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## Catering Consumption Behavior in the Post-pandemic under Platform Economy: Evidence from China

LIN Zekai

Doctor of Management

Supervisor:

PhD Rui Vinhas da Silva, Professor,  
ISCTE University Institute of Lisbon

May, 2023



BUSINESS  
SCHOOL

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Marketing, Operations and General Management Department

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Jury:

PhD Henrique José da Rocha O'Neill, Associate Professor with Habilitation,  
ISCTE University Institute of Lisbon

PhD Natália Regina Morgado de Lemos Teixeira, Associate Professor,  
ISG - Instituto Superior de Gestão

PhD Leandro Luís Ferreira Pereira, Associate Professor with Habilitation,  
ISCTE University Institute of Lisbon

PhD Rui Manuel Vinhas da Silva, Full Professor,  
ISCTE University Institute of Lisbon

PhD Wang Dong, Full Professor,  
Southern Medical University

May, 2023



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## Abstract

Due to the impact of the COVID-19 epidemic, the world economy has been hit to varying degrees, and the catering industry is one of the industries most affected by the epidemic. In the post-epidemic era, the catering industry needs to be adjusted and restored. This study integrates the Theory of Planned Behavior and Technology Acceptance Model through questionnaire survey, and analyzes the online catering consumption behavior of Chinese consumers by constructing the empirical method of structural equation model. In the post-epidemic era, the lifestyle and catering consumption habits of mass consumers have undergone tremendous changes. Their demand for dining environment, food hygiene and health has increasing rapidly, which puts forward higher requirements for the products and services of catering enterprises. At the same time, online catering has become a common way of dining, and highlights its ability to avoid the epidemic. Under the new situation, catering enterprises need to realize that consumers pay more attention to the health and safety of products, need to produce more diversified and personalized catering products, layout in advance into the field of pre-made food segmentation, build “contactless delivery” channels, and enhance the strategic position of digital transformation of catering enterprises.

**Keywords:** Post-epidemic era; platform economy; catering consumption behavior; theory of planned behavior; technology acceptance model; digital transformation

**JEL:** M31; M39

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## Resumo

Devido ao forte impacto da pandemia de COVID-19 no mundo, a economia global foi atingida em diferentes graus. Nesse contexto, a indústria de alimentos e bebidas foi uma das indústrias mais afetadas pela pandemia. Presentemente, já na era pós-pandemia, a indústria de alimentos e bebidas precisa se ajustar e se recuperar. Com base na Teoria do Comportamento Planejado e no Modelo de Aceitação de Tecnologia, o presente trabalho analisa o comportamento do consumo de alimentos e bebidas online dos consumidores chineses por meio da aplicação de questionários e da construção de modelos de equações estruturais. Na era pós-pandemia, os estilos de vida e os hábitos de consumo de alimentos e bebidas dos consumidores passaram por mudanças tremendas. A demanda por local e ambiente adequados, higiene alimentar e saúde está aumentando rapidamente, o que significa requisitos mais elevados para os produtos e serviços das empresas do ramo da alimentação. Ao mesmo tempo, o serviço de alimentos e bebidas online tornou-se comum e destacou-se fortemente por sua vantagem de evitar o contato na época da pandemia. Nesse sentido, as empresas de alimentos e bebidas precisam perceber que os consumidores, agora, prestam mais atenção à saúde e segurança dos produtos e, por isso, elas precisam produzir produtos mais diversificados e personalizados; ao mesmo tempo, elas também devem planejar com antecedência a subdivisão dos pratos preparados, construir canais de “entrega sem contato” e, assim, aprimorar a posição estratégica da transformação digital.

**Palavras-chave:** Era pós-pandemia; economia de plataforma; comportamento de consumo de alimentos; teoria do comportamento planejado; modelo de aceitação de tecnologia; transformação digital

**JEL:** M31; M39



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## 摘 要

由于新冠肺炎疫情的影响，世界经济受到了不同程度的打击，餐饮业是受疫情影响最大的行业之一。在后疫情时代，餐饮业需要进行调整和恢复，本研究通过问卷调查的方法，整合计划行为理论和技术接受模型，通过构建结构方程模型的实证方法对中国消费者线上餐饮消费行为进行分析。后疫情时代，大众消费者的生活方式和餐饮消费习惯发生了巨大的变化。他们对就餐环境、食品的卫生和健康的的需求迅速提升，这对餐饮企业的产品和服务提出了更高的要求。同时，线上餐饮已经成为一种常见的就餐方式，并突显出其能够避免疫情的特点。在新形势下，餐饮企业需要认识到消费主体更注重产品的健康安全，需要生产更加多元化和个性化的餐饮产品，提早布局进入预制菜细分领域，构建“无接触配送”渠道，提升餐饮企业数字化转型的战略地位。

**关键词：**后疫情时代；平台经济；餐饮消费行为；计划行为理论；技术接受模型；数字化转型

**JEL:** M31; M39

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## **Chapter 1: Introduction**

### **1.1 Research background**

The COVID-19 pandemic has caused an unprecedented crisis around the world. The world, and each of us, is in a predicament we haven't been in for decades. For us, the effects of the COVID-19 pandemic will be felt for many years, and many things will be permanently changed. No industry is immune to the impact of this change. Millions of companies are at risk, many industries are at a loss, and many companies are at transformation. From a personal point of view, many ways of life that people have taken for granted are changing rapidly. But on the other hand, this life-and-death crisis is also a good opportunity for reflection, and it contains the possibility of change. President Xi, general secretary of the Central Committee of the Communist Party of China (CPC), stresses that "In every challenge lies an opportunity and a challenge solved would be an opportunity gained" (People's Daily, 2020). Although the COVID-19 pandemic has brought a huge crisis to the whole industry chain of the catering industry, the pandemic does not change China's long-term development trend, and the crisis does not change the Chinese people's expectations for high-quality catering.

The world at the beginning of 2020 is already a history. COVID-19 has rewritten the world history and changed everyone's history at the same time. As fundamental changes caused by the pandemic are gradually emerging, some scholars have begun to propose such methods of age as "before coronavirus" (BC) and "after coronavirus" (AC) (Schwab & Vanham, 2021). This study calls the era of regular epidemic prevention and control after the outbreak of COVID-19 the "post-epidemic era." The pandemic has brought about ripple effect and unpredictable impact on the world, gradually breaking the past status and shaping a completely different "new normal". In this process, many of our beliefs and assumptions about what the world could be or should be will evaporate.

At the beginning of 2020, the COVID-19 pandemic broke out in China and the world. China carried out active prevention and control nationwide. The COVID-19 epidemic has cast an unprecedented blow to consumers around the world. The epidemic has spawned new consumption trends. China is the first major economy to be hit by the pandemic and the first country to enter the new normal after the pandemic, making it a bellwether for other countries



and regions to establish consumption behavior in the post-epidemic era. The pandemic has also caused a huge impact on the consumer economy, including the catering industry. The Chinese government also makes proactive responses and makes every effort to ensure the economy and people's livelihood. Although China's catering industry itself has been seriously affected by the epidemic, its contribution to the economy has increased rather than decreased. In the first quarter of 2020, GDP recorded negative growth for the first time in 10 years, and the cumulative contribution of the hotel and catering industry to GDP rose by 8.03% year-on-year. The cumulative contribution to GDP in the second quarter rose to 28.88 per cent year-on-year, nearly 16 times the level of the same period last year. Considering the great contribution of the catering industry to the national economy, it is of great practical significance to explore the impact of COVID-19 on the catering industry (Yang et al., 2021).

The epidemic that lasted for several months and three years of epidemic control not only changed the consumption and living habits of residents from the demand side, but also caused a great impact on the normal operation of the consumption market from the supply side (Guan, 2020).

In the post-pandemic era, with changes taken place both in the demand and supply sides of consumption, consumer behavior will be more rational and diverse, and consumption will play an increasingly prominent fundamental role in national economic development. The start-up and recovery of the domestic market and macro economy after the epidemic cannot be achieved without the drive of consumption, and economic growth will rely more heavily on domestic demand (Guan, 2020).

Since ancient times, there has been a saying in China that "Food is the first necessity of the people". Food consumption is a very important part of Chinese consumption. Therefore, based on the research results of influencing factors of diet consumption, this study starts from summarizing the impact of the epidemic on the demand and supply sides of food consumption market. Combined with the changes of consumer behavior and market supply, the trend changes of China's food consumption market in the post-epidemic era are emphatically analyzed. In view of the changes of Chinese consumers' food consumption concepts and behaviors, marketing strategies suitable for the post-epidemic era are proposed for catering enterprises, and corresponding suggestions are also put forward for China's catering industry policies in the post-epidemic era.

### **1.1.1 Impact of the COVID-19 epidemic on China's catering industry**

Sneader and Singhal alongside the World Travel and Tourism Council have predicted the catering industry as the most affected in the World by the COVID-19 epidemic (Pereira et al., 2022).

Looking back at the past three years, the development of China's catering industry has experienced twists and turns due to the sudden impact of the coronavirus epidemic. Before 2020, China's catering industry expanded at an annual rate of 9.7 percent, with total operating revenue reaching 3 trillion yuan in 2015, 4 trillion yuan in 2018 and 4.67 trillion yuan in 2019. Under the impact of COVID-19, China's catering industry revenue dropped to 4 trillion yuan in 2020. In 2021, due to the success of epidemic prevention and control efforts, the total business revenue has returned to the pre-epidemic level in 2019, reaching 4.69 trillion yuan. In the annual business revenue, it accounts for 10.64% of the total retail sales of consumer goods (National Bureau of Statistics of China, 2023). Since 2022, a number of sporadic epidemics have appeared in many places in China, which has greatly affected the catering industry across China. In the first half of 2022, the catering industry achieved a revenue of 2 trillion yuan, down 7.7% from the same period last year, and the proportion of its operating income in household consumption has dropped to 9.5% (National Bureau of Statistics of China, 2023). In addition, the increasingly complex international situation, increasing global inflation pressure, rising costs of raw materials and logistics, slower and slower growth of urbanization, and significant employment pressure have exerted a great impact on the development of catering industry. In 2022, the epidemic had a severe impact on the whole catering industry chain, resulting in inhibition of the demand side. Supply side operation halt, shutdown linkage effect began to appear. An analysis of the impact of the epidemic from the demand side shows a weak rebound of catering consumption demand and a further expanded decline of catering income, as well as tougher catering business than that in 2021.

In the post-epidemic era, how can the catering industry in China grasp the new opportunities of transformation and upgrading and high-quality development? The COVID-19 crisis contains new opportunities for the development of catering industry. From the perspective of promoting the optimization of industrial structure, survival and development of catering enterprises must quickly adapt to the current public health needs and the digitalization process of social economy. Accelerate the ecological, standardized, community-based, digital, contactless and cross-border integrated development of the catering industry, or become a "catalyst" for industrial transformation and upgrading. From the perspective of improving the efficiency of food safety

management, the epidemic has made the government, the society and the public have a profound understanding of the safety connotation of the catering industry, and formed a broad consensus on including the catering industry in the construction of public health system and emergency response system, which will effectively promote the high-quality development of the catering industry.

### **1.1.2 Online consumption in China's catering industry**

The number of users of online catering has grown rapidly since the outbreak. Since the outbreak of the epidemic in 2020, the consumption behavior of Chinese consumers has also changed as people's travel scope has narrowed and people spend longer hours eating at home and working than before the outbreak. According to the statistics of China Internet Network Information Center, as of December 2021, the total number of online delivery users in China reached 544 million, an increase of 125 million compared with December 2020, accounting for 52.7% of the total number of Internet users. In 2021, the overall scale of the food delivery market continues to expand, the competitive landscape changes, the platform expands the "39 retail" business, and the innovation and application of delivery technology continues to advance. At present, the policy environment for market development is improving day by day, the overall scale of the food delivery market is expanding, and the competition pattern is changing. First, the overall size of the market maintains an upward trend; second, new competitors have entered the industry competition. In July 2021, Tik Tok launched a private beta version of food delivery on its APP, which can enhance the competition in the food delivery market and provide more channels for offline businesses to reach consumers (China Internet Network Information Center, 2022a).

Food delivery platforms began to explore the mode of instant retail service and improve delivery technology. Food delivery platforms and retail e-commerce compete around instant retail. On the one hand, the food delivery platform takes instant delivery service as its competitiveness, engages in instant retail business, constantly expands delivery categories, and brings more convenience and choices to consumers. On the other hand, traditional e-commerce platforms develop real-time distribution and carry out "instant retail" business. For example, JD.com and Dada Express jointly launch "hourly purchase" business, providing retail services of "online ordering, store delivery and hour-level minute delivery". Second, research and development of new distribution technologies continued to advance. Various food delivery platforms are exploring unmanned delivery scenarios, with platforms such as Meituan, JD.com and Alibaba launching unmanned delivery vehicles one after another. Meituan Drone Delivery

is exploring the construction of low-altitude urban delivery network to further reduce the burden of food delivery workers and improve delivery efficiency (China Internet Network Information Center, 2022a).

On the eve of the Spring Festival in 2020, the sudden outbreak of the COVID-19 made China's catering industry fall into a brief "freezing point". From the relevant statistical statements, it can be seen that from January 23 to February 13, the proportion of opening shops and the proportion of operating income of catering merchants dropped precipitously. From mid-February to mid-March, due to the continuous development of the epidemic, although the proportion of opening shops gradually increased, the proportion of operating income recovered slowly, until after mid-March. The percentage of operating income began to rise rapidly. From May to June, due to the Spring Festival holiday and the recurrence of the epidemic, the proportion of income of each merchant changed greatly. After June, the opening rate of each merchant began to decline slowly, which meant that some catering businesses were closed and could not reopen. By the end of November, the opening rate of catering merchants has reached more than 80%, while the proportion of the overall revenue is less than 70%, and the average income of continuously operating stores has returned to more than 90% (Meituan New Catering Research Institute, 2022).

Today's catering enterprises are facing the transformation of "business model from the traditional sit-down food oriented to sit-down food + takeout, and even the test of the complex business model of water and electricity business". The traditional management of single capacity or single flow system can no longer meet the needs of the long-term development of enterprises.

According to the statistics of the Ministry of Commerce, at the beginning of the epidemic, in February, the most severe month of 2020, nearly 40 percent of the businesses operated with food delivery, and among them, 53.6 percent of the businesses received more than half of their business revenue from food delivery. Therefore, food delivery has become an important force in the catering industry to tide over the crisis. The number of deliverymen has grown to millions in just a few years and has become an "infrastructure" in people's lives. In 2020, revenue from online delivery rose to 16.9% of the total revenue of the country's catering industry, an increase of 4.1 percentage points and 1.9 percentage points from the previous year (Meituan New Catering Research Institute, 2022).

From the current market share of food delivery in major cities, compared with 2020, the impact of the epidemic on first-tier and second-tier cities has been much smaller. The growth rate of the market share of first-tier and second-tier cities is faster than that of third-tier and

fourth-tier cities, and the growth rate of first-tier cities is more than 40%. In terms of the proportion of take-out business in each province, the take-out business in Guangdong province takes the leading position in China, while the take-out business in Beijing and Wuhan, which suffered a relatively big impact in 2020, will have a relatively large growth in 2021 (Meituan New Catering Research Institute, 2022).

Digital economy is an important feature of the new era and a development direction. With the wide application and in-depth development of information technology, especially the smart terminal technology represented by smart phones, the Internet of things technology represented by sensors, the Internet information technology represented by cloud computing and big data, as well as the online application represented by e-commerce and social networking, the digitization process of global social economy is accelerating. Digital economy is an important manifestation of China's comprehensive national strength and innovation ability, and it is an inevitable trend of China's economic development.

Compared with the retail, financial, transportation and other service industries, the digital development level of the catering industry is relatively backward, but the development potential is still huge. Accelerating the digitization process of the catering industry is not only in line with the national strategy of developing the digital economy, but also an urgent requirement for building a modern catering industry and improving operational consumer demand, better meet the needs of people's better life, the digitization of the catering industry is also necessary. At the same time, the massive data resources generated in the process of catering digitization have played an irreplaceable role in China's social and economic development.

### **1.1.3 The Consumption of Pre-made food in Chinese catering**

The normalization of epidemic prevention and control has brought great challenges to the traditional catering industry, but to some extent, it has also brought great opportunities to the development of standardized Chinese cuisine. Standardization can reduce the overall operating costs of the Chinese food industry to meet the needs of digital development in the period of normalization of epidemic prevention and control. The Chinese government also pointed out in the "Document No.1" of 2023 that the cultivation and development of the pre-made food industry should be fostered (CPC Central Committee & General Office of the State Council, PRC, 2023).

The pre-made food industry has been officially promoted from the official documents of the Chinese government to the national strategic level. The development of pre-made food industry is not only an important embodiment of China's consumption upgrading and food

processing industry, but also a powerful means to integrate the three industries, promote rural revitalization and support the sustainable and high-quality development of agriculture. Nowadays, it has become an important starting point for promoting economic growth, promoting deep processing of agricultural products, reducing waste of resources and cultivating new growth points (Pei, 2023).

Pre-made food are a new typical of standardized Chinese food, which are developed from fresh sterilized food. Although pre-made food account for a small proportion of the overall revenue of the catering industry, they represent a combination of multiple scenarios and provide consumers with more food. With the rise of e-commerce and takeaway markets, consumers formed the habit of online consumption during the epidemic. Pre-made food have a high degree of standardization, controllable cost and considerable gross profit, which is conducive to the reduction of costs, improvement of quality and efficiency of catering enterprises. Pre-made food are more convenient and quick for consumers, which can effectively solve the cooking problems of office workers who “can’t do, not delicious and have no time”, and effectively meet the personalized and diversified needs of consumers. Therefore, pre-made food are developing rapidly because of their huge market value and development potential. China’s pre-made food industry is in a period of market growth. The retail end market is larger and the competition is more intense. It is not only necessary to seize the opportunities of the pre-made food market, but also to seize the commanding heights of industry development (J. Wang et al., 2022).

Searching for the word “pre-made food”, you can find keywords “simple cooking,” “modern, standard kitchen,” “convenience,” “high efficiency,” “stable product quality,” “food-grade bags (boxes),” “frozen or vacuum packing,” “quick-freezing technology,” “fresh-keeping,” “ready-to-eat,” “regional flavor,” “Semi-finished food”. After refining and integration, it can be summarized as “quick-frozen, vacuum packaging, semi-finished food, simple cooking, convenient”, which is based on the understanding of ordinary people, rather than scientific definition. Based on this, the basic meaning of “pre-made food” can be summed up as “prefab food “ (F. Zhao et al., 2022). Pre-made food can be divided into four categories according to the way of eating: ready-to-heat, ready-to-eat, ready-to-prepare and ready-to-cook. They can be stored at room temperature, refrigerated or frozen, with a shelf life of 3 to 360 days (Z. Wang, 2022).

The revenue of pre-made food in China reached approximately 422 billion yuan in 2020. Its market is expected to reach 800 billion yuan by 2025 (Deng et al., 2022). Recent years, Guangdong Province has worked to build the research and development platform of pre-made

food industry chain. To this end, the People's Government of Guangdong Province put forward a series of measures to promote the high-quality and steady development of Guangdong Pre-made food industry, according to Ten Measures on Accelerating the High-quality Development of Guangdong Pre-made Food Industry issued on March 25, 2022. Guangdong Province took the lead in promoting the prepared vegetable industry in an organized and systematic way in China. After the measures were issued, various parts of Guangdong Province also took the lead across the country to promote the pre-made food industry in an organized and systematic manner. After the ten measures are issued, Guangdong also actively promoted the construction of various industrial parks and expanded industrial clusters (Deng et al., 2022). Therefore, it is safe to predict that pre-made food will play a very important role in China's food consumption market in the post-epidemic era. Thus, this study proposes relevant strategies and marketing strategies for the production and sales enterprises of pre-made food based on the changes of Chinese consumers' consumption concepts and behaviors of pre-made dishes before and after the epidemic.

## **1.2 Research purpose and significance**

### **1.2.1 Research purpose**

The main purposes of this study are as follows: First, to put forward relevant suggestions on the digital transformation of Chinese catering enterprises through the changes of Chinese consumers' eating and consumption behaviors before and after the epidemic, as well as the changes of consumers' concepts and behaviors related to ordering food and shopping through online platforms. Secondly, marketing suggestions were put forward for the production and sales of prepared dishes in China through the changes of Chinese consumers' consumption attitudes towards prepared dishes before and after the epidemic.

