A NEW MODEL FOR ONLINE FOOD ORDERING SERVICE BASED ON SOCIAL NEEDS IN A SHARING ECONOMY

Ningchang Zhou
College of Design, National Taipei University of Technology, Taipei City, Taiwan
t107859402@ntut.edu.tw

Lai-Chung Lee
College of Design, National Taipei University of Technology, Taipei City, Taiwan
f10666@ntut.edu.tw

Abstract

Based on the business phenomenon of sharing economy, and guided by the Blue Ocean strategy, the researchers present a new online food ordering service model. The researchers conducted literature review to understand the current trend of the business of online food ordering. Through user studies, the life style of the main consumer groups of this business was studied to construct the social needs of the users; then through various design research methods such as the brainstorming method, SET analysis method, and SWOT Analysis, etc., the researchers have found important unmet user needs, and proposed a O2O+C2C online ordering service model with private customization and social functions to meet users' emotional needs. The design of this new service model is in line with the Blue Ocean strategy. It embodies human care, is innovative and feasible, and can provide new directions for the development of related industries.

Keywords

Service Design, Online Ordering Service, Sharing Economy, Blue Ocean Strategy, Social Needs

1. Introduction

With the development of the industrial economy, China's urbanization process is accelerating. It is estimated that by 2020, the urbanization rate will reach 60% (Jian & Huang, 2010), the population accelerates to gather in the city, the social demand is more abundant, and the social division of labor increasingly refined, a large number of new goods, new services and new types of work have been created, forming a prosperous urban life scene. In the case of a high concentration of consumer groups and production factors, how to optimize resource allocation, reduce marginal cost, and promote social integration is an important topic of urban governance. The essence of the sharing economy is to integrate idle social resources. With the support of mobile Internet technology and third-party payment, the supply and demand sides can achieve fast and accurate matching and promote low-cost trading products or services (Zheng, 2016; Yang, 2016). The sharing economy expands the dimension of consumption, explores more new social needs, broadens the thinking of business innovation, and faces many unknown challenges (Wang, 2018).

China is an important position for global economic innovation and development. According to the China Annual Report on Shared Economic Development (2019), the transaction volume of China's shared economic market in 2018 was 294.2 billion yuan, an increase of 41.6% over 2017. The number of participants was approximately 760 million, and the number of service providers was approximately 75 million, an increase of 7.1% year-on-year. It is predicted that China's sharing economy will continue to maintain an average annual growth rate of more than 30% in the next three years, playing an increasingly important role in increasing employment and stimulating consumption. The sharing economy promotes the structural optimization of the service industry and promotes the transformation of consumption patterns, especially in the areas of travel, accommodation and catering. The sharing of new economic formats has effectively stimulated the growth of the industry. The annual growth rate of online ordering service income is about 117.5%. It is 12.1 times that of the traditional catering industry. With the continuous deepening of the concept of sharing economy, the gradual improvement of the relevant laws and regulatory systems for online food safety, and the maturity of mobile Internet technology, artificial intelligence and big data technology, the online ordering industry will be more prosperous.

In view of the outstanding performance of online ordering service in the sharing economy and the fierce competition in the industry, this paper takes its service model as the research object and tries to explore and demonstrate an innovative online ordering service model based on the blue ocean strategy.

2. Related Works

The attainment of quality in products and services has become a pivotal concern since 1980s (Parasuraman, Zeithaml, & Berry, 1985). Since 2000, with the development of economy and science and technology, especially the rise of the Internet, the complexity of society, culture and ethics has become more and more obvious. Politicians and business leaders are seeking to use service design and design thinking as tools, to propose solutions for some new social problems. In the past five years, more and more designers have begun to enter this field (Hillgren, Seravalli, & Emilson, 2011). Chinese scholars have done a lot of research on improving the customer satisfaction of the O2O food ordering platform. Jiang & Zhang (2016) built the satisfaction model based on ECSI model to study the user satisfaction with the ordering platform and identify the main factors affecting user satisfaction. The research results show that the service quality of the ordering merchants and the safety and quality of food need Priority is resolved. Zhang (2018) proposed strategies to enhance customer perceived value, including ensuring the authenticity of information, content richness, ensuring product quality and reasonable pricing, and doing a good job in logistics construction. Zeng and Wang (2015) proposed a fuzzy evaluation model for online ordering user satisfaction, pointing out that the four factors affecting customer satisfaction are food factors, price factors, service factors and convenience factors, among which food factors have the greatest impact.

