?

Key points: A little.

[Q] Have you ever experienced community "O2O" consumption?

Key points: Yes.

[Q] What kind of services have you ever bought when experiencing community "O2O" consumption?

Key points: fresh food and daily use products.

[Q] You prefer online shopping or physical stores consumption?

Key points: the combination of online shopping and physical store shopping.

[Q] Do you think online shopping or online services consumption and offline services experiences is reliable?

Key points: So-so.

[Q] What kind of online shopping information you will follow?

Key points: fast and convenience.

[Q] Compared with Ali, Meituan and other large-scale O2O website, what do you think about community O2O model?

Key points: fast and convenience.

[Q] When it comes to community consumption, what will you take into consideration?

Key points: reputation and consumption.

The sixth interviewee——Mr. Wang

BIOGRAPHY

NAME   Wei Jing

PRESENT POSITION   2017-Persent

                                 SAP China VP

EXPERIENCE   1998-2007

                                 APP China IT manager

                                 2007-2014

                                 IBM Partner, GCG CPG industry GM

                                 2014-2017

                                 Jiangsu Zhaiugo e-commerce CEO,

                                 DeliveryCN logistics (group) Chairman