### **1.2.2 Research significance**

Firstly, provides reference for relevant researchers. In daily reading of relevant research literature, it can be found that the research on the Chinese consumers' catering consumption behavior of in the post-epidemic era needs to be enriched. When conducting relevant research, there are few relevant literature for reference. Therefore, the research in the thesis can provide reference for relevant researchers to a certain extent, guide more researchers to conduct different studies on the consumers' consumption behavior in the post-epidemic era, and further



enrich relevant theories, so as to help people better and more deeply understand the changes of catering consumption behavior in the post-epidemic era.

Second, it is conducive to providing decision-making reference for catering sales enterprises. Because this study compares the catering consumption behavior of Chinese catering consumers in the post-epidemic era and platform economy with that before the epidemic, we can clearly understand the specific changes in the catering consumption behavior of residents in the post-epidemic era and platform economy. Therefore, for enterprises, enterprises can adjust their corporate strategy and marketing strategy according to the specific changes in the catering consumption behavior of residents in the post-epidemic era and platform economy, and flexibly adjust the types of products sold, so as to better respond to market changes, which can enable enterprises to provide consumers with rich products while promoting the sound and rapid development of enterprises.

Thirdly, the thesis plays an auxiliary role for the government to formulate digital policies. As for the government, it can provide some realistic materials and references to facilitate the government's reference and thus help the government's efficient and rapid decision-making. This thesis puts emphasis on the research of the catering consumption behavior of Chinese consumers under the background of platform economy in the post-epidemic era, summarizes the specific changes in the catering consumption behavior of Chinese consumers before and after the epidemic, and puts forward relevant countermeasures and suggestions. Though this study, it can provide reference for the digital transformation of Chinese catering enterprises and provide suggestions for the Chinese government's digital strategy.

### **1.3 Research methods**

This thesis adopts the questionnaire survey to collect data in two phases, with SPSS26.0 and AMOS26.0 software used to verify the data of the theoretical hypothesis model. The first stage is the pre-investigation stage, through which the questionnaire is modified. The second stage is the formal investigation stage, in which the investigation is conducted by issuing formal questionnaires.

Therefore, this study intends to provide first-hand data for the dietary consumption behavior of Chinese consumers in the post-epidemic period through questionnaires. This research aims to understand the current situation of China's catering industry consumption, and on this basis, empirical research. Through the questionnaire survey, the researchers obtained a



large number of first-hand data, which laid a solid data foundation for the empirical research of this study.

In terms of quantitative analysis, this study takes Chinese catering consumers in the “post-epidemic era” as the research object, and uses SPSS26.0, social statistics software AMOS26.0 and Excel software to conduct statistical analysis and empirical research. Statistical analysis of the data obtained from the questionnaire, including exploratory factor analysis, confirmatory factor analysis, path analysis, et al., to verify the hypothesis of this research.

## **1.4 Research framework**

The thesis consists of six chapters. In addition to the research background of this chapter, the following chapters are about literature review and theoretical framework, research methods, research results, discussions, conclusions and suggestions. The details of each chapter are as follows:

The second chapter includes literature review and theoretical framework. In this chapter, the author first teases out and generalizes relevant literature on technology acceptance model and planned behavior theory, then analyzes and summarizes the independent and dependent variables of Chinese consumers ordering and purchasing pre-made dishes through online platforms under the post-epidemic era; secondly, the author concludes the external environment and other relevant variables to study whether these relevant variables will play a role in controlling the model. Finally, the author builds the theoretical hypothesis and the research model of this study in line with the results of literature review.

The third chapter involves research design and methods. This part first describes the research object and data acquisition method; secondly, it analyzes the applicability of the questionnaires and scales on Chinese consumers’ shopping behavior on online platforms, including the detailed explanation of the reliability analysis and validity analysis as well as data analysis methods and tools.

The fourth chapter contains research results. This chapter verifies the theoretical hypothesis and research model and analyzes relevant data through the analysis of the data collected from questionnaires and scales.

The fifth chapter contains discussion, conclusions and recommendations. This part first discusses the results of this study; secondly, based on the research conclusions, the practical significance of this study and the direction of future research are further clarified.

The sixth chapter involves outlook. On the basis of Chapter 5, this research discusses the research direction that can be continued in the future, and analyzes and expounds the strategies and marketing strategies that Chinese catering enterprises can adopt in the post-epidemic era.

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## **Chapter 2: Literature Review**

### **2.1 Related concepts**

#### **2.1.1 Platform economy**

Platform economy is an important part of the concept of digital economy, which belongs to the second level of its concept. The concept of “digital economy” was first proposed by Don Tapscott (2016) in his bestselling book “Economics in the Data Age: Reflections on Opportunities and Risks in the Age of Network Intelligence”. In the era of digital economy, the rise of digital platform enterprises is a worldwide phenomenon. At present, there is no unified understanding of the concept of platform economy in the academic circle. Based on various viewpoints, the definition of “platform economy” is as followed: Using cloud, network, terminal and other online infrastructure, in coordination with a series of rules and institutions, and using artificial intelligence, big data analysis, blockchain and other digital technology means. Then a new economic model is formed after combining the transaction, transmission content, management process. This new business form is formed and developed along with the fourth Industrial revolution with digital technology as the core, which is an important embodiment of digitalization and intelligence.

The concept of platform organization was first proposed by Ciborra (1996), a professor of management at the University of Bologna. As early as 1996, he published his book “The Platform Organization: Recombining Strategies, Structures, and Surprises” in the journal of “Organization Science” in the United States. This research takes Italian company Olivetti as an example, the concept of “platform organization” is formally proposed and defined as “an organizational structure that can construct a flexible combination of resources, practices and structures in emerging business opportunities and challenges”. Indeed, economists and management scientists have long discussed the concept of a platform economy in terms of the non-digital world. For example, we usually talk about shopping malls, markets and supermarkets are platforms that connect merchants and consumers. This business strategy of platform management has actually existed in our daily life for quite a long time. Some scholars even regard Village Matchmaker as a primitive platform (Caillaud & Jullien, 2003; Evans, 2003).

Through the search of China's authoritative academic journals and dissertation search website [www.cnki.net](http://www.cnki.net) for "platform economy", the current research of Chinese scholars on platform economy mainly focuses on such topics as platform anti-monopoly, the development mechanism of platform economy, the regulatory mechanism of platform economy, and the definition, characteristics, effects and content of platform economy. They all have their own ideas about what a "platform economy" means.

For example, Cai et al. (2020) clearly defined the concept of "platform economy" in his article "Difficulties and Strategies of Tax Governance in Platform Economy", that is, to realize bilateral or multilateral trade by exploring potential demands with the support of network technology, based on real or virtual trading places, and with platforms as intermediaries or resource providers.

Huang (2022) has also conducted relevant research on "platform economy", which is a new type of economy with cloud, network and terminal as the core. Through artificial intelligence, big data analysis and block chain, it is a new economic form of transaction, transmission and management.

Zhao and Li (2019) argued in their "Review of Research on Free Trade Zone based on Platform Economic Theory" that although scholars at home and abroad have different opinions on the definition of the concept of "platform", their basic views come from the induction of the practical experience of "platform" enterprises. Since 2000, after in-depth research on the existing shopping platform and knowledge platform at that time, foreign scholars have put forward the concept of platform economy, and defined the two-sided market with the theory of price on-neutral similarity. However, it was not until 2004 that the concept of "platform economy" in France was officially declared "platform economy". Two years later, some scholars first defined the connotation of platform economy, then defined platform economy from the virtual and real aspects, and briefly elaborated the source of its income, and finally concluded it as a kind of place (space).

Han (2022) gave a special definition of "takeaway platform" in the article "development logic and interest differentiation of platform economy." The takeout platform refers to the online platform engaged in takeaway service, which can transfer the orders issued by users to the distributor side, deliver the goods to the users within a specified time, and charge a certain fee. This mode can not only meet the needs of consumers, but also greatly improve the quality of service. In addition to providing food, the takeaway platform can also provide other services, such as delivery and maintenance. At the same time, it can also provide consumers with other convenient services, such as home delivery et al. In addition, the takeaway platform can also

meet consumers' requirements for food safety, as it adopts a strict food safety inspection mechanism.

After combing the relevant literature using Web of Science, we found that in one of the most cited articles, Rai et al. (2006) elaborated on the impact of digital supply chain integration capabilities on corporate performance. Digital platforms play a key role in managing supply chain activities and partnerships, thereby bringing performance benefits to companies. This study illustrates how and why information technology can create performance gains for companies in a supply chain management (SCM) environment.

Some scholars have also studied the topic of social commerce, and social e-commerce is becoming an important platform. In e-commerce, this is mainly due to the increasing popularity of social networking sites such as Facebook, LinkedIn and Twitter. This study conducted an empirical study on a popular microblog to understand users' social sharing and social shopping in social networking sites to investigate how social factors such as social support and relationship quality affect users' future intention to participate in social commerce. The results show that both factors play a crucial role. Social support and website quality have a positive impact on users' willingness to use social commerce and continue to use social networking sites. These effects are moderated by the relationship quality between users and social networking sites. Our findings not only help researchers explain why social commerce is popular, but also help practitioners develop better social commerce strategies (Liang et al., 2011).

Hajli (2015) Social commerce is a new development of e-commerce, which is generated by using social media to enable customers to interact on the Internet. Recent advances in ICT, the emergence of Web 2.0 technology and the popularity of social media and social networking sites have witnessed the development of new social platforms. These platforms promote the use of social commerce. Drawing on literature on marketing and information systems (IS), the authors propose a new model to use PLS-SEM to test the model to deepen our understanding of social commerce. The results show that Web 2.0 applications are attracting individuals to interact and generate content on the Internet. Consumers use social commerce structures for these activities to increase trust and purchase intention. Limitations, implications and future research directions are discussed at the end of this research.

Although there are many similarities between the platform economy discussed in this study and the traditional platform, the differences between the two are also obvious. The digital platform transforms the business process through mobile Internet technology, breaks through the limitations of traditional platform geography, time, information exchange and other aspects, and obtains a new business model.

In summary, the platform economy is a business model based on the Internet, digital technology and sharing economy model. Through the establishment and operation of online platforms, it connects the supply and demand sides, realizes the sharing and interaction of resources, and promotes transactions and value creation. In the platform economy, the platform acts as an intermediary and organizer. By providing infrastructure and services such as online communication, information matching, payment and settlement, the platform brings together suppliers and demanders to achieve transactions and cooperation between the two sides. The core of the platform economy is to build a matching mechanism between supply and demand, and gather the connected parties in a shared cyberspace to promote the efficient allocation of resources and the occurrence of economic activities. The platform economy has some typical characteristics, mainly as follows: First, multi-party participation: the platform in the platform economy connects the supply side and the demand side to form an ecosystem of multi-party participation. The supply side can be individuals, enterprises, organizations, et al., and the demand side can be users, consumers, enterprises, et al. Second, the sharing economy model: the platform economy advocates resource sharing, and realizes the maximum utilization and optimal allocation of resources by sharing and utilizing existing resources. The platform does not have actual production assets, but provides infrastructure and services to promote the sharing and exchange of resources. Third, digital and Internet technology support: The platform economy relies on the development of the Internet and digital technology, and uses the vast information space provided by the Internet and the support of digital technology to make transactions more convenient, efficient and secure. Fourth, network effect and scale economy: the value and influence of platform economy increase exponentially with the increase of participants' scale. The more participants in the platform, the greater the trading volume and value creation, and also attract more participants to join, forming a network effect and economies of scale. Fifth, personalized and customized services: The platform economy can provide customized services and experiences based on users' personalized needs and preferences. Through data analysis and intelligent algorithms, the platform can realize personalized recommendation, precision marketing and other functions, improve user experience and satisfaction. Typical platform economy mainly includes sharing economy platform (such as shared bicycle, shared accommodation), e-commerce platform (such as Taobao, Jingdong), transportation platform (such as Didichuxing, Uber), online education platform (such as Coursera, Zhihu Live), catering group-buying platform (such as Ele. me, Meituan, Dianping), et al. In general, the platform economy has become an important force to promote economic development and social change by building an online platform, connecting

supply and demand sides, promoting transactions and value creation, realizing the sharing and optimal allocation of resources, and having the characteristics of high efficiency, flexibility and innovation. The platform economy studied in this research mainly focuses on the catering group-buying platform.

In China, the reform of platform economy is closely related to the epidemic. When the SARS epidemic just ended, Jack Ma launched the e-commerce platform “Taobao.com” based on PC Internet. In 2020, China’s economy was hit by the unprecedented COVID-19 epidemic, which had a significant impact on economic activities but also accelerated the innovation and development of the platform economy. It can even be said that the outbreak of the epidemic has become an important factor to promote the further development of the platform economy.

### **2.1.2 Video marketing**

Short video sharing technology first appeared in the United States. It was first promoted on a large scale in China by vine company in 2011-2013. At present, a number of large-scale short video sharing platforms represented by Tik Tok and kuaishou have been formed in China. With the rapid development of information technology, the mode of production and consumption centered on digital technology has gradually become an important driving force for the development of the new economy (Wang, 2022). In the context of the mobile Internet, with the trend of fragmentation, visualization and mobility of people’s media consumption becoming more and more significant, mobile short videos that can be quickly edited and shared by society using smartphones as carriers have quickly become a new Internet outlet (Xu et al., 2023). During the epidemic, China implemented strict prevention and control policies, and many cities adopted strict control once the epidemic occurred. Many Chinese residents began to work at home, and students began to live online class at home. Many people have developed the use of the Internet to solve their daily needs of food and other items. Many Chinese consumers spend time watching short videos and live broadcasts on their mobile phones during the epidemic, and many people have developed the habit of ordering on short video online platforms.

According to the China Internet Information Center, the total number of online video websites in China reached 995 million in the first half of 2022, an increase of 20.7 million, or 94.6 percent year-on-year. Meanwhile, China’s online video websites had 962 million short video users, an increase of 28.05 million compared with December 2021, or 91.5% year-on-year (China Internet Network Information Center, 2022b). With the deep integration of short video and e-commerce, the competition in the content e-commerce market is becoming more and more fierce. Short video platforms continue to expand into the field of e-commerce, and



the “content + e-commerce” model has deeply affected users’ consumption habits. Short video platforms have begun to extend their reach into local daily life and shift from content consumption to online services. Kuaishou and Tik Tok, the two largest short video platforms, are also doing their own things. By combining with third-party platforms, Kuaishou has become a comprehensive service platform integrating online and offline (China Internet Network Information Center, 2022b).

With the deepening of the digitization process and the impact of the epidemic, the behavior habits of users have changed greatly, especially video consumption. More and more users know the world through videos, and they spend an average of 18 hours or more per week watching videos. Compared with text content, users are more willing to share video content with friends. According to statistics, more than 1 billion users watch Facebook videos every day. In order to further verify the influence of the video, Biteable placed graphic ads and video ads on the Facebook website respectively. The results show that the influence of the video is much better than that of the static picture. The number of potential customers of the former is more than three times that of the latter, while the click rate of the video is about 480 % higher than that of the graphic ads, and the return on investment is also higher (Zhang, 2021).

In general, short video is content-oriented to improve customers’ purchase intention and achieve marketing goals. According to Joe Pritz, the father of content marketing in the United States, content marketing is a kind of commercial marketing, which creates and disseminates content to attract specific or potential target audiences, with the purpose of motivating customers to bring benefits to the company (Zhang, 2020).

The popularity of mobile Internet has accelerated the development of online video. As long as you have a mobile phone, you can create and share video content anytime and anywhere. The accessibility and low cost of online video production help users to record their lives in a more direct way, and also help the communication subjects to convey their ideas and values more vividly. Video, such a fresh form of content, is transforming the short stay of attracting users’ attention into the influence on users’ mood, and gradually occupies the focus of content marketing. At the same time, long-term stop and attention have also stimulated the user’s original content consumption intention, which in turn has spawned more purchase behavior. The report also pointed out that up to 94% of users said they would learn about the services and products they are interested in by watching videos. Another 79% of users will be driven by video content, and then download the application and achieve in-app purchase. (Zhang, 2021).

Song and Huang (2022) believe that comprehensiveness, interest and quality of short video content have a positive impact on consumers’ purchase intention. Perceived value plays an

intermediary role. When the four dimensions of Tik Tok short video content, namely comprehensiveness, interest, interactivity and quality, affect consumers' purchase intention, perceived value intervenes and plays a role between the dimensions. This indicates that if the short video content of Tik Tok makes consumers feel the value of products, they will increase their willingness to purchase products and improve marketing effectiveness. High-quality short video content can make consumers get a good perception, so as to achieve the best publicity and marketing effect, establish emotional resonance with consumers, and achieve the intention of positively affecting consumers' purchase when obtaining consumers' trust.

In the e-commerce marketing mode, with the characteristics of "strong interaction, strong scene construction and strong spatial integration", live marketing endows users with the interactive ritual of "super-time, super-reality, and super-society", as well as the virtual symbol consumption experience. Live marketing directly focuses "people, goods and fields" into the same frequency space, and reproduces an approximate real online shopping scene through visualization. A study by Huang (2023) based on the SOR theoretical model, constructed a model of the influence of live broadcast information on consumers' purchase intention and behavior, and believed that external stimulus information at the level of products, network anchors and consumer groups can help consumers establish their cognition of products, relationships and emotions. Thus, purchase intention and behavior are generated.

Zheng (2022) pointed out in her study that content marketing in short videos can positively affect the audience's purchase intention. The study pointed out that the content marketing in short videos can shorten the psychological distance of consumers, thus promoting their consumption intention. Psychological distance plays an intermediary role between content marketing and purchase intention.

Short video also has multiple advantages in marketing: low creation threshold, low marketing cost, rift communication, rooted grassroots culture, high video information carrying capacity, fan interaction et al (Le, 2021).

"Planting grass", as a term on the Internet, is essentially a kind of social marketing. The development of consumer culture has been influenced by the evolution of media technology, especially the popularization and application of mobile Internet technology, which has brought great changes to people's consumption practice. As a promotion platform for products and brands, social media has great influence. Most young people say that they understand and discover products through social media. According to statistics, 58% of consumers say that social media platforms have an impact on their purchasing decisions (Jiang & Chen, 2019).

Therefore, the short video online platform is a new marketing platform for Chinese consumers. It is of great significance to study how the short video online platform affects the shopping behavior of Chinese consumers in academic and management practice.

Content marketing is an integrated way of information transmission. It uses text, pictures, video, audio and other information carriers to attract customers' attention and interact with them through the enterprise's own content, so as to achieve the purposes of product promotion and brand marketing. The application of content marketing is very wide. Through the content marketing can carry on the enterprise image publicity and also can promote the enterprise sales work. Content marketing is a new marketing concept in the network environment. The essence of content marketing is an effective way of information dissemination based on the online platform. In this way, with the help of the carrier of the network, the information of the enterprise can be passed to more potential consumers. While realizing the enterprise goals and promoting the products, it also enables consumers to have a more comprehensive understanding of the enterprise and the product. Therefore, content marketing has gradually become a necessary way for many enterprises in the marketing process.

Short video marketing is a hot topic of academic research in recent years. It is a new marketing method to promote products, brands and services by using short video to convey information to consumers. Guo Xiaoyu is the first person to introduce the concept of "short video" on the Internet. He regards "short video" as an important branch of "video marketing". Compared with still images and traditional videos, short videos have the characteristics of low entry threshold, rich information and rapid spread, which can stimulate consumers' interest in virtual haptics. Based on the rich content and three-dimensional interaction effect of short video, marketing has become a new marketing tool. It has a wide range of applications in media, agriculture, e-commerce and other fields. In recent years, with the rapid development of short video, its marketing has attracted great attention from the academic circle. However, the current research on short video market is still in the initial stage, and relatively scattered. Therefore, it is necessary to systematically sort out the existing relevant literature in order to clarify the research content of this subject and provide reference for future research.