In the business model innovation research of catering services, Wang (2018) summarized three new types of shared economic service models: social sharing restaurants, family sharing kitchens and capacity sharing. A socially shared restaurant is a consumption pattern that shares space and content, bringing together different consumers through a table of topic groups. This type of group usually likes food and has the desire to communicate and share. The family-sharing kitchen uses the private kitchen as a shared resource, emphasizing the concept of home and making the sharing of food with strangers full of humanity. Capability resource sharing is the transformation of an individual's cooking ability into a shared resource, such as providing a door-to-door service to meet the needs of the user's home and banquet meals.

Zheng (2016) believes that the general business model of the sharing economy has advantages in terms of personalized and customized services, long-tail customers and sustainable development. It is necessary to strengthen the safety credit system, third-party platform supervision and demand-side rights protection mechanisms. Construction. Qiu (2018) believes that the core competitiveness of the online ordering platform is rich in categories, logistics and distribution, and featured marketing. In the case of serious homogenization, a differentiated strategy should be adopted to provide products that are different from competitors. Service; business planning should be developed towards the local life platform of the whole category, providing users with comprehensive and diversified value-added services; prices and technologies are difficult to differentiate, and differentiation should be based on product functions and marketing innovation.

It can be seen that researchers generally believe that increasing product and service categories, strengthening credit system supervision and logistics distribution, ensuring food safety and improving consumer satisfaction are the main directions for O2O ordering platform optimization. Continuously exploring new businesses and seeking differentiated competitive advantages is also one of the ways the platform attracts users.

Most consumers will pay attention to the foods that are raw materials from nature without the screening process or chemicals for safety. Many of factors made the consumer interest in healthy the health food market is constantly expanding. The principal objectives of the study were as follows.

3. User Research and Results Analysis

According to the background statistics of the online ordering platform which named "*ELE*" and the survey results of the consulting company *iiMedia Research*, nearly 60% of users will order food on the working day, and nearly 80% prefer to order lunch (as shown in Figure 1). Most of the ordering consumers began to order a large number of foods from 8:00 am, at 12:00 noon and 18:00 pm for the peak meal order, and the number of people who are keen to settle lunch and dinner in the form of ordering is more (as shown in Figure 2).
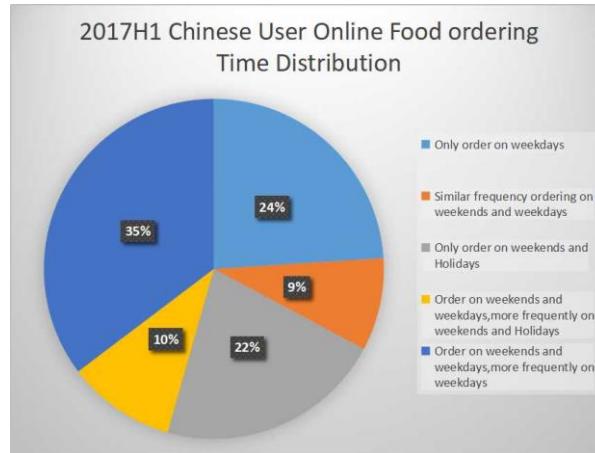
Figure 1: *Chinese User Online Food Ordering Time Distribution (2017H1)*

Figure 2: *Chinese User Online Food Ordering Preference Distribution (2017H1)*

From the perspective of the age distribution of users, the mainstream platform for online catering ordering is mainly young users. The proportion of users under 24 years old is over 50%, and the proportion of users over 30 years old is only about 20% (as shown in Figure 3).
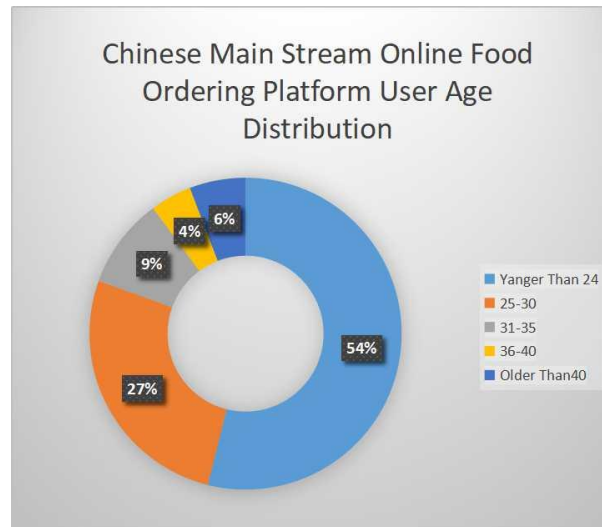
Figure 3: *Chinese Main Stream Online Food Ordering Platform User Age Distribution*