For the concept of "short video marketing", there is no consensus in academic circles at home and abroad, and various scholars have different definitions of it. Some scholars take short video as a kind of media and sell goods through short video platform. Xia believes that short video marketing is marketing activities carried out by companies or commercial organizations on mobile phones (Xia, 2020). Some scholars also put forward that short video marketing refers to the process of using short video tools to carry out market publicity. The above definitions

highlight the function of a “tool”, but its ultimate goal is relatively simple, while in practice, it can achieve multiple marketing goals. From these concepts, we can see that short video, as a kind of media, plays a decisive role in the marketing activities of enterprises. Taking the definition of video marketing as a reference, this study believes that short video marketing is a marketing method that takes new media as a communication channel and makes short videos to deliver value, so as to promote products, brands and services.

### **2.1.3 Content marketing**

The term content marketing was first proposed by Rick Doyle of the American Federation of Newsresearch Editors in Chief in 1996. He expounded it from the perspective of communication and believed that content marketing was a completely different way of communication from traditional marketing. However, so far, there is still a lack of consistent definition of content marketing. In 2008, Pulizzi et al. systematically explained the concept of content marketing for the first time from the user’s point of view, arguing that it attracts and retains target consumers by creating and disseminating multi-form, educational or persuasive content. Subsequently, the American Content Marketing Association defined and summarized content marketing from the perspective of corporate business objectives. Joe Pulizzi is one of the important thought leaders of content marketing. In his book “Content Marketing Redbook”, he summarizes the definition of content marketing as follows: “Content marketing is a strategic marketing method that attracts and retains valuable, persuasive, and targeted audiences by creating and distributing content that is relevant to them, and ultimately promotes measurable action to achieve business goals (Wang, 2019).

Dou (2021) defines content marketing in “Content Marketing-Digital Marketing New Era” as: “Content marketing refers to a marketing method that uses valuable content to first attract consumers’ attention, thereby enhancing their understanding of the brand, cultivating goodwill, and ultimately leading to purchases and cultivating long-term loyalty.”

This definition emphasizes the importance of content marketing to the target audience, that is, to create valuable content, to meet the needs and interests of the target audience, to trigger their emotional identity and interactive behavior, and through this behavior to promote the realization of business goals. At the same time, it also clarifies the strategic characteristics of content marketing, that is, content marketing is a long-term, purposeful and systematic marketing method, which needs to be closely integrated with the marketing strategy and objectives of the enterprise to achieve the ultimate commercial benefits.

Research shows that content marketing is of great significance to influence consumers' purchasing behavior. Most of the previous literature from the media form and consumer perspective. Li (2019) found that live broadcast, short video and graphic content on e-commerce platforms have different effects on consumers' consumption behavior when targeting the same type of products. Although these three kinds of content can encourage consumers to spend more money, for women's clothing, consumers who watch short video content consume 15% more than consumers who do not watch.

Wang (2019) believes that the focus of marketing content that enterprises use content marketing strategies to convey to consumers is different. Therefore, the content marketing of enterprises is first divided into dominant types, and then the users' perceived value is used as an intermediary variable to explore the impact of different content strategies on consumer purchase intention. Research shows that in the content released by enterprises, the more parts that can meet the needs of consumers, the more obvious the perceived value generated by consumers, and the stronger the consumer purchase intention triggered. The influence mechanism of the dominant logic of content marketing on consumers' purchase intention is as follows: First, the establishment of trust: content marketing can establish consumers' trust in brands or products by demonstrating the professional knowledge and superiority of products or brands, thus promoting consumers' purchase intention. Second, the trigger of emotional resonance: through emotional marketing means, establish emotional resonance and connection with consumers, trigger consumers' emotional needs and curiosity, and stimulate purchase interest and desire. Third, the convenience of information acquisition: content marketing can provide rich product or brand information, provide convenience for consumers to meet their needs for more information, thereby enhancing their purchase decisions. Fourth, the superiority of competition: through the superior display, content marketing can highlight the competitive advantage of products or brands, so as to improve consumers' willingness to buy. Fifth, the transmission of value proposition: through content marketing, a brand or product can convey the value proposition it provides, attract and guide consumers' purchasing decisions, and establish long-term brand loyalty. In summary, the dominant logic of content marketing can affect consumer' purchase intention through various means, including building trust, triggering emotional needs, providing information convenience, highlighting competitive advantages, and delivering value propositions.

Wang (2020) divides short video content marketing into three directions: functional, entertainment, and social interaction. She pointed out that high-quality brand short videos can effectively reduce consumer uncertainty about products, thereby narrowing the relationship

between brands and consumers, reducing psychological distance, and increasing consumer purchase intention. This effect is mainly achieved through the mediating role of psychological distance.

Lyu and Zhu (2021) explored the content characteristics of short video and found the characteristics of information, social interaction and scene. Their research shows that these characteristics have a positive impact on consumers in online shopping scenarios, including the value of providing perceived use, emotional enjoyment and cognitive trust. In addition, through the influence of emotional use value and cognitive trust value, these characteristics also play a positive role in promoting consumers' willingness to choose. Short video has become an important content marketing method, which can attract consumers' attention and convey brand or product information to them in a short and concise form. In addition, short video has the advantages of social interaction and scene, which can more effectively trigger consumers' emotional needs and purchase desire. In order to enhance the effect of short video content marketing, merchants need to pay attention to the following points: first, provide useful information to allow consumers to recognize the use value of products or brands; secondly, strengthen social operations to promote the visibility and dissemination of brands or products; finally, pay attention to scene marketing, let consumers perceive the existence of products or brands, so as to more naturally promote consumers' purchase intention.

In a study, Al-Gasawneh and Al-Adamat (2020) discussed the mediating role of online word-of-mouth in content marketing and its relationship with Jordan's green purchase intention. The basic theory of this study is social communication theory. The results show that online word-of-mouth controls the relationship between content marketing and green purchase intention. Therefore, the study provides practical findings that Jordanian companies can increase customers' willingness to purchase green products by achieving word of mouth and providing appropriate marketing content. Specifically, effective and appropriate content marketing encourages consumers' green purchase intention. Regarding the importance of content-based social media marketing in motivating consumers to share content through online word-of-mouth, the H2 results of the current study show that content marketing has a positive impact on online word-of-mouth. Therefore, it can be said that effective and clear content marketing encourages online users or customers to spread through online word-of-mouth with their peers. The impact of online word-of-mouth on shopping intention is positive. This makes current research confirm that online word-of-mouth is a valuable part of attracting consumers to buy green products. This study uses social communication theory to analyze online word-of-mouth as an intermediary between content marketing and green purchase intention, providing

valuable contributions. The study also confirms that online word-of-mouth has been shown to moderate the relationship between content marketing and green purchase intention. This shows that clear and effective content marketing, including appropriately attractive content, can strongly encourage satisfied customers to share their positive experiences through online word-of-mouth, which in turn increases other customers' interest in green products.

## **2.2 Research on the influencing factors of online shopping behavior**

This research will analyze the main influencing factors of consumers' online ordering. The main participants of online ordering are online consumers, catering enterprises and ordering platform enterprises, and the most important participating factors are the products (or services) provided by merchants. The quality of products (or services) will directly affect customers' satisfaction with online food ordering. Therefore, the analysis of the factors affecting consumers' online ordering decisions will be gradually carried out around online consumers, catering enterprises and ordering platform enterprises.

### **2.2.1 Research on the influence of personal experience on online shopping behavior**

Personal experience in this research refers to the experience of consumers' online shopping. Consumers' previous shopping experience on the platforms will determine their willingness to shop. In the process of using the online shopping platforms in the past, the shopping experience, satisfaction and service quality obtained by consumers will have an impact on their future shopping decisions. Consumers' personal experience on online shopping platforms has an important impact on their future shopping intentions and purchasing decisions. Consumers evaluate and judge the reliability, service quality and product quality of the platform based on previous shopping experience, thus affecting whether they are willing to choose the platform for shopping again.

Jarvenpaa and Todd (1996) conducted a survey on the main factors affecting consumers' online shopping. They believe that consumers' shopping experience, perception of products and website services are important influencing factors, and analyze their possible influence on consumers' online shopping decision-making behavior. In this article, Jarvenpaa and Todd listed various components of the three factors and explained their place in the minds of consumers. The meaning of each element is shown in Table 2.1. Among these factors, customers' understanding of online goods is mainly reflected in the price, type and quality of goods. Secondly, through online shopping, consumers can feel the change of lifestyle and the pleasant



experience. In addition, consumers can also deeply understand the convenience provided by online merchants to customers through technical support services such as online product display, information search, order processing and online communication. Merchants' commitment and guarantee of product quality and service can also alleviate consumers' concerns about the uncertainty of online shopping (Table 2.1).

Table 2.1 Components of consumer perceived factors and their implications

Factors	Components	Implications (the degree of consumers' perception)
Product perception (product)	price	The Internet offers better-priced products and attractive promotions and deals.
	types	The Internet offers a wide range of goods and services, including goods and services that consumers cannot find elsewhere.
	product quality	The Internet is a source of high quality products and services that meet consumers' expectations.
Shopping experience (consumer)	performance	The Internet saves time and makes shopping easier
	suitability	The Internet suits consumers' lifestyle and is their preferred way of shopping.
	happiness	Shopping online makes consumers happy.
customer service (e-merchant)	responsiveness	E-merchant provides necessary information for consumers to search for information, select, order before purchase and offers product delivery and after-sale service support.
	reliability	E-merchant is required to fulfill the commitment.
	definiteness	Both products and services are shown in an visual manner.
	humanization	Merchants understand and meet the consumers' individualized needs and provide friendly service in a communicative and visual manner. It's a general transaction and not just the buyer-seller relationship.
	warranty	Merchants provide information so as to reduce uncertainties caused by consumer experience, business reputation, product or service quality.

Source: (Jarvenpaa & Todd, 1996)

Bai et al. (2008) believes that when consumers purchase goods, they should consider the technical services, shopping experience and product characteristics of the website. In addition, many researchers have drawn similar conclusions. The main influencing factors include three aspects: business factors (website factors), consumers' own characteristics (such as shopping experience, gender, et al.) and commodity attribute characteristics.

In terms of technology, it includes the security and privacy of information, the design of web pages and the practicability of functions. Purchase factors refer to the characteristics of people and websites, which are related to purchase experience. About product perception. In the context of e-commerce, goods can only be displayed on the website, resulting in a lack of real feelings and experiences, which will increase the difference between consumers' perception of the goods purchased and the goods actually shipped, thus making consumers more uncertain about the perception of online transactions. Therefore, for consumers, they need to rely on



previous personal online shopping experience to choose products and merchants. If their previous shopping experience is better, it will increase the probability of repurchase and thus affect consumers' purchase intention (Jarvenpaa & Todd, 1996).

To sum up, personal shopping experience makes consumers feel that the system can save time for them and make them feel that shopping becomes easier. The use of Internet shopping is more suitable for consumers' lifestyle and is their preferred way of shopping. These factors together reflect the usefulness of the shopping system. Consumers' perception of the "convenience and speed" of the shopping system formed in the process of online shopping in the past will form a perceived ease of use of the shopping system, so as to strengthen consumers' reuse of the system. Personal experience is an important factor for consumers to use the system for shopping.

### **2.2.2 Research on the influence of perceived trust on online shopping behavior**

The variable of perceived trust comes from the theory of trust, which is proposed by German sociologist Simmel Georg. He believes that trust is an important factor in maintaining sticky relationships, social exchange is a prerequisite for the sustainable development of society, and consumers' willingness to use online platforms is a systematic trust, not a universal trust in the sense of personality (Mayer & Davis, 1995).

Through empirical analysis, Schaupp and Belanger (2005) found that website (system) and goods are the two most important factors in online shopping. Among them, the website elements include the convenience of online shopping, the trust of merchants and the logistics of post-purchase products, which are the three elements that affect online shopping.

Qiu (2017) analyzed the influencing factors of consumer purchase behavior in mobile e-commerce, and found that the six factors of sociability, quality, convenience, safety, preference and ease of use have a positive correlation with mobile online shopping intention. Good product quality and high system security will improve consumers' trust perception, thereby improving shopping intention.

Sung-Eui (2010) pointed out that the remote order purchase decision of B2C shopping is affected by many factors, including distribution, service, trust and reliability. Consumers evaluate the convenience demand (such as spatial accessibility) for remote order shopping that requires delivery and after-sales service through the mediating variable of perceived risk, and also reflect consumers' doubts and concerns about remote order delivery services, thus affecting consumers' purchase decisions.

Based on the UTAUT model, Li et al. (2020) explored the influence mechanism of perceived value across e-commerce platforms on consumers' purchase intention. Through empirical research, we reach the following conclusion: in the process of cross-border e-commerce shopping, consumer's functional experience and brand perception of cross-border e-commerce platforms will directly affect consumers' experience of cross-border e-commerce platforms, thus affecting consumers' purchase intention. The value perception of cross-border e-commerce platform has a significant positive impact on consumers' purchase intention, and consumer trust is an important mediating variable affecting their purchase intention.

Many scholars are studying and analyzing the factors that affect consumers' online shopping. For the services of B2C shopping websites, including the characteristics of website payment, physical goods distribution and after-sales service, they analyzed the impact of website services from many aspects and verified its impact on consumers' online shopping decisions. The specific analysis includes: the analysis of consumers' trust and reliability factors in website payment system and general service, the concern about after-sales goods distribution, the concern about the complexity of website service process, the study of perceived risk of remote orders, and the preference for distribution convenience.

In summary, product quality and system security, especially the security of the payment system, will affect consumers' perceived trust. Perceived trust will determine whether consumers use and continue to use the online shopping system, which is also an important factor in online shopping behavior.

### **2.2.3 Research on the influence of behavioral intention on online shopping behavior**

Behavioral intention in this research refers to online shopping intention. The prediction of consumers' online purchase behavior is affected by many factors, among which online shopping intention is an important factor. Consumers' information search methods, website quality and product evaluation will affect online shopping intention (Hausman & Siekpe, 2009; Poddar et al., 2009). In the e-commerce environment, shopping intention is a major factor affecting consumers' online shopping (Bai et al., 2008). Most scholars regard online shopping intention as the representation of online shopping behavior in terms of online shopping decision-making. Schiffman and Canuck and Harder and Stowell respectively believe that technological features, shopping environment and product factors have a significant impact on the formation of consumers' online shopping intentions. In order to attract and retain customers, online stores must understand the importance of these factors (Ha & Stoel, 2008; Schiffman & Kanuk, 2000). Chen et al. (Chen et al., 2010) tested the characteristics of technical factors, shopping factors

and product factors as well as their relative importance to customers' shopping decisions, and finally confirmed that these factors have a significant impact on customer purchase intention.

#### **2.2.4 Research on the influence of other factors on online shopping behavior**

In addition to the above factors affecting online shopping behavior, domestic and foreign scholars have also analyzed other factors affecting online shopping behavior:

Long & Liu (2013) divided the influencing factors of online shopping into consumer factors, situational factors, commodity attributes, channel factors and merchant factors, and proposed relevant theoretical hypotheses on this basis. In previous studies, no measurement items of merchant factors have been found. Therefore, this study developed corresponding measurement items from the perspectives of merchant reputation, communication ability and promotion, and carried out factor analysis and hypothesis testing.

Li (2020) established the basic model of "ECM-ISC" based on the theory of "expected confirmation". On this basis, six new variables are introduced, namely perceived ease of use, perceived entertainment, perceived quality, perceived price advantage, subjective norm and transformation cost, and a factor analysis model affecting the continuous behavior of mobile shopping APP users is established and analyzed theoretically. All the above factors can have a positive impact on the persistence of mobile shopping APP.

### **2.3 Research progress on online catering consumption behavior**

#### **2.3.1 Meaning of catering consumption behavior**

Catering consumption behavior refers to the behavior of people to buy, choose, prepare and enjoy food in the process of meeting their daily dietary needs. It involves the individual's needs, preferences and values for food, and is influenced by the individual's cultural, economic, social and psychological factors.

#### **2.3.2 Meaning of online catering consumption behavior**

Online platform catering consumption behavior refers to the consumption behavior of catering services through the online platform. With the popularization and development of the Internet, more and more consumers choose to order, take out, review and other catering services through mobile phone applications or web platforms.

Online platform catering consumption behavior includes the following aspects:

1. Order and take-out: Consumers can browse the menu, select dishes, place orders, and choose to pick up or delivery services through the online platform to send food to a designated location or on the door. The online platform provides consumers with more convenient catering choices by establishing cooperative relationships with catering businesses and providing ordering and takeout services.

2. Online payment: consumers can pay online through the online platform, using Alipay, WeChat payment, bank card and other means to complete the payment, convenient and quick.

3. comments and ratings: consumers can evaluate and score catering businesses on the online platform, and share their dining experience and opinions. This provides reference and decision-making basis for other consumers to choose restaurants, and also has an impact on the service quality and reputation of catering businesses.

4. Preferences and promotions: Online platform catering consumption behavior also includes enjoying the benefits, discounts and promotions provided by the platform. The platform often cooperates with catering businesses to launch various coupons, sales promotion activities, et al., to provide consumers with better consumption experience and benefits.

The emergence of online platform catering consumption behavior has greatly changed the traditional catering consumption mode and provided more convenient and diversified choices. Consumers can order food anytime and anywhere through the online platform, enjoy more convenience and services, and also promote the development and innovation of the catering industry.

### **2.3.3 Research on influencing factors of online catering consumption behavior**

The catering industry is an important pillar industry in China's tertiary industry. It is closely related to the people of various countries. In a sense, it can reflect the people's quality of life and the level of social civilization. This research focuses on the customer behavior analysis of the online catering industry, looks forward to the development trend of the online catering industry, discusses the development trend of the online catering industry, and plays a very positive role in the development of the online catering industry and the improvement of management, as well as the high-quality development of China.

The study of catering consumption behavior refers to a scientific understanding obtained through the study of consumer psychology, catering consumption level, catering consumption structure, catering preferences, catering habits, catering concepts, catering behavior et al. (Gao, 2012).

Some scholars have conducted special research on the factors affecting consumption. They have learned the consumption theory of western mainstream economics and discussed the impact of income on consumption. The income of the current, past and future stages will have an impact on consumers' optimal intertemporal consumption decisions. Keynes's view is that consumption expenditure depends on a person's current disposable income. As people's disposable income increases, the amount used for consumption will also increase, but the consumption increment decreases with the increase of income (Keynes, 1936). Judging from the actual situation of consumption development and upgrading in countries around the world, in addition to macro factors such as the level of economic and social development, it is also closely related to various factors such as residents' income and expectations, and market supply levels. In addition, external factors such as natural disasters, financial crises and public health events also have some impact on consumer demand. First, the consumption situation is determined by the period of economic development. The second is determined by personal income and expectations. Third, the release of consumption potential is affected by the degree of market supply. Fourth, consumer behavior is affected by social culture, environment and other factors. Fifth, external factors have a certain impact on the supply and demand of the consumer market (Guan, 2020).

Online consumption is usually asymmetrical. For merchants, the type, price and delivery time of food will have an impact on consumers' purchasing behavior, which will have a certain impact on store sales. Yang (2020) chose Meituan Takeout, the largest e-commerce platform in China, and used the online crawling program to obtain the relevant information of Meituan Takeout in the university town of Changqing District, Jinan City, and analyzed it, providing a basis for the enterprise and users to make decisions. It can be seen from the decision tree model that the three attributes of "delivery fee", "store score" and "praise rate" are the key indicators that affect the consumption of users recommended by decision makers.

Some scholars took the customers of social catering media as the research object. Based on the theories of technology adoption and planning behavior, they introduced the external variable of network word-of-mouth to construct the customer satisfaction evaluation model integrated with C-TAM and TPB, and conducted empirical analysis on it. Through questionnaire survey and empirical analysis, it is concluded that network word-of-mouth, perceived ease of use, perceived usefulness, subjective norms and use attitude are the main factors influencing consumers' willingness to continue using food social media. This research result can provide reference for third-party food e-commerce platforms and catering enterprises in the process of

business decision-making, and it has certain guiding significance in both theoretical and practical management.

Chen (2017) used computer technology to analyze the comments of the current popular online ordering platform. His research shows that the seven attributes of merchants' delivery speed, service attitude of delivery personnel, packaging integrity, and taste, weight, freshness and hygiene of the dishes themselves are the most valuable.

In terms of catering unmanned delivery technology, some scholars have also made relevant studies on drones. For example, Hwang et al. (2019) discussed the innovation motivation of drones in the context of food delivery service based on the technology acceptance model. This study divides consumer perception of innovation into four dimensions: function, enjoyment, cognition and society. The results of this study show that in addition to cognitive motivation, the other three dimensions of consumer perception of innovation are important factors of attitude. In addition, function-driven consumer perception of innovation has a positive impact on behavior, and attitude has been proved to increase desire and behavior.

In another article, Hwang et al. (2019) analyzed the influence of gender and age as moderating variables on consumer perception innovation, attitude and behavior. The results show that women are more receptive to new technologies than men, and women are more likely to accept and recommend these technologies and services to others. Age also moderates innovation perception, attitudes and behavior, with younger people more likely to embrace new technology than older people, the study is the first to reveal an age difference in drone food delivery services (Hwang & Kim et al., 2019).

Kaspar (2020) also conducted a study on people's use of contact tracing apps in the context of the COVID-19 epidemic, through which people's attitudes towards using the apps were investigated. The study uses protective motivation theory (PMT). The results show that PMT is a useful model that can explain people's motivation to protect against infection through social distance and use applications related to the COVID-19 pandemic. People's risk perception of the novel coronavirus will encourage people to use the relevant application procedures.

Another emerging field is the use of blockchain technology. By combining blockchain technology with e-commerce, it can effectively solve difficult problems such as information security, information asymmetry, information traceability, and information anti-counterfeiting. In the next few years, e-commerce will gradually develop to a new stage of development. The degree of customer's trust to the manufacturer has a greater influence on customer's satisfaction; the effect of payment and logistics on customer satisfaction is second, which is similar to that of customers satisfaction. Due to its decentralized characteristics, the influence of cross-border

e-commerce platforms has also been weakened. Based on this, some relevant suggestions are put forward, which provides a new method for constructing an open and shared, immutable and traceable cross-border e-commerce consumer trust environment (Liu et al., 2020). Blockchain also has positive significance in protecting users' private information (T. Yang et al., 2020).

In essence, blockchain technology is a technical solution to solve the trust problem and reduce the cost of trust. Its purpose is to achieve a decentralized, to the purpose of credit intermediary. With the continuous development of blockchain technology, it has become an important tool to reduce the credit cost of commercial transactions. It is expected to break the current domestic Internet business pattern and is also a promoter of information Internet to value Internet (Y. Wang, 2020). The application of blockchain technology in the Internet of Things also plays a positive role in the application of APP, mainly used in the precise positioning of logistics information, secure payment and prevention of privacy disclosure (Zhao, 2020).

In the post-epidemic era, many traditional catering enterprises are suffering from many problems, such as low customer flow, difficulty in drainage, reduced revenue, continuous rising cost, et al., and catering enterprises are under great pressure to operate. In the current context, catering enterprises should be consumer demand-oriented, open up business ideas, and formulate marketing strategies suitable for enterprise development to adapt to changes in the new environment (Li, 2022).

In the post-epidemic era, the lifestyle and catering consumption habits of Chinese consumers have undergone great changes. Their demand for dining environment, hygiene and health has further increased, which requires catering enterprises to improve the quality of products and services. At the same time, since the outbreak of the epidemic, the online catering industry has become a normal way of eating, and highlights its characteristics of avoiding the adverse epidemic growth, which forces traditional catering enterprises to face up to the changes in demand. In order to continue to develop under the new situation, catering enterprises need to realize that the development trend of catering industry is transforming to mass catering with consumption of less than 100 yuan. The consumers are younger, pay more attention to the health and safety of products, and their consumption forms are more diversified and personalized (Li, 2022). The outbreak of the COVID-19 has greatly affected China's catering industry. At present, under the background of the normalization of epidemic prevention and control, China's catering industry will still face more uncertain risks, severe challenges and new development opportunities. How to clarify the current situation, coping strategies and future direction of the catering industry, how to realize the reconstruction and integration of the internal development

function of the catering industry to adapt to the external environment, is an urgent problem for China's catering industry to answer.

Based on the development and change of social economy and the development of catering industry in the post-epidemic era, this research provides some principles and countermeasures for the future development of catering industry. At the same time, it will also be related to the trend of social environment development and change. A series of predictions have been made on the development of catering industry in the future, hoping to promote China's catering industry to better cope with the uncertainty brought by environmental changes. The application and popularization of Internet technology has innovatively integrated Internet thinking with people's living habits, thus constructing a new mechanism for people's catering information expression, catering consumption cognition, catering consumption pattern and catering consumption structure in network thinking. In this way, people have shifted from ordinary social network relationship to online network relationship, forming a double-line circulation of "online and offline" catering consumption pattern(Luoxia, 2020).

## **2.4 Theory of planned behavior**

Ajzen (1985, 1991) put forward the Theory of Planned Behavior (TPB) in his early years, the theory of planned behavior has been successfully used in the field of catering to discuss consumer behavior (Arvola et al., 2008; Bhuyan, 2011) using planned behavior theory to predict breakfast consumption (Wong & Mullan, 2009) and food choice (Hewitt & Stephens, 2007; Mead et al., 2010). The theory of planned behavior is the extension of theory of reasoned action (TRA) (Dang & Song, 2019). Rational behavior theory explains human behavior in terms of attitudes and social norms, while planned behavior theory includes perceptual behavior control. American psychologists Fishbein and Ajzen (1975) put forward the theory of rational behavior, which focuses on individual health, moral and other behaviors and analyzes their role in process transformation. However, in the theory of planned behavior, attitude, subjective norms and other factors are mentioned, and in this theory, attitude and subjective norms play a leading role. In the case of an individual, an individual's intention to act causes his actions to change. Based on this theory, Ajzen (1991) added a new element, namely perceptual behavioral control (PBC), and formed the theory of planned behavior. In this theory, behavioral intention will determine individual behavior, while perceived behavioral control can also directly affect individual behavior (as shown in Figure 2.2), among which perceived behavioral control has a direct impact on motor behavior. Planned behavior theory is a model that predicts actual behavior. It



was originally used to predict human social behavior is an important theory, in recent years, it is gradually applied to marketing, is used to analyze and predict the rational consumption behavior of customers (Ajzen, 1991). The theory of consumption planning behavior mainly includes four aspects: one is consumer's consumption behavior; The second level is the purchase intention of customers, which directly affects the consumption intention of customers, and affects the choice and selection of a certain product. The third level is the factors affecting consumers' purchase intention, including consumers' attitude towards purchasing behavior, subjective standards (what others think consumers should do, which is equivalent to the code of conduct given to consumers by others), perceived behavioral control (consumers' judgment on the degree of control over consumption behavior). In some cases, perceived behavioral control can also have a direct impact on consumer behavior. The fourth level is an in-depth analysis of the above aspects, such as attitude, subjective standards, judgment, et al. The model is shown in Figure 2.1.

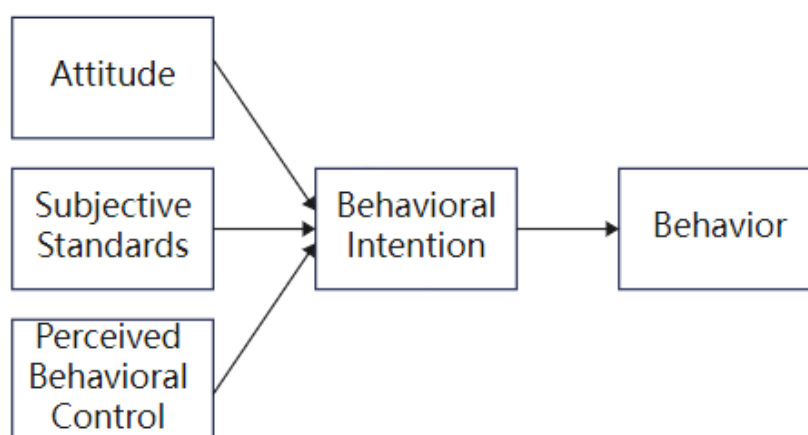


Figure 2.1 Theoretical model of planned behavior

Source: (Ajzen, 1991)

Attitude is the result of a person's behavior in the evaluation of overall behavior performance (Bhuyan, 2011), which is also determined by individual beliefs about positive or negative behavioral outcomes (Hewitt & Stephens, 2007). The influence of attitude on intention often plays an important role. In the literature on food consumption, some scholars use emotional and moral attitudes (the attitude of doing the right thing and then generating self-reward) in the theory of planned behavior to predict the intention to purchase organic food. The research points out that variables such as attitude, moral norm and subjective norm explain the influence on the intention. In the three cross-nationality studies studied (Italy, Finland and Britain), In England and Italy, attitudes affect intention not only more than the main criterion, but also more than the ability to explain intention.

Bhuyan (2011) used the theory of planned behavior to test the research results of “the influence of consumers’ attitude and preference on their eating out behavior” and pointed out that the more negative consumers’ attitude towards takeaway food (including health, safety, bacteria and service et al.), the less their takeout behavior (frequency).

Ajzen (1991) pointed out that in the theory of planned behavior, attitude is the most decisive factor for individual intention and promotes choice. On the contrary, some studies have pointed out that the effect of attitude on intention is insignificant. Especially under stress, attitudes toward unhealthy eating did not fully predict behavioral outcomes, because attention to attitudes became less rational in intense situations of stress (Louis et al., 2009).

On the other hand, social norms and perceptual behavior control also influence the decision-making process (Vermeir & Verbeke, 2008). It is worth noting that Vartanian (2010) “Disgust and Perceived Behavioral Control Attitudes for Obese” found that disgust is the strongest predictor of obesity in negative attitudes, that is, disgust is completely intermediate between perceived behavioral control and attitudes. Among them, although the influence of obesity in people’s beliefs can be deleted, these deleted effects are often not obvious to their attitudes. The subjective norm refers to the social pressure that value affects the individual, like the evaluation results of the important behavior of the individual (Bhuyan, 2011). That is, the behavior that one’s beliefs should take for the views of others (Hewitt & Stephens, 2007). For example, the social pressure that the individual feels, and is manifested in taking or not taking action (Verbeke & Vackier, 2005).

Hewitt and Stephens (2007) used the theory of planned behavior to study the healthy eating of children aged 10 to 13 and found that attitudes and subjective norms are the most predictive variables of intention. Therefore, parents will give their children what they think is healthy to their children, and what they think is most important for them. And believe that this will increase positive attitudes including beliefs, preferences and results. Social norms include not only perceived social pressure, but also the responsibility of individuals to feel or behave in terms of moral obligations.

Arvola et al. (2008) pointed out that the role of moral norms follows patterns of behavior. Taking the theory of fish consumption as an example, the intention to eat fish is influenced by social norms, which contain individual responsibilities and moral obligations. This refers to the importance of fish for a healthy meal to the family (Verbeke & Vackier, 2005). Other studies further turn negative feelings of obligation or guilt into positive feelings of self-enhancement (doing the right thing), that is, turning moral norms (social norms) into attitudes for further research (Arvola et al., 2008). It can be seen that social norms can be divided into internal moral

norms (that is, personal norms) and external expectations and needs (social norms) because of their mixed feelings and conflicting norms.

Smith et al. (2008) divided social norms into injunctive norms and descriptive norms. Generally speaking, social norms are included in imperative norms. Generally speaking, social norms are included in injunctive norms, and injunctive norms in behavior will motivate their behavior by emphasizing social rewards or punishments in committed or uncommitted behavior (that is, agree or disagree with their individual behavior); narrative norms reflect how individuals perceive others' behavior, that is, to motivate their individual performance from the efficient and appropriate behavior of ordinary people. In terms of beverage consumption, Smith et al. (2008) pointed out that both the narrative norm and the imperative norm significantly affect the intention, which means that if someone who is important to others does the same or supports the behavior, the individual is more likely to intend to buy their favorite beverage brand. Therefore, in the consumer's point of view, in social norms, it is important not only the degree to which the individual's behavior is supported or not supported by the people around, but also the perception of the behavior of the people around. Other studies have pointed out that imperative norms are often more influential than narrative norms (Dunn et al., 2011). That's because brief fear of negative evaluation can significantly interfere with the effect of social norms on intentions. In other words, for people who consume fast food, it is more important than how other people do not support this behavior.

Dunn et al. (2011) pointed out that social norms are a special issue in food consumption, especially in fast food consumption. In the short term, the fast food industry provides positive results such as making people feel pleasant in the situation, but in the long run, from the perspective of health, the result will be negative, and this negative result is often because an individual's views are opposed by the majority of others. This situation has many examples in society, including food consumption. Therefore, social norms are more predictive of intentions when they are negative and the results indicate that the consumption of fast food will affect its fast-food consumption in the special case of social influence and the need to comply with social opinions. However, social norms do not always significantly affect their behavior in any case. Vermeir and Verbeke (2008) pointed out that in the consumption of sustainable food (price fairness, animal and plant, environmentally friendly consumption), when consumers do not trust products as sustainable consumption but have a positive attitude towards their consumption, these consumers do not refer to the opinions given by important others but consider whether they can easily buy sustainable products.

Perceptual behavior control is an individual's view of his or her ability to express his or her behavior (Bhuyan, 2011), that is, how simple or difficult the individual's perception is reflected in his or her behavior (Hewitt & Stephens, 2007). Perceptual behavior control directly affects his or her behavior conceptually, because if an intention leads to an act, it cannot be completed in fact, because his or her behavior is not completed under voluntary control (Vermeir & Verbeke, 2008). For example, if you want to buy a night out, you have no money. According to the theory of planned behavior (Ajzen, 1991), perceptual behavior control consists of facilitating condition and past experience, while other studies further use principal component analysis to incorporate preferences into perceptual behavior control to predict behavior (Verbeke & Vackier, 2005), and these items of perceptual control have higher or lower intermediate scores. It shows that there is no great difficulty in fish consumption (Verbeke & Vackier, 2005), but perceptual behavior control does not always predict its intention or behavior.

Smith et al. (Smith et al., 2008) pointed out that although the average score of perceptual behavioral control in beverage consumption is high (6.5 out of a total score of 7), due to the limited influence in its structure and the limited scope of influence, the ability to explain behavior will be as rational behavior theory (Fishbein & Ajzen, 1975) said, it depends on attitude and social norms. Therefore, attitude and social norms reflect the behavioral performance of perceptual desire, and perceptual behavior control reflects whether perception is controlled in individual behavior, and these three factors can successfully predict their intention and then predict their behavior (Chen, 2007).

On the contrary, the theory of planned behavior (Ajzen, 1985) assumes the model is considered in a rational state, but the assumption of rational behavior does not adequately explain why a consumer buys the same product or service based on feeling (Bhuyan, 2011). As Dunn et al. (2011) said, although the theory of planned behavior is an important and accepted framework to predict general behavior, it must not predict more complex behaviors including food choice. Some reasons are explained because some related studies do not use exploratory research to test behavioral beliefs themselves.

The greatest importance of measuring basic beliefs is that attitudes, intentions and behaviors can be successfully changed through understanding (and beliefs). Moreover, in order to make the results more meaningful and relevant, psychometric tools design items that attitudes should include to reflect maternal beliefs (Dunn et al., 2011).

Chen (2007)'s study of organic food in Taiwan developed the influence of food choice motivation on their attitude towards organic food. In fact, many studies have also developed other variables to compensate for or enhance the ability of the theory of planned behavior to

predict behavior. For example, Smith et al. (2008) added self-identity to the framework to predict intentions and behaviors, and the results showed that self-identity is a good variable to predict intentions. In other words, higher self-identity is more likely to have higher intention to buy drinks of the same brand, and it is further pointed out that the role of self-identity in beverage brand consumption is to express self-image and self-identity suitable for oneself in behavior

Dunn et al. (2011) also used self-identity in the framework of their fast-food consumption. The results showed that when consumers consider future health outcomes and identify with their healthy diet, they have a lower intention to choose fast food consumption, but this does not significantly affect their behavior, because self-serving bias is between intention and behavior (Dunn et al., 2011). In other words, when self-identity fast food is healthy, there will naturally be fast food consumption behavior, but when self-identity fast food is unhealthy, there will be fast food consumption behavior. Therefore, self-identity in the theory of planned behavior can not only discuss behavioral roles but also explain psychological issues.

To sum up, the theory of planned behavior still has the following gaps in academic research, which need to be further explored in the future:

First, other scholars suggest that the theory of planned behavior needs to use exploratory factor analysis to find out its basic beliefs and then further measure its attitudes to improve its predictive accuracy.

Second, the theory of planned behavior assumes that consumers predict their intentions and behaviors on the rational principle, and often lacks discussion on the emotional aspect. So far, many studies have added some emotional variables to the theoretical framework of planned behavior to make up for its shortcomings, but there is still no complete framework for empirical research under the condition of combining rationality and irrationality.

## **2.5 Technology acceptance model**

Technology Acceptance Model (TAM) is a model widely used in the study of user acceptance of new technology. This model was proposed by Davis (1989) in 1989 and has become an important tool for studying users' acceptance of new technologies (Davis, 1989). TAM has the characteristics of simple structure, strong practicability and good explanation of user behavior. It has important application value in e-commerce, social media, information technology, new technology (product) research and development. With the rapid development of information technology, in recent years, scholars from multiple disciplines have integrated theories such as

Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Innovation Diffusion Theory (IDT), and User Satisfaction Theory (U&G) with TAM, and further improved the theoretical model of TAM, in order to better explain user behavior and provide effective decision-making basis for enterprises. At the same time, the research object of TAM has gradually shifted from the general population to the specific population, and its research direction has shifted from the early model framework to the study of external variables, so that the explanatory power of the model can be continuously improved, from 10% at the beginning to 40% ~ 60% now (Bian, 2012). Based on the clue of “belief-willingness-action”, the TAM theory focuses on how individual’s attitude and belief affect individual’s action intention, and then affect individual’s actual action. In the technology acceptance model, system design features are used as external variables as the starting factor for people to decide whether to adopt information systems. These characteristics directly affect people’s perception of the ease of use of information systems (perceived ease of use). At the same time, these characteristics and ease of use together determine people’s perception of the usefulness of information systems (usefulness). Cognitive attitude and cognitive usefulness work together on users’ willingness to use information systems (behavioral intention). Ultimately, it is the willingness to act that determines the actual use of information systems (Wu, 2012).

Technology acceptance model (TAM) is a deformation of the rational behavior theory model, which can explain the relationship between customers’ network trust and shopping intention to a certain extent. The technology acceptance model (TAM) provides a basis for the study of users’ adoption of new technologies, and proposes that perceived usefulness and perceived ease of use are the key factors to determine whether users adopt new technologies, and “ease of use” and “usefulness” are two intermediary variables to regulate users’ adoption of new technologies. The research of technology acceptance model (TAM) in the field of online shopping shows that the usability and convenience of web information can reduce the asymmetry of online information, the processing of information can improve customers’ online trust, and have a positive impact on customers’ purchase intention (Koufaris & William, 2004). Therefore, perceived ease of use and perceived usefulness have a positive impact on consumers’ online trust.

### **2.5.1 Basic theory of technology acceptance model**

The core theory of technology acceptance model (Figure 2.2) is “willingness to use”, that is, whether users are willing to use new technology. The model is based on two main factors: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) (Davis, 1989). Perceived

usefulness refers to whether users think the new system will be useful for their work or life. Perceived ease of use refers to whether users think the new system is simple and easy to use.

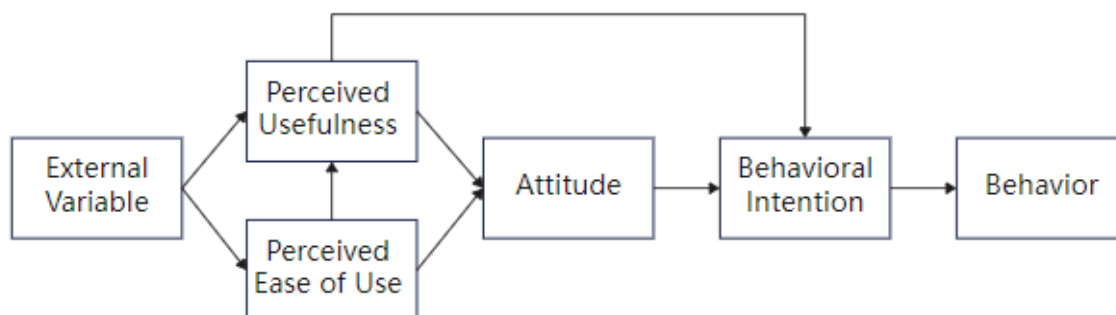


Figure 2.2 Technology Acceptance Model

Source: (Davis, 1989)

This model proposes a new technology adoption mode, that is, users' cognition of the new technology, whether users adopt and use the new technology. External variables include system design characteristics, user characteristics (including perceived form and other personality characteristics), task characteristics, policy impact, organizational structure, the nature of technology in the development or implementation process, et al. These external variables also affect the internal variables of the technology acceptance model (belief, attitude, intention) to a certain extent.