In order to find innovative and feasible product service design solutions, this paper conducts a questionnaire survey on the lunch meal of office workers through the network, focusing on the way of lunch solution, the evaluation of online ordering service, the expectation of lunch, the work and A total of 106 valid questionnaires were collected for questions such as satisfaction with life. According to the survey results, 74.5% of the respondents said that they "had been worried about the lunch problem". Some of them thought that "food hygiene and safety are difficult to guarantee", and some people think that "the dining method is too single and feels life is boring". And a small number of people said that "feeling that they lack care"; 20% chose to go to the restaurant to eat, 24% chose to order food online, and 9% of the respondents had their own habit of taking lunch; 20% said Very dissatisfied with the order service, 36.7% said that the satisfaction is average; when ordering the order, 61.3% said that the priority is food safety, followed by the taste; when asked about the satisfaction of work and life At the time, 42% of the respondents said that they were more satisfied, 40% said they were "general", and a small number of people said "very bad and dissatisfied"; in addition, 42% of the respondents were unmarried.

The existing O2O online ordering mainstream platform is a B2C business model, and the homogenization operation is serious. According to the Blue Ocean Strategy Theory (Kim & Mauborgne, 2000), the industry has entered the Red Sea state. It is worth noting that "Bring Your Own Lunch" does not involve any commercial transactions in all solutions. It is a special case and is a blue ocean area that has not yet been commercialized. According to the survey results, most of the respondents who are accustomed to bringing their own lunches think that

their own lunches are more in line with personal tastes, and that food safety, especially personalization needs, cannot be replaced. When asked how to evaluate how some people have their own lunch, most of the respondents thought that this is a performance that loves life and pays attention to quality of life. Some of the respondents believe that people who make homemade lunches have strong hands-on ability and are good at home. It can be seen that taking lunch to go to work is considered by most people to be a glorious act. When asked about "what difficulties are encountered with their own lunches," 83% of respondents believe that "there is no time to prepare and it takes a lot of thought."

According to the above survey, the youth groups in the above-mentioned workforce are the research objects. For their lunch meal problems, using brainstorming method and SET analysis method (Cagan & Vogel, 2012), combined with Maslow's theory of hierarchy of needs, the life needs and social environmental factors were analyzed and analyzed to find out the opportunity gap of online ordering service. The finishing results are shown in Table 1.

It can be seen from the above analysis that the O2O model of the current online ordering mainstream platforms provide demand information matching and pre-payment services between users and offline merchants, and the single service model is the main reason for the formation of the Red Sea competition. Dining is an activity of human beings with both natural and social attributes. Most of the ordering services only meet the physiological needs of users, ignoring the psychological needs of users. Long-term consumption of ordering meals can make people feel bored and unwilling to work. If you can strengthen the social attributes of the ordering service, give users more human care, and guide them to pay attention to the fun of life, can become the idea of differentiated competition.

4. Building a New Service Model

This paper proposes a shared lunch service that combines O2O and C2C models, with consumers who have their own lunch habits or are willing to provide lunch services as a supplier, and consumers who want to enjoy private homemade lunches as demanders, through online ordering platforms. The demand is matched, and then the supplier supplies the food to the demand side online, and the service scope is mainly the surrounding place of the supplier's work place (as shown in Figure 4).