(1) Perceived usefulness: it refers to the degree to which the user believes that the use of an information system can improve his work performance, that is, the degree to which the user believes that a certain information system will improve his work performance. Usefulness cognition expresses the system user's expectation of work performance. When the user thinks the system is helpful to his work, he will hold a positive attitude towards the system.

(2) Perceived ease of use: it refers to the degree to which users believe that the use of the information system will save time and effort. If users believe that the use of the information system will not cost too much effort, they will hold a positive attitude towards the system. TAM also believes that the perception of usability will positively affect the perception of usefulness. In other words, if the user thinks that an information system is easy to use and saves time and effort, he will also think that the information system will improve his work efficiency.

(3) Behavioral intention: refers to the strength of force that prompts an individual to use a certain system in the future, that is, the possibility that an individual intends to use a certain technology or information system under his subjective consciousness. TRA believes that willingness is the decisive factor that affects whether users really use an information system. Any other factors that may affect the use of information system, such as perception of



usefulness, perception of ease of use, attitude, et al., are all intermediate variables that affect the actual use behavior through willingness. In addition, Davis (1989) believed that there would be many external variables that would eventually affect the use behavior by influencing the perception of usefulness and ease of use. Davis himself also tried to add external variables such as subjective norms, impression and work relevance into the expanded TAM, and explored the final impact of these external variables on the use behavior through their influence on the perception of usefulness.

TAM is a model specifically designed to explain and predict the behavior of individuals using computer technology. Since its inception, TAM has been constantly evolving and is widely used in the organizational environment, computer technology and various user groups. For example, TAM has been successfully applied to e-mail, voice mail and other technical tools, personal computer use, database management system (DBMS), spreadsheets and other fields. Whether it is a simple and practical application or a complex technical system, TAM has its unique explanatory power and has become an important tool for studying the use of computer technology.

User attitude is the positive or negative emotions held by users for a particular system. The willingness to act is the degree to which a person can be measured when taking an action. In this model, the user's use behavior of the target system mainly depends on the user's willingness to use, which is affected by the user's attitude and perceived usefulness ( $BI = A + U$ ). The attitude of users is affected by perceived usefulness and ease of use ( $A = U + EOU$ ), perceived usefulness is affected by external factors and ease of use ( $U = EOU + \text{external variables}$ ), and ease of use is mainly affected by external factors ( $EOU = \text{external variables}$ ). External variables refer to measurable factors such as training time, instruction manuals, and design features of the system itself.

Lee et al. studied and summarized important journals and conferences published in the field of information system management during the 18 years from 1986 to 2003, and found a total of 101 articles using TAM and 698 journal indexes. Among 101 literatures, 74 literatures all proved that there was a significant correlation between perceived usefulness and action intention, indicating that perceived usefulness is a prerequisite for action intention. That is, if users find it useful, they will use it. For perceived ease of use, only 58 literatures showed that perceived ease of use was significantly correlated with behavioral intention, suggesting that perceived ease of use could not effectively predict behavioral intention. Finally, it is found that perceived ease of use is a significant prerequisite for perceived usefulness, rather than a parallel and direct prerequisite for technology acceptance, which indirectly affects technology



acceptance by affecting perceived usefulness. Therefore, the explanatory power of technology acceptance model has been questioned. Sun and Zhang believe that these models contribute to the prediction of user acceptance factors and relationships. But. They also demonstrate limitations, namely inconsistencies in the relationships between components of research models with relatively low explanatory power. Currently, most studies using TAM explain only 30-40% of the variance of causation(Wang & Cao, 2008).

Wang, X. et al. based on the core aggregation technology adoption model (TAM) of WOS from 2009 to 2018, used CiteSpace V5.5 visualization software to conduct a visual analysis on the changes and development trends of TAM hotspots through social networks, core knowledge base and keyword co-occurrence map (Wang, X. et al., 2021). In recent years, literatures related to TAM have an increasing trend on the whole, and its research involves a number of different knowledge fields, showing the intersections between different disciplines. Among them, mobile commerce, social media, education model, developing countries et al, are hot topics in TAM field. The main content of this project is the application of TAM in emerging fields and emerging markets, and how to intervene and guide users to accept and apply new technologies and new methods. In 2008, Professor Venkatesh from Walton University and Associate Professor Bala from Indiana University Kelley were jointly cited as the most commonly cited classic theory called “technology acceptance model”, which proposed that individuals adopt TAM3 of cognitive availability and cognitive availability at the level of information technology to assist managers to make efficient decisions. In second place is Professor Venkatesh et al., who in 2003 put together eight models of user acceptance to form the Unified Model (UTAUT) literature and applied it to more areas of technology acceptance. In 2010, Hare et al. from Kennesaw State University published Multivariate Data Analysis: A Global Perspective, which provided a new way for researchers to explore the relationship between models through quantitative research (Wang et al., 2021).

### **2.5.2 Application of technology acceptance model**

Technology acceptance model has been widely used in many fields, including health care, education, finance and other industries. For example, in the medical field, technology acceptance models are used to study the acceptance of new medical technologies by doctors and patients. In the financial field, this model has been used to study consumers' acceptance of electronic payment and mobile payment.

### **2.5.3 Extension of the technology acceptance model**

On the basis of the technology acceptance model, there are some extended models. The most common one is the extended Technology Acceptance Model (TAM2) (Venkatesh et al., 2003), which adds new variables, such as subjective norms, knowledge level, personal innovation and trust, to better explain the process of users accepting new technologies.

In addition, based on the extension of technology acceptance model, there are some new research fields. For example, the Social Media Acceptance Model (SMAM) looks specifically at social media acceptance (HUANG et al., 2022). Virtual Reality Acceptance Model (VRAM) studies the acceptance degree of virtual reality technology (Bai & Shao, 2021; Zhao et al., 2022).

Although the technology acceptance model can effectively promote the popularization and acceptance of technology, it also has some drawbacks, some of which include:

First, assume that users are rational: the technology acceptance model assumes that users will make decisions based on their own needs and interests, but in reality, users' behavior may be influenced by emotional, social, and other factors rather than just rational considerations.

Second, it ignores the social and cultural aspects of technology: the technology acceptance model ignores the social and cultural impacts of technology, such as the possibility that technology may change the structure and values of society, thus leading to changes in users' attitudes and behaviors.

Third, it is difficult to deal with complex technologies: Technology acceptance models may not provide adequate guidance for complex technologies that require more complex user support and training.

Fourth, short-term thinking: the technology acceptance model usually focuses on how to promote the acceptance of technology in the short term, without considering the long-term satisfaction and loyalty of users. Therefore, technical extension personnel need to better balance short-term interests and long-term goals.

In conclusion, the goal of this study is to combine the theory of planned behavior with the model of technology acceptance to explore a complete framework to explain a wider range of online eating and drinking behaviors and to provide a more comprehensive explanation of human consumption behavior patterns.

## **2.6 Integrated application of theory of planned behavior and technology acceptance model**

Theory of planned behavior and technology acceptance model are two classical theoretical models which have been widely used to study different types of behavior and decision process. However, both models have some limitations. For example, planned behavior theory ignores the influence of social and cultural factors on behaviors, while technology acceptance model ignores the motivation and purpose behind behaviors. In recent years, researchers have begun to integrate planned behavior theory and technology acceptance model to explain individual behavior and decision-making process more comprehensively. TAM (Technology Acceptance Model) and TPB (Theory of Planned Behavior) are two relatively independent theoretical frameworks, but in practice they can be well integrated.

TAM mainly focuses on users' acceptance of new technologies, while TPB lays more emphasis on users' behavioral intentions. Integrating these two models helps us to better understand the reasons behind user behavior and thus improve our user experience design.

Specifically, the advantages of TAM and TPB integration model are as follows:

First, more accurate prediction of user behavior: integrating the two models can better understand the motivation of users to adopt specific technologies. Therefore, we can predict user behavior more accurately.

Second, better understanding of user cognitive processes: both TAM and TPB focus on user cognitive processes, which help us understand user attitudes and behavioral intentions towards technology. By integrating the two models, we can gain a deeper understanding of the cognitive processes and reasons behind users' behaviors.

Third, better improve the user experience: by integrating the two models, we can better understand user attitudes and intentions towards technology. This helps us design a better user experience, which increases user satisfaction and usage.

Fourth, design marketing strategies more finely: integrating TAM and TPB models can better predict the possibility of users adopting new technologies and understand the factors of user decision-making. This means that we can develop more sophisticated marketing strategies to guide users to adopt a technology.

Fifth, enriching data collection and analysis: integrating TAM and TPB models means we need to collect more data to accurately assess the impact of different factors on users' use of

new technologies. This helps us better understand user behavior and motivation, and it also helps us better evaluate the success rate and effectiveness of our products.

Sixth, detailed user research: the integration of TAM and TPB models can provide more perspectives and methods in the process of user research. Specifically, it enables the research team to explore more in-depth user characteristics and behaviors, including user attitudes, beliefs, et al. This information can provide a better reference for product design.

Therefore, integrating TAM and TPB models has many advantages, which can help us better understand the behavior and motivation of users, so as to improve our product design, user experience and marketing strategy. The integration of TAM and TPB models can help us understand user behavior and motivation more comprehensively, thereby improving our product design and user experience.

For example, a study by AlHadid et al. (2022) explored the use of mobile applications in e-government to protect health as a new idea during the COVID-19 epidemic. Therefore, the purpose of this study was to examine the various factors that influence the use of the SANAD application as a health protection tool. These factors are based on well-established models such as UTAUT, TAM, and extended PBT. Using survey data from 442 SANAD App in Jordan, the model was empirically validated using AMOS 20 confirmatory factor analysis, structural equation modeling (SEM), and machine learning (ML) methods to evaluate the research hypotheses. The ML methods used are ANN, SMO, bagging Error Reduction Pruning Tree (RepTree), and Random Forest. The results indicate several key findings: Respondents' performance expectations of this digital technology, effort expectations, social impact, facilitation conditions, perceived risk, trust, and perceived quality of service were important antecedents of their attitudes towards its use. The strength of these relationships is influenced by moderating variables, including age, sex, education level, and Internet experience of behavioral intent. However, perceived risk attitudes toward SANAD applications did not significantly influence the study to add to the literature by empirically testing and theorizing the impact of SANAD applications on public health protection.

Laksono et al. (2022) studied the factors influencing farmers' willingness to adopt GI (geographical indication) practices in the Indonesian coffee industry from a psychological behavioral perspective. Specifically, this research examines the psychological factors that influence farmers' willingness to adopt GI. This study combines the theory of planned behavior (TPB) and the technology acceptance model (TAM) as the theoretical framework. The following psychological behavioral factors were constructed and tested: subjective norm (SN), perceived behavioral control (PBC), behavioral attitude (ATB), perceived usefulness (PU) and

perceived economic benefit (PEB). The study also investigated the influence of sociodemographic factors on these psychobehavioral structures. The survey was conducted in two geographical indication coffee regions in Indonesia and involved 178 farmers believed to be willing to adopt GI practices and procedures. The relationship between structures is studied, in which structural equation model (SEM) is used. The data obtained were analyzed using WarpPLS 7.0. It was found that attitudes toward behavior, perceived behavioral control, and perceived economic benefits were important factors influencing the willingness to adopt GI practices. Subjective specifications do not affect the willingness to adopt GI practices. Farmers' knowledge primarily influences perceived behavioral control and willingness to adopt GI practices and procedures.

Hsieh et al. (2022) pointed out in a study that due to the COVID-19 epidemic, doctors in many countries around the world are using telemedicine to visit patients through telemedicine. This study aims to integrate planned behavior theory (TPB), technology acceptance model (TAM) and self-determination theory (SDT) to explore the adoption behavior of telemedicine systems. A convenient resident sample was extracted from the population of Nantou County, Taiwan Province and analyzed by structural equation model. The results show that attitude, perceived behavioral control, perceived usefulness and perceived autonomous support have significant positive effects on sustained intention. The results also confirm that perceived autonomous support, perceived ease of use and perceived usefulness have significant positive effects on attitudes. In addition, the study suggests that perceived ease of use, perceived usefulness, and attitude play important mediating roles. The conclusions and practical implications of the study are expected to provide some innovative insights and perspectives for health organizations and institutions, which in turn will facilitate better practices and services for telemedicine technology.

Qi et al. (2021) proposed in a study that the COVID-19 outbreak significantly increased consumer demand for online groceries as well as healthy, safe and quality food. In China, certified food products are generally considered to be safe and of high quality. Therefore, this study examines the potential factors influencing Chinese consumers' willingness to shop online for certified food products during the COVID-19 crisis. An integrated model is proposed by combining the technology acceptance model (TAM) and the theory of Planned Behavior (TPB) with the impact of COVID-19 (IOC). Empirical results from structural equation model analysis with 491 available responses show that the proposed model shows good model fit and satisfactory explanatory power ( $R^2 = 53\%$ ) regarding consumers' certified online food shopping intentions during the epidemic. Path analysis showed that attitude, perceived behavioral control,

perceived usefulness (PU) and IOC significantly affected consumers' willingness to purchase certified food online. PU and perceived ease of use (PEOU) are important drivers of attitude, and PEOU significantly affects PU. In addition, IOC is significantly related to most factors except subjective norms. These findings can be used to detect changes in consumer behavior and provide appropriate strategic implications for stakeholders in China's certified food industry in the current and post-epidemic era. Planned behavior theory and technology acceptance model can be used to explain and predict consumers' behaviors and preferences in catering behavior. Combining these two models may improve the accuracy of forecasts and provide catering companies with better marketing and promotion strategies. For example, if a restaurant business wants to attract more consumers to its online food ordering app, it can use planned behavior theory and technology acceptance models to determine what factors will influence consumer willingness and behavior. Companies can then develop strategies to address these factors, such as improving app usability, increasing discounts and coupons, and offering more menu choices.

Troise et al. (2020) draws on an integrated framework that uses the technology acceptance model (TAM) and the theory of Planned Behavior (TPB) to analyze the main drivers of a user's intention to use a food delivery application. The aim of this research is to use the structure of the model to investigate consumers' willingness to adopt online food delivery (OFDs), and to extend this to consider the impact of food choice, convenience, trustworthiness, and perceived risk associated with COVID-19 as background factors.

Liu and Fu (2023) believe that "live streaming e-commerce" is an emerging development mode of e-commerce, which is of great significance to stimulate consumption potential, promote industrial integration, and promote innovation and entrepreneurship. Based on the TAM model, TPB theory and trust theory, this study constructs a structural equation model to make an empirical analysis of the consumption behavior of live streaming e-commerce. Starting from the five dimensions of consumers' perceived usefulness, perceived ease of use, trust, subjective norms and willingness to use live streaming e-commerce, a theoretical model and research hypothesis for the study of live streaming e-commerce consumer behavior are constructed. It is found that cognitive usefulness, trustworthiness and subjective criteria have positive effects on the intention to use online advertisements. Although consumers' perceived ease of use on live streaming e-commerce will not have a significant positive impact on their intention to use it, similar to trust, perceived ease of use will have a significant positive impact on perceived usefulness, so it will also indirectly affect consumers' intention to use live streaming e-commerce.

Zhu, C. et al. (2021), taking Shanghai as an example, using the method of combining the technology adoption model and the theory of planned behavior, through empirical analysis, explores the key factors affecting the public sector to promote government data disclosure, and draws the following conclusions: First, the working attitude of the public sector has an obvious positive effect on the public sector's willingness to promote government data openness; Second, the more active the working attitude of the public sector, the stronger the willingness of the public sector to promote the disclosure of government data. The influence of subjective norms on the willingness to push is also significant and is the largest. It shows that perceived usefulness is a key factor to motivate civil servants to promote government data disclosure. That is, when civil servants feel that the results of government data disclosure are valuable, they will be more willing to promote government data disclosure. When national civil servants realize that promoting government data opening can improve the efficiency, efficiency and service quality of the department, national civil servants will more actively participate in the process of promoting government data opening. Perceived ease of use has a significant negative effect on the promotion intention of civil servants, which is very rare in similar studies. One possible reason is that although civil servants feel that the tools and platforms for open government data are easier to use and easier to implement, because of the security and confidentiality issues involved in open data, and the lack of an exemption mechanism, the easier it is to promote the opening of government data, the more risks it will take, and the greater the reverse impact on the willingness to promote. Perceived ease of use and perceived usefulness have an indirect impact on the willingness of civil servants to promote. Among them, perceived ease of use plays an intermediary role through perceived behavior control, and perceived usefulness has an impact through its intermediary role. On the one hand, when civil servants perceive that they have more information about the openness of government data and know more about the way the government promotes the openness of government data, they will have a higher perception of the usefulness of promoting the openness of government data and a more positive willingness to promote it. On the other hand, if civil servants can better understand the implementation of the government data opening policy and better understand the ease of use of government data opening tools and platforms, they can feel more about the ability of government data opening and the willingness to promote government data opening. This shows that when civil servants perceive that they are competent for their work, they will have more positive evaluations of their work, perform their duties more seriously, form more active work behaviors, and produce higher work performance. In addition, perceived ease of use and perceived usefulness have an indirect impact on the willingness of civil servants to promote



through the intermediary role of behavioral attitudes, and the indirect impact of perceived usefulness on the willingness to promote is greater than perceived ease of use. For civil servants, they pay more attention to the practical utility of promoting open government data, and pay less attention to the difficulty of participating in and implementing open government data. If civil servants believe that the promotion of open government data is more conducive to the internal, economic and social development of the government, they will increase their positive attitude towards promoting data opening, and then enhance their willingness to promote data opening.

Chih Chung (2013) explored the online behaviors of Web 2.0 users and compared and analyzed the research models of the Theory of planned behavior (TPB), TAM and C-TAM-TPB. The C-TAM-TPB model predicts the user's online behavior more accurately than the TAM or TPB model alone. The model combines variables in the technology acceptance model (such as perceived usefulness and ease of use) with variables in the theory of planned behavior (such as attitudes, subjective norms, and perceived behavioral control) and takes into account the interactions between them to better describe an individual's decision-making process when using a particular technology. It also discusses how these models can be used in practical applications to guide network design and marketing strategies. The authors point out that these models can help designers better understand user needs and determine desired functionality and interface design, thereby increasing user satisfaction and usage. In addition, according to these models, marketers can predict the behavior and attitude of users and adopt targeted marketing strategies to improve the market share of products. From theoretical framework to practical application, this research deeply discusses the application of planned behavior theory, technology acceptance model and C-TAM-TPB model in online behavior, which provides a good reference value for us to better understand user behavior and guide design and marketing strategy in practical application.

More and more higher education institutions are adopting tools to promote mobile learning. However, research on the drivers of its adoption has been insufficient. The research of Gomez-Ramirez et al. (2019) identified the influencing factors for college students to adopt m-learning (Mlearning). Theory of planned behavior (TPB) and technology acceptance model (TAM) have proved to be effective and powerful models for studying the adoption of learning technologies. Based on TPB and TAM, we propose a model to explain how cognition influences the adoption of Mlearning by Columbia University students. To test the acceptability of the model, 878 undergraduate students at Instituto Tecnológico Metropolitano (ITM), a Colombian higher education institution, were surveyed with self-filled questionnaires. The results show that all structures of TPB and TAM have a moderate influence on the willingness to adopt m-learning.



Among them, perceived usefulness and attitude have a significant impact on students' acceptance of mobile learning. These results could stimulate future research and facilitate the effective dissemination of m-learning in developing countries (Gómez-Ramírez et al., 2019).

The integration of the theory of planned behavior and the model of technology acceptance can explain the individual's behavior and decision-making process towards technology more comprehensively. This kind of integration application has a wide range of application prospects in the study of different types of technology acceptance and use. The integrated application of planned behavior theory and technology acceptance model provides a new perspective and tool for us to deeply understand the individual behavior and decision-making process. Future research can further expand and improve the theory and practice of this integrated application.

Future studies can consider integrating these two models with other theoretical models to more fully explain individual behavior and decision-making process. In addition, future research can also explore how to apply these two models to emerging technologies and applications, such as artificial intelligence, blockchain and the Internet of Things. These emerging technologies and applications have a profound impact on people's life and work, so it is of great theoretical and practical significance to understand people's acceptance and use of these technologies and applications.

To sum up, the integrated application of planned behavior theory and technology acceptance model can provide more comprehensive, accurate and reliable explanatory power for various fields of research, and also help researchers better understand the process of user behavior and decision making, so as to better design and develop products and services that meet users' needs and preferences. In the future, the integration and application of the theory of planned behavior and the model of technology acceptance still have great development space, and more application scenarios and research problems can be explored, so as to provide more in-depth and comprehensive guidance for practice.

## **2.7 Research model hypothesis**

In this study, Structural Equation Modeling (SEM) is used to analyze the issue of Chinese consumers' continued willingness to use online food ordering and shopping platforms in the post-epidemic era. In the design of the theoretical model, the Theory of Planned Behavior (TPB) suggests that individuals' actual behaviors are controlled by behavioral intentions and perceptual behaviors, and that individuals' actual behaviors are jointly influenced by behavioral attitudes, subjective norms, and perceptual behavioral control, and determined by behavioral

intentions and perceptual behavioral control. Meanwhile, the Technology Acceptance Model (TAM) argues that perceived usefulness and perceived ease of use jointly determine behavioral attitude toward using a technology, and perceived usefulness and behavioral attitude jointly determine behavioral intentions, which in turn determine actual behavior; external variables indirectly influence behavioral attitude and behavioral intentions by affecting perceived usefulness and perceived ease of use. Based on the variables of attitude, subjective norm, perceived behavior control and intention to use in TPB model, this research selects the variables of perceived usefulness, perceived ease of use, use attitude and intention to use in TAM model, integrates the relevant variables of the two models and adds video content marketing, personal experience and perceived trust as independent variables. The independent variables will indirectly affect the attitude and behavior intention by affecting perceived usefulness and perceived ease of use.

### **2.7.1 Relationship between video content marketing, behavioral intention, perceived usefulness and perceived ease of use**

Social media has had a significant impact on the tourism and restaurant industries. Among the different types of social media platforms, short video applications, represented by Tik Tok or kuaishou, have brought great changes to the tourism and restaurant industries. As a new mobile technology platform, short video applications have changed the way users access information, shopping behavior and share shopping experiences (Wang et al., 2022). Xie (2021) studied the use behavior and motivation of users with Tik Tok short video in a study. This study first coded and extracted the influencing factors of the use motivation of Tik Tok short video through qualitative interviews. It was found that the use motivation of the use behavior of Tik Tok short video users included eight variables: perceived ease of use, perceived popularity, perceived entertainment, perceived information, social interaction, recording, social promotion and habits. The study also used the structural equation model to quantitatively analyze the influence of the above eight variables on the use behavior through the intermediary variable of attitude. It is concluded that the perceived entertainment, perceived information and perceived ease of use of Tik Tok short video are positively correlated with the intention to use. Gao et al. (2021) believed in a study that the characteristics of short video, such as interest, amount of information, video traffic, and service response, have a positive impact on perceived usefulness and perceived ease of use, and have a positive impact on user adoption intention through perceived usefulness and perceived ease of use. Ma (2022) used structural equation model to study in a study, and pointed out that live broadcast platform and live broadcast channel had a positive impact on perceived

ease of use, live broadcast anchor and live broadcast content had a positive impact on perceived usefulness. Xia (2021) pointed out in the article “Influencing factors and mechanisms of consumer behavior in video marketing” that the quality of video marketing platforms (usefulness and ease of use) has a positive impact on users’ behavioral intentions through two mediating variables: trust and immersion. X. Wang (2020), pointed out in the article “Research on the Impact of Short Video Content Marketing on Consumers’ Purchase Intention” that short video content marketing has a positive impact on consumers’ purchase intention, and short video content marketing affects consumers’ purchase intention through the mediating variable of psychological distance.

Therefore, the following hypothesis are proposed in this study:

**H1:** Video content marketing has a positive relationship with behavioral intention.

**H2:** Video content marketing has a positive relationship with perceived usefulness.

**H3:** Video content marketing has a positive relationship with perceived ease of use.

### **2.7.2 Relationship between personal experience, perceived usefulness and perceived ease of use**

Cheng & Yu (2018) conducted a study on the influence of users’ existing experience on the use experience of news aggregation APP. Existing experience, perceived usefulness, perceived ease of use and satisfaction were used as the research variables of this study. In this study, EEG experiment and behavior experiment were used to test APP users. In a study, Liu et al. (2021) used “students’ own online learning experience” as an individual factor, “perceived usefulness” and “perceived ease of use” as normal students’ cognitive beliefs in online teaching, and “willingness to use” as their behavioral intention. The structural equation model was used to verify that the previous experience of online teaching system users has a significant positive impact on perceived usefulness and perceived ease of use, and affects the user’s willingness to use through perceived usefulness and ease of use.

Therefore, the following hypothesis are proposed in this study:

**H4:** Personal experience is positively related to perceived usefulness.

**H5:** Personal experience is positively related to perceived ease of use.

### **2.7.3 Relationship between perceived trust, perceived usefulness and perceived ease of use**

Wang et al. (2022) added two new variables to the Technology Acceptance Model (TAM): Electronic Word of Mouth (ewom) and Electronic Trust (eTrust), and this study concluded that the technology acceptance theory still holds with the addition of the two variables of Electronic Word of Mouth and Electronic Trust. Li et al. (2020) used the UTAUT model to construct a theoretical research model of the influence mechanism of cross-border e-commerce platform perception on consumers' purchase intention, and conducted regression analysis on the data, the results showed that: cross-border e-commerce platform function and platform brand affect consumers' perceived value, which are positively related to consumers' perceived value, platform function and platform content also have influence on platform brand; The perceived value of consumers' cross-border e-commerce platform is positively related to consumers' purchase intention, and there is a significant mediating role of consumer trust between consumers' cross-border e-commerce platform perception and consumers' purchase intention. Cai et al. (2022) integrated the theory of planned behavior and technology acceptance model, combined with the characteristics of online exhibition platforms under the influence of the COVID-19 epidemic, and constructed a theoretical model aiming to explore the willingness to continued use of online exhibition platforms. Through estimation of model parameters on questionnaire data, the study found that the public's perceived usefulness of online exhibition platforms had a direct effect on their behavioral attitudes, while personal experiences had an indirect effect on their behavioral intentions. In terms of the final influence of behavioral intention, perceived usefulness and perceived ease of use played a mediating role in the first stage, while behavioral attitude played a mediating role in the second stage. In order to effectively improve the continuous use behavior of online exhibition platforms, we believe that we need to strengthen the management of the platforms and enhance the public's perceived trust, and also incorporate personalized services and refined operational management measures to ensure platform ease of use.

If perceived usefulness and perceived ease of use are met in an individual's shopping experience, that is, the shopping process can meet their needs and the operation is simple and smooth, then they may have a positive evaluation and opinion on the shopping experience. This positive evaluation and opinion help to increase consumer satisfaction and may prompt them to choose the platform or service again for shopping.

Therefore, the following hypothesis are proposed in this study:

**H6:** Perceived trust is positively related to perceived usefulness.

**H7:** Perceived trust is positively related to perceived ease of use.

### **2.7.4 Relationship between perceptual behavior control and behavioral intention**

According to the theory of planned behavior, individual's behavioral intention and behavior are the results of deliberate planning, which are influenced by attitude, subjective norm and perceptual behavioral control (Ajzen, 1985, 1991). Perceptual behavioral control refers to consumers' perception of the ability to perform a specific online purchase behavior, which reflects consumers' perception of favorable or unfavorable execution factors. Perceptual behavior control mainly includes the user's perception of the degree of control of the system, the degree of knowledge reserve, and the degree of understanding of specific work (Zhu et al., 2021). In the study of catering behavior, researchers use the theory of planned behavior to study catering behavior and believe that there is a close relationship between perceptual behavior control and behavioral intention. Individuals' cognition of their perceived behavioral control will affect their willingness to perform a certain behavior. When individuals think that they have higher perceptual behavior control ability, they are more likely to produce positive behavioral intentions and put them into action. Conversely, when individuals believe that their perceived behavioral control ability is relatively low, it may reduce their willingness to perform a certain behavior (Arvola et al., 2008; Bhuyan, 2011).

Therefore, the following hypothesis are proposed in this study:

**H8:** Perceptual behavioral control has a positive relationship with behavioral intention.

### **2.7.5 Relationship between subjective norms and behavioral intention**

Subjective norms refer to the individual's perception of the expectations and evaluations of others in the surrounding social environment. It includes factors such as other people's support, expectations, and social norms for individual behavior. Behavioral intention refers to the individual's tendency or willingness to perform a certain behavior in a specific situation. There is a close relationship between subjective norm and behavioral intention (Ajzen, 1985, 1991). Individuals' expectations of others and their perception of social norms will affect their willingness to perform a certain behavior. When individuals perceive that others have higher support and expectations for a certain behavior, they are more likely to have positive behavioral intentions and tend to take corresponding actions. On the contrary, when individuals perceive others' opposition or negative evaluation of an act, they may reduce their willingness to perform

the act (Hewitt & Stephens, 2007; Mead et al., 2010). The influence of subjective norms can be explained by two elements: descriptive norms and normative norms. Descriptive norms are individuals' observation and reflection of others' behavior, that is, how individuals think most people around them act. Normative norms are the individual's perception of the expectations and evaluations of others, that is, the individual thinks that most people around them want to take what kind of behavior. Therefore, understanding and shaping individuals' subjective normative cognition can have an important impact on their behavioral intentions. This can be achieved through social influence, information dissemination, social identity and so on. For example, publicity and education activities can increase the individual's willingness to perform a certain behavior by providing information about the support and recognition of others. At the same time, changing social norms and expectations to make them more positive and supportive of certain behaviors can also enhance individual behavioral intentions (Ajzen, 1985, 1991).

Therefore, the following hypothesis are proposed in this study:

**H9:** Subjective norms has a positive relationship with behavioral intentions.

#### **2.7.6 Relationship between perceived ease of use, perceived usefulness, behavioral intention and behavioral attitude**

Perceived usefulness refers to the individual's belief and cognition that can obtain actual benefits after performing a certain behavior. Behavioral intention refers to the individual's tendency or willingness to perform a certain behavior in a specific situation. Behavioral attitude refers to the individual's positive or negative evaluation of the implementation of a certain behavior (Davis, 1989). There is a close relationship between perceived usefulness, behavioral intention and behavioral attitude. Individuals' perceived usefulness will affect their willingness and enthusiasm to perform a certain behavior. Individuals are more likely to have positive behavioral intentions and tend to act accordingly when they believe that the implementation of an act can achieve tangible benefits and value (Cai et al., 2022). Perceived usefulness can be used as an important driving factor to encourage individuals to change their behavioral attitudes and increase their willingness to act. Individuals' positive or negative evaluation of the implementation of a certain behavior will affect their expectations and expectations for the results of the behavior. When individuals have a positive attitude towards the implementation of a certain behavior, they are more likely to think that the behavior has practical benefits and are more likely to have positive behavioral intentions (Wang & Cao, 2008).

Therefore, the following hypothesis are proposed in this study:

**H10:** Perceived usefulness is positively correlated with behavioral intention.

**H11:** Perceived usefulness is positively correlated with behavioral attitude.

### **2.7.7 Relationship between perceived ease of use, perceived usefulness, behavioral intention and behavioral attitude**

Perceived ease of use refers to the individual's subjective evaluation of the convenience and simplicity of using a product or performing a behavior (Davis, 1989). Perceived ease of use affects the perceived usefulness of an individual for a product or behavior. When individuals believe that a product or behavior is easy to use and operate, they are more likely to believe that the product or behavior can provide practical benefits, thereby increasing their belief in perceived usefulness (Wang & Cao, 2008). Perceived ease of use also affects individual behavioral intentions and behavioral attitudes. When individuals feel that a product or behavior is easy to use and convenient to operate, they are more likely to have a positive attitude towards the product or behavior, believing that the implementation of the behavior will bring benefits and produce more positive behavioral intentions (Wang & Cao, 2008).

Therefore, the following hypothesis are proposed in this study:

**H12:** Perceived ease of use has a positive relationship with perceived usefulness.

**H13:** Perceived ease of use has a positive relationship with behavioral intention.

**H14:** Perceived ease of use has a positive relationship with behavioral attitudes.

### **2.7.8 Relationship between behavioral attitude and behavioral intention**

Behavioral attitude refers to the individual's subjective evaluation of the implementation of a certain behavior, including positive or negative attitudes, emotions, beliefs and cognition (Davis, 1989). Behavioral attitude can affect the individual's preference and evaluation of the behavior, and have a positive or negative effect in the process of behavior selection. The main basis for the formation of behavioral attitudes is the individual's cognition and evaluation of the results, benefits and consequences of the behavior. Behavioral attitude can affect behavioral intention (Cai et al., 2022; Wang & Cao, 2008). Individuals hold a positive attitude towards a certain behavior, which tends to increase their willingness and tendency to the behavior; having a negative attitude will reduce their corresponding behavioral intentions (Wang & Cao, 2008).

Therefore, the following hypothesis are proposed in this study:

**H15:** Behavioral attitude has a positive relationship with behavioral intention.

### 2.7.9 Structural equation modeling hypothesis

According to the theory of planned behavior (Ajzen, 1991), behavioral intention is influenced by behavioral attitude, subjective norm and perceived behavioral control. According to the technology acceptance model (Davis, 1989), behavioral intention is influenced by perceived usefulness, perceived applicability and behavioral attitude. In addition, according to the above research, video content marketing, personal experience and perceived trust have an impact on behavioral intention through perceived usefulness and perceived ease of use. In this research, the structural equation model is constructed based on the relevant theory and the above hypotheses (see Figure 2.3). Among them, the expected impact direction of H1-H15 hypotheses is all positive.

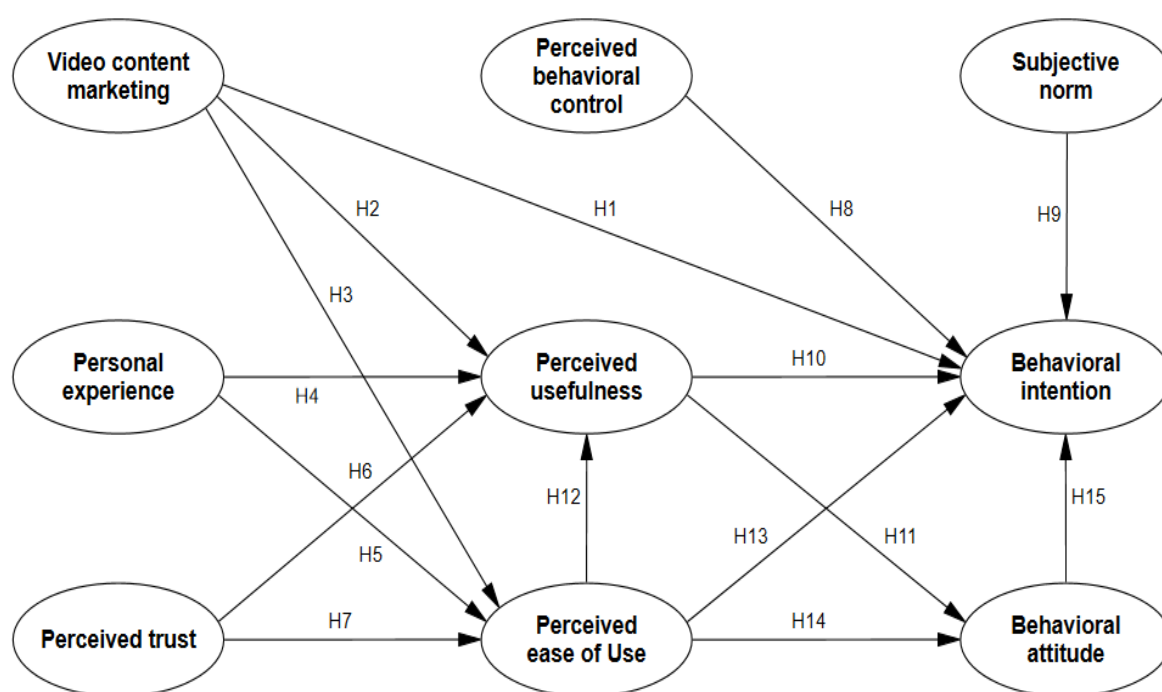


Figure 2.3 Research Model Hypotheses



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## **Chapter 3: Research Design and Methods**

This study takes Chinese catering consumers who have used the online platform to order food as the research object. According to the above theoretical model and research hypothesis, the status analysis is conducted through questionnaire, and the theoretical model of the second chapter is verified.

### **3.1 Research subjects**

This study takes Chinese catering consumers who have used the online platform to order food as the research object, and the questionnaire is distributed through the Internet. To ensure the scientificity of the sampling objects, this study uses a professional questionnaire distribution and recovery system for data collection.

### **3.2 Measurement tools and methods**

This study briefly introduces the data analysis tools and methods needed for empirical research, designs the measurement scale of variables, and initially forms a questionnaire. Through the results of small sample survey, the reliability and validity of the questionnaire are analyzed, and a comparatively perfect questionnaire is finally formed.

The validation of the conceptual model proposed in Chapter 2 is the ultimate purpose of the empirical study in this chapter. This process mainly consists of two parts, one is to design the scale and questionnaire of the model, which is mainly based on the scale and questionnaire of the relevant research fields at home and abroad, and the initial scale and questionnaire are formed by fully considering the specific situation of this study. Then, through expert interviews, small sample prediction and testing, the formal questionnaire is finally formed. Secondly, the range and number of subjects for questionnaire distribution are selected by stratified random sampling method to obtain first-hand data of the sample. Based on the structural equation model, a conceptual model of online consumption behavior of catering consumers in the post-epidemic era is constructed.

This chapter briefly introduces the data analysis tools and methods required in questionnaire test and data test, in which descriptive statistical analysis is used to accurately

understand the basic characteristics of the collected sample data; reliability and validity analysis to ensure the credibility and effectiveness of the data collection of the measurement tools; exploratory factor analysis, which seeks a small number of common factors to maximize the representation of information on all variables; confirmatory factor analysis is used to test the fitting degree between the hypothetical factor structure and the sample data. The data analysis tools used are SPSS26.0 and AMOS26.0 statistical analysis software, in which SPSS26.0 software is used to carry out the reliability test and exploratory factor analysis of the latent variable measurement scale, and AMOS26.0 software is used to carry out the confirmatory factor analysis and validity test of the measurement model.

### **3.3 Research methods**

Based on the above theoretical analysis, the current situation is analyzed and the model used is validated through the questionnaire method. Firstly, we briefly introduce the data analysis methods needed in the empirical research, set up a reasonable variable measurement scale for the initial questionnaire, test the reliability and validity of the questionnaire through a small sample survey, then amend the questionnaire to set up a reasonable questionnaire, collect the sample data so as to further statistical analysis and reliability and validity test et al. We use structural equation model to validate the hypothetical paths, analyze and discuss the results of empirical research.

### **3.4 Questionnaire distribution**

The questionnaire is distributed and collected in the form of online distribution. In order to ensure the scientific of the sampling, a professional questionnaire distribution and recovery system is selected for data collection.

### **3.5 Variable indexes and measurements**

According to the structural equation model hypothesis proposed in the second chapter, the key variables observed in this study are video content marketing, personal experience, perceived trust, perceptual behavioral control, perceived usefulness, perceived ease of use, subjective norms, behavioral intention, and behavioral attitude. All the measurement items in the questionnaire of this study were scored by the five-point scale in the Likert Scale. One point

indicated very disagree and five points indicated very agree. The variables are quantified by means of questionnaire scale. Based on this, the relationship between variables is investigated, so as to achieve the purpose of empirical analysis.