Table 1: *SET Factors Analysis and GOPs*

| Maslow's hierarchy of needs	Social（S）	Economic（E）	Technology（T）	Pain spot	POGs	significance
need for self-actualization	Identifying self-worth, possessing moral values and independent personality, and maintain fairness and justice.	Have the financial ability to be free to pursue ideals and help others achieve their ideals.	Intelligent, digital, virtual reality technology	High pressure, lack of happiness, no ideals, I feel that life is meaningless, negative emotions	Emphasis on the joy of life	Guide users to build an optimistic life mentality, enhance users' self-identity and confidence。
esteem needs	Be respected and be cared from the society and others	Be self-sufficiency, do not give up the pursuit of a beautiful life.	paying more attention to human care than technology	Lack of care from society and others, Depression	Emphasis on human care	Enhance user's goodwill towards society
Love and belonging needs	Friendship, love and social belonging.	Careful budgeting, willing to share idle items, abilities and social resources.	Mobile internet, internet of things, social software	Lack of friends and the opportunities to express love, no sense of belonging	Emphasis on life sharing and emotional communication	Enhance user contact with others
safety needs	Life is stable, free from pain, threats or illness	Deposits, cash, house and items are safe	Blockchain, face recognition, food safety detection technology	Lack of trust in food safety provided by merchants	Emphasizing the foods are safety	Lift the user's sense of distrust
physiological needs	Foods, water and air, good sleep and secretion, Be satisfied in sex.	Priority to meet food, housing and sexual needs	Air and water purification technology, health detection technology	Physical and psychological load, fatigue, secretion disorders, sexual depression	Emphasizing that the amount of food is sufficient	Meeting the physiological needs of users
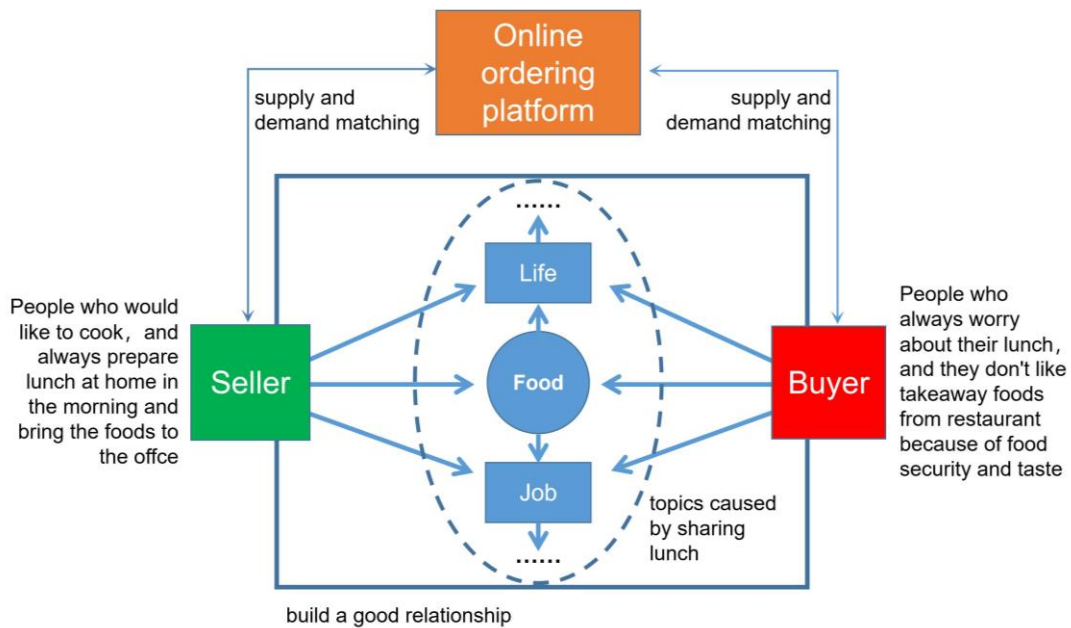
Figure 4: *A Online Ordering Service Model of Sharing Lunch*

The design of this service model mainly has the following highlights:

Firstly, for those who are accustomed to bringing their own lunches or who are willing to provide private customized lunch services, they often prepare food in the morning, prepare food for two or three people and prepare one's food. The workload and cost are not Will increase by multiples, so the supplier will sell the food one or two more foods to others while preparing their own lunch. The benefits may be a certain profit or at least their own lunch is free. Certain attraction.

Secondly, the main selling point of "safe and secure", "warm" and "communication life", "what do I eat when you eat." For busy working people, you can enjoy the "home-cooked meal" that is considered safe and secure, and the soul is comforted. For food lovers, you can taste more personalized cooking in this way. Food, you can get a rich sample of recipes to increase the fun of life.

Thirdly, create a new social platform. For the youth group, marriage and love is an issue that cannot be avoided. Similar life pursuits and preferences are often important considerations for people to choose their mate. It takes a certain amount of time to get in-depth communication in order to get a clear answer. The traditional purpose of blind date, with obvious purpose, will

make both sides feel very embarrassed and unable to generate willingness to communicate. When you can't find a suitable partner, people will feel the pressure from all parties, plus busy work, food irregularities, people's happiness will be reduced, and it is easy to produce negative emotions. By sharing the way of homemade lunch, single people can easily and freely get the opportunity to know the opposite sex, and can start the exchange of life topics by dining, promote mutual understanding, and create conditions for finding the ideal partner. Therefore, this online ordering service is a social service with a free and in-depth study, which is a good representation of human care.

And finally, Profit opportunities for the platform. Through a variety of filtering conditions, create a high-quality urban social platform that uses food sharing and communication as content. By providing users with links to other life needs services, it has the value of traffic output and profits from advertising.

5. Challenges and Countermeasures

In order to judge the feasibility and risk of this new online ordering service model with private customized lunch as the content, this paper adopts SWOT analysis method（Helms & Nixon, 2010）to analyze the advantages and disadvantages (as shown in Table 2).