### **3.5.1 Video Content Marketing**

Video content marketing refers to the creation and sharing of interesting and engaging video content to promote and advertise products, brands or services. It uses video, a visual and auditory media form, to convey information to the target audience in a vivid and visual way, arouse their interest and resonance, and prompt them to take action. In this study, there are a total of 6 questions for the measurement of the variable of video content marketing: 1. I recognize the presentation of short food videos on the online platform; 2. the short video of food let me marvel at the richness of Chinese food culture content; 3. I think the short video content makes me feel excited and excited; 4. Diet short video let me sincerely admire the chef's technical level; 5. I think making food short video can fully demonstrate their creativity; 6. I think watching short food videos is an important way for young people to entertain themselves (Bhattacharjee, 2000; Zheng, 2022; Zhu & Cheng, 2022).

### **3.5.2 Personal experience**

Personal experience in this study refers to personal shopping experience, which is a person's understanding and evaluation of products and services accumulated through actual shopping activities. It includes not only the process of purchase decision-making, but also the acquisition, comparison and selection of information in the early stage, as well as the use experience and follow-up service experience after purchase. Shopping experience can involve all aspects of online shopping, physical store shopping or mixed shopping. This study has a total of 3 questions for the measurement of the variable of personal experience: 1. People who have listened to the people around have used the online platform before; 2. Has used the online platform to order meals; 3. This online platform has been recommended to people around (Cai et al., 2022).

### **3.5.3 Perceived trust**

In this study, perceived trust is defined as the degree of consumers' trust in the APP or website (system) used in the mobile Internet environment. This study has a total of 4 questions for the measurement of the variable of perceived trust: 1. High security in using the online platform; 2.

Use the online platform to improve privacy protection; 3. I trust the service environment of the online platform; 4. I think the online platform is trustworthy and can guarantee my daily diet needs (Colesca & Dobrica, 2008; Bwalya, 2009).

### **3.5.4 Perceptual Behavior Control**

Perceptual behavior control refers to consumers' perception of the ability to perform a specific online purchase behavior, which reflects consumers' perception of favorable or unfavorable execution factors. In this study, there are four questions in total for the measurement of the variable of perceptual behavior control: 1. I have enough time to buy the food I want on the online platform; 2. I have enough money to buy the food I want; 3. The government has the corresponding policy propaganda; 4. I am very familiar with the current epidemic prevention policy (Arvola et al., 2008; Bhuyan, 2011).

### **3.5.5 Perceived usefulness**

This study believes that perceived usefulness refers to the degree to which users believe that using a particular APP and website (system) can improve work efficiency. There are four questions in total for the variable measurement of perceived usefulness: 1. Using the online platform can meet my needs; 2. Using the online platform can save my time; 3. Using the online platform will increase my order desire; by watching the video content, the online platform can make me know more about the product (Davis, 1989).

### **3.5.6 Perceived ease of use**

Perceived ease of use refers to a person who believes that using a specific system can save time and effort. This study has a total of 4 questions for the variable measurement of perceived ease of use: 1. Online platform operation is very simple; 2. The online platform can intelligently identify my needs; 3. Online platform search products is very convenient; 4. It is very convenient to download the software related to the online platform (Davis, 1989).

### **3.5.7 Subjective norms**

Subjective norms refer to the individual's perception of the expectations and evaluations of others in the surrounding social environment. It includes factors such as other people's support, expectations, and social norms for individual behavior. Consumers in the decision whether to implement a particular online purchase behavior is affected by perceived social pressure, mainly

from family members, friends, teachers and other important others or enterprises, communities and other organizations. There are four questions in this study to measure the variable of subjective norms: 1. I think that the use of online platform is in line with the current national epidemic prevention policy; 2. I think the use of online platform is conducive to their own, family, friends and colleagues health protection; 3. I believe that the use of online platform is conducive to reducing the risk of epidemic transmission during meals; 4. Using the online platform to buy food is in line with the views of my relatives and friends around me.

### **3.5.8 Behavioral intention**

This study defines behavioral intention as consumers' purchase intention and recommendation intention in the APP or website (system). There are three questions in this study to measure the variable of behavioral intention: 1. During the epidemic, I will use the online platform; 2. After the epidemic, I will continue to use the online platform; 3. I will recommend the online platform to people around me (Davis, 1989).

### **3.5.9 Behavioral attitudes**

Behavioral attitude in this study refers to the positive or negative evaluation of consumers on the implementation of a specific online purchase behavior, which essentially reflects the stable psychological tendency held by consumers. In this study, there are three questions in the measurement of the variable of behavioral attitude: 1. Using the online platform to reduce the time and space constraints under the normalization of epidemic prevention and control; 2. Using the online platform under the normalization of epidemic prevention and control I think it is meaningful; 3. Under the normalization of epidemic prevention and control, I am very interested in using the online platform (Lin, 2007; Cai et al., 2022; Davis, 1989).

## **3.6 Statistical analysis tools and methods**

In this study, two statistical analysis software SPSS26.0 and AMOS26.0 are used for data analysis and processing, in which SPSS26.0 is used to test the reliability and exploratory factor analysis of the variable measurement scale, and AMOS26.0 is used for confirmatory factor analysis and measure the validity test of the model.

There are mainly the following methods:

### **3.6.1 Reliability and validity analysis**

Such analyses are performed to ensure the credibility and effectiveness of the measurement tool data collection.

#### **3.6.1.1 Reliability analysis**

Cronbach's  $\alpha$  coefficient was used to analyze the reliability of the scale to evaluate the internal consistency of the scale. It is generally believed that the reliability of the scale is good when the Cronbach's  $\alpha$  coefficient exceeds 0.70.

#### **3.6.1.2 Validity analysis**

The validity of the scale is analyzed by factor analysis. KMO adaptability test and Barlett's spherical test are used to determine whether the scales meet the conditions for factor analysis.

### **3.6.2 Factor analysis**

The relevant items that do not meet the requirements of the scale dimension setting are deleted and the optimized validity analysis is verified.

#### **3.6.2.1 Exploratory factor analysis (EFA)**

An exploratory analysis of the structural validity of the scale, seeking a small number of common factors to maximize the representation of information on all variables.

#### **3.6.2.2 Confirmatory factor analysis (CFA)**

Confirmatory analysis of the construct validity of the scale, it is generally believed that the KMO value exceeds 0.70, and the Bartlett spherical test ( $P < 0.05$ ) can be regarded as meeting the conditions ; after exploratory factor analysis and verification, the fitting degree between the hypothetical factor structure and the sample data is tested.

### **3.6.3 Analysis of variability**

For the measurement data, the homogeneity of variance was tested by t-test or ANOVA, and LSD method is used for pair comparison between groups; Kruskal-Wallis H-test is used for variance heterogeneity.

### **3.6.4 Structural equation model construction**

AMOS26.0 is used to establish the structural equation model of this research hypothesis, and the path coefficient of the structure is estimated and tested, and the model fitting index is used to judge the fitting degree of the actual data structure and the theoretical structure.

### **3.7 Pre-test analysis report**

Before the formal questionnaire is distributed, the questionnaire is predicted, the initial questionnaire is analyzed by factor analysis, the effective items are screened, and the factors with stronger correlation are retained, the items quality of the scale is first analyzed and studied here. After dividing them into two groups with high and low scores by CR value, the independent sample t-test is used to test whether there is a significant difference in the means of the two populations (low-score group) that obey the normal distribution to facilitate the subsequent judgment whether it is suitable for factor analysis, and the KMO and Bartlett's sphericity tests are used to test the effectiveness of the screened factors and verify the suitability of the options for exploratory factor analysis. Principal component analysis is used to analyze the factors of the items, and nine principal components that explain most of the variance are selected and named.

### **3.8 Small sample test**

Due to the particularity of questionnaire data collection, it is required to test the reliability and validity of the initial questionnaire before formally issuing a large number of questionnaires through the network. The validity of the questionnaire is tested from three aspects: content validity, convergent validity and discriminant validity. Further correction or deletion of non-essential items improves the availability and effectiveness of the questionnaire. It belongs to the small sample survey method and improves the questionnaire design.

### **3.9 Small sample placement table test**

In order to improve the availability and effectiveness of the questionnaire and to refine the questionnaire design, it is required to pre-test the small sample data and analyze the questionnaire from the reliability and validity. The test items are purified by CITC analysis with



alpha reliability coefficients, while exploratory factor analysis and confirmatory factor analysis of all items are conducted afterwards. The scale items of each variable are purified by CITC and alpha reliability coefficient analysis, when  $\text{CITC} < 0.4$  and the item is deleted, the  $\alpha$  reliability coefficient increases. Until the internal consistency of the questionnaire is good it meets the reliability requirements of the study.

### **3.10 Project analysis**

The CR value is an index used to test whether the items of the questionnaire can identify the degree of reflection of different respondents. The sum of all respondents' scores on the questionnaire is ranked in order of highest and lowest. The top 25%-33% of the scores are in the high group, and those with scores in the bottom 25%-33% are in the low group. The average score of each item of the two groups is calculated, and the significant level of the difference between the two groups is calculated, and the CR value of the item is obtained. If the CR value reaches a significant level less than 0.05, it means that the item can identify the response level of different respondents and is meaningful in the survey. The significant level greater than 0.05, indicating that the item cannot identify the degree of response of different investigators. Therefore, the item is meaningless in the survey and should be deleted.

### **3.11 Reliability analysis**

Reliability, also known as credibility, refers to the degree of consistency of the results obtained when the same object is repeatedly measured by the same method. Reliability index is mostly expressed by the correlation coefficient and can be broadly classified into three categories: stability coefficients (consistency across time), equivalence coefficients (consistency across forms) and internal consistency coefficients (consistency across items). The internal consistency reliability is used in this study, specifically the alpha reliability coefficient method is used to test the reliability of the questionnaire variable scales.

The  $\alpha$  reliability coefficient is the most commonly used reliability coefficient, which belongs to the internal consistency coefficient. It evaluates the consistency between the scores of each item in the scale and is used to check the credibility of the measurement, such as the authenticity of the questionnaire.

The reliability coefficient of the total scale is preferably above 0.8, between 0.7 and 0.8 is acceptable; the reliability coefficient of the subscale is preferably above 0.7, and 0.6-0.7 is

acceptable. If Cronbach's alpha coefficient is below 0.6, we should consider re-compiling the questionnaire.

### **3.12 Validity analysis**

Validity is the effectiveness of the measurement, which is the degree to which the result can reflect the content. The higher the validity, the better the measurement results can express the true characteristics of the content to be examined. Generally, the validity of the questionnaire is tested by three aspects: content validity, convergent validity and discriminant validity.

The main method of structural validity analysis of questionnaire data collection is factor analysis. Structural validity refers to the measurement ability of the measurement tool to the measurement object. The validity of the questionnaire refers to the degree to which the actual questionnaire measurement score can explain the theoretical characteristics or concepts. Generally speaking, the result of factor analysis is to summarize the description of the potential attributes of the measurement variables, so as to realize the description of the accuracy of the measurement property and the correctness of the measurement results. Therefore, factor analysis can test the validity of the questionnaire.

### **3.13 Exploratory factor analysis**

Exploratory factor analysis is a method to find the essential structure of multivariate observed variables based on data dimensionality reduction. Exploratory analysis of the structural validity of the scale seeks a small number of common factors and express the information of all variables as much as possible. The more common methods are principal component analysis and factor analysis. To test the correlation between items and measure the feasibility of factor analysis, the commonly used methods are Barlett's sphericity test and the KMO test.

The KMO test is used to probe the partial correlation between observed variables, comparing the simple correlation coefficient and partial correlation coefficient. Between 0 and 1, if the KMO metric is closer to 1, the factor analysis is more suitable, if it is lower than the minimum standard of 0.5, it is not suitable for factor analysis; Barlett's spherical test is that the correlation coefficient in the general correlation matrix must be significantly higher than 0. Barlett's spherical test is more suitable for factor analysis when the value is relatively large and the corresponding companion probability value is less than the given significance level of 0.001.

In the statistical analysis of the data, the principal component analysis method is used to carry out the exploratory factor analysis. With the component correlation matrix, the maximum variance method is used as the rotation method to explore the sample data, the common factors and the research variables proposed in this study are compared to observe their matching degree. If all the measurement items of a component have a higher loading on the corresponding common factors than other factors, it indicates that the scale has certain convergent validity and discriminant validity. The cumulative explained variance of common factors should reach more than 70 % of the total variance in order to get better results. If it reaches more than 60 %, the common factor is acceptable, and the minimum standard should reach more than 50 %.

Principal component analysis (PCA) is a statistical method. A set of variables that may be correlated are converted into a set of linearly unrelated variables by orthogonal transformation. The converted variables are called principal components, which make a few variables explain all variables as much as possible.

ANOVA focuses on the effect of a factor on a response variable and aims to analyze whether there is a significant effect of the factor on the response variable, i.e., whether there is a significant difference in the mean value of the response variable at different levels of the factor. If the factor level has no effect on the response variable, then the means of the response variable under different factor levels is the same, which is the original hypothesis of ANOVA.

### **3.14 Confirmatory factor analysis**

Confirmatory factor analysis can test whether each item has appropriate subordinate relation with the factor and test whether there is a dimension error attribution problem. Therefore, the confirmatory factor analysis of the data does not involve a multi-level factor structure, and only the first-order confirmatory factor analysis of the data is needed. Confirmatory factor analysis (CFA) is used to analyze the construct validity of the scale. It is generally believed that the KMO value exceeds 0.70. The nine latent variables involved in the structural equation model are composed of four items. Based on the subordinate relationship between each item and latent variable, the first-order confirmatory factor model is constructed by using AMOS software to analyze the sample data.

### **3.15 Analysis report**

Through the collation of the scale and the screening of the items, after eliminating irrelevant and inappropriate options, a formal questionnaire is finally formed. On the basis of the data collection of the formal questionnaire, the next thing to do is to verify the relevant assumptions. The collected data are analyzed by common method deviation, difference, structural equation model, et al., to ensure the reliability of the formal scale. On this basis, the path relationship between variables is analyzed to verify the conceptual model proposed in this study.

### **3.16 Hypothesis testing**

Based on the a priori theory and the mature scale, the relationship between the variables is constructed, and the measurement scale of this study is obtained. Based on confirmatory factor analysis, the relationship between latent variables and measurement index is verified. In further research, AMOS software is used to construct the structural equation model for the theoretical model. Using the obtained sample data to analyze the structural equation model; according to the evaluation index and correction principle of structural equation model, reasonable debugging and correction make the model more reasonable. According to the fitting index, the structural model is scientifically evaluated, and the relevant path relationship hypothesis is tested on the basis of data analysis.

### **3.17 Difference study**

The purpose of a difference study is to compare the differences between two or multiple sets of data. The difference in the difference relationship refers to the difference of a certain index in different sample groups. Common difference analysis methods: t-test, ANOVA, and chi-square test. The difference between the three methods is that the data types are different. If it is a fixed class and a fixed class, then we should use the chi-square analysis; if it is a fixed class and quantitative, then we should use the ANOVA or t-test. The difference between the ANOVA and T-test is that for the X of the t-test, it can only be 2 categories such as male and female of gender. If X is 3 categories such as bachelor degree or below, bachelor degree, bachelor degree or above; then only ANOVA can be used. The ANOVA can be subdivided according to the difference of X. When the number of X is one, it is called single factor variance; when X is two, it is two-

factor variance; when X is three, it is called three-factor variance, which goes down in turn. When X exceeds one, it is collectively referred to as multi-factor variance.

### **3.17.1 Difference analysis**

The independent samples t-test is used to test whether there is a significant difference between the two categories. According to the information of the table, the information on the left side of the table is a simple data description, which is the mean and standard deviation of gender (male and female students) in perceived usefulness, perceived ease of use, subjective norms, perceptual behavioral control, personal experience, perceived trust, behavioral attitudes, behavioral intentions, and video content marketing, respectively, which are also the basic data needed for the t-test. In the right half of the table, information focuses on the analysis of whether the difference is significant, the need to properly understand the P value and the difference has a statistical significance, the smaller the P, it does not mean that the actual difference is greater, but that the more reason to reject the original hypothesis  $H_0$ , the more reason to explain that there is a difference between them. Whether the difference is statistically significant or not and whether there is professional practical significance are not exactly the same. Under the premise of bilateral test and statistical significance level  $\alpha=0.05$ , it is possible to know whether the significance level is reached by looking at the p value. When accepting  $H_1$ , the male variable is different from the female variable; when accepting  $H_0$ , there is no evidence yet to support the difference between the variables of each gender. When the p value is greater than 0.05 there is no significant difference, and vice versa.

### **3.17.2 Single factor ANOVA**

Single factor ANOVA is to compare the differences in the means of each group in the sample when only one independent variable or factor is considered, it is to achieve equality test between three or more means. Only one factor or independent variable is involved, a factor may have different level values, that is, different values. It is a hypothesis-based test designed to evaluate multiple mutually exclusive theories about data. Before generating hypotheses, questions about the data are expected to be answered.

In single factor ANOVA, there are two possible hypotheses.

The original hypothesis ( $H_0$ ) is that there is no difference between the groups and that the means of the groups are equal.

The alternative hypothesis ( $H_1$ ) is that there are differences between means and groups.

In single factor ANOVA, significance is tested using the F value,  $F = \text{between-group variance} / \text{within-group variance}$ . The F value is used to assess between-group differences, and also indicates the significance of the overall fitting equation; the larger the F, the more significant it is, and the better the fitting degree. Conversely there is no significant difference.

Through the difference analysis and single factor analysis of gender, education and income, the following conclusions can be drawn:

There are no significant differences between respondents of different genders in subjective norms, perceived behavioral control, personal experience, behavioral attitudes, behavioral intentions, and video content marketing; there are significant differences in perceived usefulness, perceived ease of use, and perceived trust; in which female's scores are significantly higher than male's scores.

There are no significant differences among respondents with different education levels in perceived usefulness, perceived ease of use, subjective norms, personal experience, perceived trust, behavioral attitudes, and video content marketing; there are significant differences in perceptual behavioral control, and behavioral intentions.

There is no significant differences in perceived usefulness, perceived ease of use, personal experience, and perceived trust among respondents with different incomes. Significant differences exist in subjective norms, perceptual behavioral control, behavioral attitudes, behavioral intentions, and video content marketing.

### **3.17.3 Multi proportion analysis**

When the dependent variable is multiple choice questions, it can be analyzed by the following methods:

The calculation of percentage, prevalence rate and response rate, Pareto diagram, these three methods are calculated by percentage, through different forms of analysis, relatively more used. If you want to use statistical test methods to analyze differences, you can use CochranQ test, chi-square test. Another more advanced multivariate statistical method correspondence analysis can also be analyzed for multiple choice questions.

In this analysis, the approach used is to calculation of percentage, prevalence rate and response rate.

By calculating the percentage, we can know the preference of the research group for pre-made food or the reasons for its multiple choices. By counting the current number of samples, for example, 668 people chose the option “time saving”, then the selection ratio is  $668 / \text{sample size}$ , and the proportion is 26.4% according to the table. The remaining 7 items are calculated

in the same way, which is the simplest way to calculate the percentage and is the most frequently used, also known as the prevalence rate.

According to the table information, the proportion of “easy cooking” is the highest, accounting for 29.3%, which indicates that people like pre-made food mainly because of its convenience, followed by “time saving”, accounting for 26.4 %, which is also one of the embodiments of the convenience of pre-made food.

In addition to the basic proportion analysis, further in-depth analysis is “response rate”, a total of  $n$  samples, each sample can choose more than one option,  $n$  people choose  $m$  options in total, on average a person chooses  $m/n$ , about  $x$  options. That is each person has an average of  $x$  options.

If you want to understand the relative proportion of each option, you can use the response rate for analysis, for example, a total of 668 people choose “convenience cooking”, all of the selected items are  $m$ , so the proportion is  $668/m = 76.3\%$ .

The response rate is a relative proportion index of each option, which emphasizes the PK between the options. Because the sum of each ratio must be 100 %, PK comparison can be made between the options.

Prevalence rate is a proportion of a population, with more emphasis on how much proportion of the sample to choose a particular item. The focus of the two index values is different, if the analysis is deeper, it is usually required to analyze the response rate.

Through the analysis of response rate and prevalence rate, we can know that the biggest reason why people like to purchase pre-made food is its convenience, saving the audience’s time, and the cooking is simple. The variety of choices is also one of the reasons why people purchase pre-made food, for its taste and whether it is nutritious, the proportion is not high and is not the main reason why people choose pre-made food.