Table 2: *SWOT Analysis of the "Sharing Lunch" Service Model*

	Helpful to archiving the objective	Harmful to archiving the objective
	Strengths	Weaknesses
Internal attributes of the organization	（1）The new order service business is highly innovative and attractive; （2）Ready-to-order ordering platform customer traffic portals, payment channels and promotion channels.	(1) Service model design needs to be improved; (2) The number of target groups is uncertain; (3) Uncertain profitability; (4) It is difficult to cultivate the users of the supplier
	Opportunities	Threats
External attributes of the Environment	（1）The rapid development of the sharing economy, the increasing number of participants, and the idea of sharing lunches; （2）There are a large number of people who have the need for free dating; （3）There is no precedent in the cross-	（1）It may encounter public crises caused by disputes or illegal acts between users, affecting the enthusiasm of users; （2）Being plagiarized by competitors, once again facing competition for homogenization operations;

	cutting field between the online ordering service industry and the marriage and love agency service industry.	（3） Unsuccessful early user cultivation leads to project failure; （4） No profit model was found.

From the above analysis, we can know how to attract sellers and buyers to join, to avoid too few early seed users, affecting the growth rate of users; how to ensure the food hygiene and safety of each user, what kind of tableware to use to ensure the fresh taste of food, Guarantee the user's experience; how to prevent unknown risks such as fraud, sexual harassment, privacy breaches and illegal transactions. In order to ensure the safety of transactions and food, a strict entry system is required, which requires both the supplier and the buyer to register in real life and provide valid proof of employment.

6. Conclusions

The online ordering service in the current sharing economy is in a rapid development stage, strengthening the understanding of the sharing economy, researching its characteristics and service models, in-depth segmentation of user needs, enriching the diversification of service content, improving user experience and enhancing consumption. The continued enthusiasm and loyalty of the ordering platform is the future direction of the relevant industry. The new online ordering service model proposed in this paper is a group of young commuters who share the economy, create a new business service model and a new user experience with private cooking ability and time as a shared resource, and build a new urban life. Content, creating an effective social platform for the youth community, increasing their sense of identity and happiness in the city. This service model is in line with the blue ocean strategy of differentiated development, and can avoid the Red Sea competition caused by the homogenization operation of the current online ordering service industry, and can provide new development ideas for related platform enterprises.

References

Cagan, J. M., & Vogel, C. M. (2012). Creating breakthrough products: revealing the secrets that drive global innovation. FT Press.

Chan Kim & Renée Mauborgne.（2005）.Blue Ocean Strategy .Beijing, China:The Commercial Press

Helms, M. M., & Nixon, J. (2010). Exploring SWOT analysis–where are we now? A review of academic research from the last decade. Journal of strategy and management, 3(3), 215-251. https://doi.org/10.1108/17554251011064837

Hillgren, P. A., Seravalli, A., & Emilson, A. (2011). Prototyping and infrastructuring in design for social innovation. *CoDesign*, *7*(3-4), 169-183. https://doi.org/10.1080/15710882.2011.630474

Jian Xinhua, & Huang Kun. (2010). Empirical Analysis and Forecast of the Level and Speed of Urbanization in China. Economic Research Journal, (3), 28-39.

Jiang Yin, & Zhang Ling. (2016).Satisfaction Analysis of O2O Catering Delivery Platform——Taking "ELE" as an Example. modern business, (24), 178-180.

National Information Center. (2019). China's annual report on sharing economic development (2019). Retrieved March 1, 2019,http://www.sic.gov.cn

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. Journal of Marketing, 49(4), 41–50. https://doi.org/10.1177/002224298504900403 https://doi.org/10.2307/1251430

Qiu Bin. (2018).Research on Competitive Strategy of Ordering Platform.unpublished Master's thesis,East China Jiaotong University, Nanchang, China

Wang Jiaqi. (2018). Research on Catering Service Model in the Background of Sharing Economy. modern business, (10), 6.

Yang Shuai. (2016). Sharing Economy Types, Factors and Influences: The Perspective of Literature Research. Review of industrial economics, (2), 35-45.

Zeng Jianqiu, & Wang Fan. (2015).Research on User Satisfaction and Empirical Analysis O2O Online Ordering. Journal of Modern Information, 35(8), 17-21.

Zhang Mengya.(2018).Research on Customer Perceived Value and Promotion Strategy of O2O Catering Ordering Platform.Master's thesis, Shanghai Normal University,Shanghai, China

Zheng Zhilai. (2016). Research on the Causes, Connotation and Business Model of Sharing Economy. modern economic research, (3), 32-36.