The main reason for reluctant to choose pre-made food is the fear of food safety problems and too many preservatives in pre-made food. Its taste and price are also secondary reasons why pre-made food is not liked by people.

### **3.18 Proportion analysis**

Proportion analysis refers to the analysis of the proportion of different individuals in the overall. Proportion refers to the proportion of the number of each part in a whole to the total number, reflecting the overall composition or structure. Proportion, which directly reflects the proportion of individuals in the total, is often used to observe the composition of the total (the

proportion of each individual) and monitor the changes of individuals in the total (the proportion of individuals in the total changes over time).



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## Chapter 4: Results

The questionnaire survey of this study is divided into two stages. The first stage is the pre-survey, which is carried out in January 2023. The number of samples in the pre-survey stage is 130, and the survey is randomly distributed to all parts of China through the professional network survey system. The second stage is the formal investigation stage, which is in May 2023. The number of samples in the formal investigation stage is 900, and the survey is randomly distributed to all parts of China through the professional network survey system.

### 4.1 Pre-investigation

#### 4.1.1 Subjects' situation

In this study, the prepared questionnaire was predicted and 130 subjects were randomly selected within China and given questionnaires, 121 questionnaires were returned, of which 121 were valid, with an effective rate of 93.1%.

Five variables are set in this research: “gender”, “age”, “education”, “marital status”, “presence of minor children” and “average income”. Among “gender”, the frequency of “male” is 51, accounting for 42.1%, and the frequency of “female” is 70, accounting for 57.9%; among “age”, The frequency of “19-24 years old” is 21, accounting for 17.4%, the frequency of “25-30 years old” is 35, accounting for 28.9%, and the frequency of “31-40 years old” is 56, accounting for 46.3%, the frequency of “41-50 years old” is 8, accounting for 6.6%, and the frequency of “51 years old and above” is 1, accounting for 0.8%; in “education”, the frequency of “high school and below” is 6, accounting for 5%, the frequency of “professional training college” is 28, accounting for 23.1%, the frequency of “undergraduate” is 84, accounting for 69.4%, and the frequency of “postgraduate” is 3, accounting for 2.5%; among “marital status”, the frequency of “married” is 85, accounting for 70.2%, and the frequency of “unmarried” is 36, accounting for 29.8%; among “presence of minor children”, the frequency of “yes” is 76, accounting for 62.8%, and the frequency of “no” is 45, accounting for 37.2%; among “average income”, the frequency of “less than 3,000 yuan” is 7, accounting for 5.8%, the frequency of “3,001-5,000 yuan” is 20, accounting for 16.5%, the frequency of “5,001-10,000 yuan” is 68,

accounting for 56.2%, and the frequency of “more than 10,001 yuan “ is 26, accounting for 21.5%.

#### **4.1.2 Project Analysis**

When pre-testing the questionnaire, Churchill (1979) in his study specifically stated that the initial questionnaire should be screened and purified by factor analysis for the initial measurement items. Unpurified items are prone to multi-dimensional situations when performing factor analysis, which is not conducive to the analysis of the relation between variables.

##### **4.1.2.1 Independent sample t-test (CR decision value)**

In this study, all 35 items of the 9 variables are used to calculate the total score, grouped by 27 % of the total score, the high group and the low group are assigned 1, 2 respectively, and the independent sample t-test is used for project analysis. The discrimination of the items is judged according to whether the t-value, i.e., CR (decision value)  $\geq 3$ . If the CR value  $\geq 3$ , it indicates that the discrimination of the items is good and can be retained, and if the CR value  $< 3$ , it means that the discrimination of the items is poor and needs to be deleted. It can be seen from Table 4.1 that CR of 32 items is greater than 3, which meets our needs. Among them, CR values of SE4, SN4, PBC4 are less than 3, which do not fit criterion, so they are deleted.

##### **4.1.2.2 Corrected Item-Total Correlation (CITC)**

Corrected Item-Total Correlation tests the correlation between each item and the total score of the questionnaire. The item is related to the total score of it. If it is too low or too high, it indicates that there are problems in the item. Correlation is too low, indicating low homogeneity, correlation is too high, indicating the measurement of non-identical content. the normal CITC coefficient needs to be greater than 0.4, indicating qualified and is to be retained, and below 0.4, which needs to be deleted. As can be seen from the following table, the CITC coefficients of SE4, SN4, PBC4, PT4 and VCM4 are all less than 0.4, so they need to be deleted. The CITC coefficients of the other items: 0.401-0.661, with statistically significant differences ( $P < 0.01$ ), so that 30 items can be retained with the following results.

##### **4.1.2.3 The $\alpha$ value after deleting the items**

The analysis was conducted by using the  $\alpha$  value test after the deletion of items, and if the Cronbach's alpha value increased after the deletion of an item, the item should be deleted. The total Cronbach's  $\alpha$  coefficient for the 35 items of the predictive questionnaire is 0.915, and four

of the items were significantly improved by deletion. It contains 4 items: **SE4**, **SN4**, **PBC4**, **PT4**, so these 4 items: **E4**, **SN4**, **PBC4**, **PT4** are needed (see Table 4.1).

Table 4.1 Project Analysis

Item	CR(t)	Corrected Total Correlation	Item- Cronbach's Alpha after deletion of items
SA1	8.888	0.661	0.91
SA2	6.531	0.597	0.911
SA3	7.786	0.602	0.911
SA4	5.15	0.528	0.912
SE1	6.285	0.532	0.912
SE2	6.412	0.549	0.912
SE3	7.458	0.605	0.912
<b>SE4</b>	<b>1.587</b>	<b>0.102</b>	<b>0.919</b>
SN1	6.271	0.611	0.911
SN2	7.315	0.529	0.912
SN3	5.049	0.547	0.912
<b>SN4</b>	<b>1.587</b>	<b>0.092</b>	<b>0.919</b>
PBC1	4.952	0.535	0.912
PBC2	3.823	0.461	0.913
PBC3	4.451	0.491	0.913
<b>PBC4</b>	<b>0.583</b>	<b>0.084</b>	<b>0.918</b>
PE1	5.73	0.529	0.912
PE2	5.942	0.51	0.912
PE3	6.559	0.536	0.912
PT1	6.581	0.56	0.912
PT2	7.142	0.642	0.911
PT3	5.4	0.564	0.912
PT4	3.099	<b>0.243</b>	<b>0.916</b>
BA1	5.522	0.498	0.913
BA2	6.854	0.532	0.912
BA3	6.201	0.48	0.913
BI1	4.217	0.401	0.914
BI2	4.037	0.433	0.913
BI3	4.66	0.455	0.913
VCM1	7.013	0.5	0.913
VCM2	6.327	0.486	0.913
VCM3	7.613	0.443	0.913
VCM4	3.81	<b>0.376</b>	0.914
VCM5	4.611	0.5	0.913
VCM6	6.106	0.491	0.913
Standard	$\geq 3$	$\geq 4$	$< 0.915$

To summarize, three main criteria are mainly adopted for the purification and correction of the scale in this research. If the CR value is  $< 3$ , the item is deleted; if the CITC is  $< 0.4$ , the item is deleted; if the Cronbach's  $\alpha$  value of the reliability coefficient after deleting the item is greater than the Cronbach's  $\alpha$  value of all variables, the item is deleted. Therefore, the following items can be deleted: **SE4**, **SN4**, **PBC4**, **PT4**, **VCM4**, and finally 30 question items are retained.

### 4.1.3 Exploratory factor analysis

#### 4.1.3.1 Suitability for factor analysis

The validity index of the scale was judged by the exploratory factor analysis process. In the exploratory factor analysis results, when  $KMO > 0.9$  and Bartlett's sphericity test significance  $p < 0.05$ , it indicates that the questionnaire is very suitable for factor analysis, when  $0.8 < KMO < 0.9$ , it is more suitable;  $0.7 < KMO < 0.8$ , it is generally suitable; when  $0.6 < KMO < 0.7$ , it is less suitable; and when the value of KMO is less than 0.5, it is not suitable for factor analysis.

From the data in the table below, we can see that the result of this factor analysis  $KMO = 0.855 > 0.6$  and Bartlett's test of sphericity  $p < 0.001$ , the scale is suitable for factor analysis (see Table 4.2).

Table 4.2 KMO and Bartlett's test

KMO Sampling suitability quantity		0.855
Bartlett's sphericity test	Approximate chi-square	2621.602
	Degree of freedom	435
	Significance	0.000

According to the variables in this study, ten principal components with eigenvalues greater than 1 are extracted from the results in the following table, and the component matrix is rotated by the kaiser's normalized varimax, the results are shown in the table below. The distribution of eigenvalues of the first 10 principal components is more even, which are 3.348, 2.753, 2.561, 2.461, 2.46, 2.452, 2.451, 2.418, 2.417, and 1.8, and the cumulative variance of these 10 principal components accounts for 83.735%, indicating that they can well summarize the information contained in the 30 items and can explain most of the amount of variation (see Table 4.3).

Table 4.3 Total variance explained

Component	Initial Eigenvalues			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.993	33.311	33.311	3.348	11.16	11.16
2	2.845	9.484	42.796	2.753	9.176	20.337
3	2.41	8.033	50.828	2.561	8.536	28.873
4	1.846	6.153	56.981	2.461	8.204	37.077
5	1.62	5.398	62.38	2.46	8.2	45.277
6	1.557	5.189	67.569	2.452	8.173	53.45
7	1.369	4.562	72.131	2.451	8.17	61.62
8	1.252	4.173	76.304	2.418	8.059	69.678
9	1.216	4.052	80.357	2.417	8.057	77.736
10	1.013	3.378	83.735	1.8	5.999	83.735
11	0.508	1.694	85.429			
12	0.449	1.495	86.924			

13	0.391	1.304	88.229
14	0.384	1.279	89.508
15	0.341	1.135	90.644
16	0.309	1.032	91.675
17	0.29	0.968	92.644
18	0.269	0.896	93.54
19	0.24	0.801	94.341
20	0.223	0.743	95.083
21	0.211	0.702	95.785
22	0.186	0.618	96.404
23	0.174	0.581	96.985
24	0.171	0.57	97.555
25	0.147	0.491	98.046
26	0.139	0.462	98.509
27	0.125	0.416	98.925
28	0.12	0.399	99.324
29	0.103	0.343	99.667
30	0.1	0.333	100

#### 4.1.3.2 Determination of factors and deletion of items

The varimax is adopted to rotate the factors, and the results of the rotated factor loadings are shown in the following table. For the sake of observation, the table prohibits the display of load values below 0.4. According to the following table, after determining the 10 factors, the rotated component matrix (with commonality). The items that factor loadings is less than 0.4 and the commonality is less than 0.4 with improper categorization and repeated meanings need to be deleted (see Table 4.4).

Table 4.4 Rotation factor loadings and commonality

	Component										Commonality
	1	2	3	4	5	6	7	8	9	10	
SA1				0.780							0.878
SA2				0.848							0.879
SA3				0.811							0.868
SA4										0.854	0.868
SE1							0.808				0.800
SE2							0.815				0.804
SE3							0.807				0.842
SN1								0.764			0.812
SN2								0.862			0.855
SN3								0.77			0.772
PBC1			0.842								0.843
PBC2			0.882								0.875
PBC3			0.827								0.830
PE1		0.891									0.902
PE2		0.905									0.912
PE3		0.857									0.883
PT1						0.833					0.855
PT2						0.777					0.834
PT3						0.8					0.800
BA1									0.838		0.781
BA2									0.831		0.814
BA3									0.778		0.713
BI1					0.875						0.845
BI2					0.877						0.842
BI3					0.788						0.778
VCM1	0.887										0.862
VCM2	0.882										0.875
VCM3	0.834										0.789
VCM5										0.873	0.887
VCM6	0.86										0.824

**4.1.3.3 Determine factors and naming (delete items to redo exploratory factor analysis)**

From the data in the table below, the results of this factor analysis  $KMO=0.855>0.6$ , the approximate chi-square is 2470.703; the result of Bartlett's sphericity test  $p<0.001$ , the approximate chi-square is 378, which shows that the data is suitable for factor analysis. According to the variables in this study, the results in the table below, 9 principal components with eigenvalues greater than 1 are extracted and the kaiser's normalized varimax is used to rotate the component matrix. The results are shown in the following table, the eigenvalues of the first 9 principal components were distributed in a more balanced way, with 3.334, 2.744, 2.552, 2.459, 2.458, 2.446, 2.442, 2.441, and 2.405, and the cumulative variance of them accounts for 83.145%, indicating that the 9 principal components can well summarize the information contained in the 28 items and can explain most of the amount of variation (see Table 4.5).

Table 4.5 Total variance explained

Component	Initial Eigenvalues			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.473	33.834	33.834	3.334	11.906	11.906
2	2.84	10.144	43.977	2.744	9.8	21.706
3	2.404	8.585	52.563	2.552	9.115	30.821
4	1.819	6.497	59.059	2.459	8.783	39.604
5	1.618	5.779	64.838	2.458	8.777	48.381
6	1.519	5.424	70.263	2.446	8.736	57.116
7	1.314	4.692	74.954	2.442	8.722	65.838
8	1.248	4.455	79.41	2.441	8.717	74.555
9	1.046	3.735	83.145	2.405	8.59	83.145
10	0.536	1.914	85.059			
11	0.449	1.602	86.661			
12	0.387	1.384	88.045			
13	0.383	1.367	89.412			
14	0.342	1.223	90.635			
15	0.305	1.091	91.725			
16	0.285	1.017	92.742			
17	0.265	0.946	93.687			
18	0.236	0.842	94.53			
19	0.215	0.769	95.299			
20	0.209	0.748	96.047			
21	0.183	0.653	96.699			
22	0.171	0.611	97.311			
23	0.152	0.543	97.853			
24	0.139	0.497	98.35			
25	0.134	0.478	98.828			
26	0.12	0.429	99.257			
27	0.108	0.385	99.642			
28	0.1	0.358	100			



The varimax is used for factor rotation. The results of the factor loadings after rotation are shown in the following table. In order to facilitate observation, the value of the loadings value below 0.5 is prohibited. A total of 9 principal components were formed. The factor loadings of each principal component are greater than 0.5, and the commonality is greater than 0.4 (see Table 4.6).

Table 4.6 Rotated Component Matrix

	Component									Commonality
	1	2	3	4	5	6	7	8	9	
SA1								0.78		0.878
SA2								0.849		0.878
SA3								0.811		0.867
SE1							0.809			0.799
SE2							0.815			0.801
SE3							0.809			0.841
SN1						0.763				0.797
SN2						0.864				0.853
SN3						0.79				0.75
PBC1			0.84							0.837
PBC2			0.887							0.87
PBC3			0.827							0.829
PE1		0.891								0.9
PE2		0.907								0.911
PE3		0.863								0.881
PT1				0.841						0.858
PT2				0.793						0.836
PT3				0.802						0.795
BA1									0.837	0.776
BA2									0.832	0.812
BA3									0.786	0.712
BI1					0.874					0.843
BI2					0.876					0.839
BI3					0.791					0.772
VCM1	0.89									0.862
VCM2	0.882									0.874
VCM3	0.833									0.784
VCM6	0.865									0.822

#### **4.1.3.4 Factor naming**

After removing SA4 and VCM5, there are 9 principal components left, which are consistent with the questionnaire design. Naming the factors:

The first principal component: it is mainly related to the demand driving force, which can be named as video content marketing, including VCM1, VCM2, VCM3, VCM6, and the variance interpretation is 11.906 %.

The second principal component: it is mainly related to personal experience and can be named as personal experience, including PE1, PE2, and PE3, with a variance interpretation of 9.8%.

The third principal component: it is mainly related to perceptual behavior control, which can be named as perceptual behavior control, including PBC1, PBC2, PBC3, and the variance interpretation is 9.115 %.

The fourth principal component: it is mainly related to perceived trust, which can be named as perceived trust, including PT1, PT2, PT3, and the variance interpretation is 8.783 %.

The fifth principal component: it is mainly related to behavioral intention, which can be named as behavioral intention, including BI1, BI2, BI3, and the variance interpretation is 8.777 %.

The sixth principal component: it is mainly related to subjective norms, which can be named as subjective norms, including SN1, SN2, SN3, and the variance interpretation is 8.736 %.

The seventh principal component: it is mainly related to perceived ease of use, which can be named as perceived ease of use, including SE1, SE2, SE3, and the variance interpretation is 8.722 %.

The eighth principal component: it is mainly related to perceived usefulness, which can be named as perceived usefulness, including SA1, SA2, SA3, and the variance interpretation is 8.717 %.

The ninth principal component: it is mainly related to behavioral attitude, which can be named as behavioral attitude, including BA1, BA2, BA3, and the variance interpretation is 8.59 %.

## 4.2 Formal investigation

### 4.2.1 Subjects' background information statistics

A total of 900 questionnaires were distributed in this survey, of which 18 samples had omissions, as well as inconsistencies in filling out options or obvious regularity in answering, which will be treated as invalid samples, and 882 valid questionnaires remained after eliminating invalid samples with an effective rate of 98.00%. The statistical results of the subjects' background information are shown in Table 4.7.

Table 4.7 Distribution of samples

Variables	Classification	Frequency	Percentage
Gender	Male	426	48.3
	Female	456	51.7
Age	19-24 years old	225	25.5
	25-30 years old	272	30.8
	31-40 years old	278	31.5
	41-50 years old	75	8.5
	51 years old and above	32	3.6
Education	High School and below	117	13.3
	Professional training college	222	25.2
	Undergraduate	509	57.7
	Postgraduate	34	3.9
Marital Status	Married	518	58.7
	Unmarried	364	41.3
Presence of minor children	Yes	459	52
	No	423	48
Average income	Less than 3,000 yuan	127	14.4
	3,001-5,000 yuan	196	22.2
	5,001-10,000 yuan	346	39.2
	More than 10,001 yuan	213	24.1

### 4.2.2 Common method bias

Common method bias is the artificial covariation between predictive variables and criterion variables caused by the same data source or rater, the same measurement environment, the item context, and the characteristics of the item itself during the data collection process. Questionnaire measurement error include systematic error and chance error. This common method bias caused by data homology will seriously confuse and mislead the statistical analysis results, which belongs to the systematic error. Currently, the following methods are used to test for common method bias: Harman's single factor test, partial correlations analysis, potential error variable method, unique correlation model of error, and direct product model. To ensure the accuracy of the statistical analysis results, we use the most commonly used Harman's single factor test to test the common method bias of the data in this thesis, i.e., all the scale items are

analyzed together by exploratory factor analysis, and the components with eigenvalues greater than 1 were extracted by principal component analysis, the results are shown in the following table. A total of 12 common factors with eigenvalues greater than 1 are extracted. The variance explained by the first factor without rotation is 21.538 %, not more than 40 % ( many foreign scholars recommend greater than 50 % ). There is no common factor that explains most of the variation, indicating that the scale is tested by common method variance (see Table 4.8).

Table 4.8 Total variance explained

Component	Initial Eigenvalues			Extraction Sums of squared of loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.031	21.538	21.538	6.031	21.538	21.538
2	2.937	10.489	32.027	2.937	10.489	32.027
3	2.382	8.507	40.534	2.382	8.507	40.534
4	2.062	7.366	47.9	2.062	7.366	47.9
5	1.634	5.836	53.735	1.634	5.836	53.735
6	1.54	5.5	59.236	1.54	5.5	59.236
7	1.41	5.036	64.272	1.41	5.036	64.272
8	1.347	4.811	69.082	1.347	4.811	69.082
9	1.149	4.104	73.187	1.149	4.104	73.187

### 4.2.3 Reliability test

Reliability, also known as credibility, refers to the believable degree of a questionnaire, mainly showing the consistency, coherence, duplicability and stability of test results. The results of a good measurement, which measures the same thing repeatedly for many times, should always remain the same to be credible. There are many ways to measure the inherent reliability of a scale, the alpha coefficient is used to represent the consistency of the scale in this thesis. The higher the  $\alpha$  value, the more consistent the results of the items in the questionnaire, and the better the reliability in the scale. When the alpha coefficient is lower than 0.6, it is low reliability, and it is necessary to consider reformulating the questionnaire or screening the controversial indexes in the questionnaire. A reliability higher than 0.9 indicates that the questionnaire data results are very stable, and 0.7 to 0.8 is relatively stable.

The calculating results of perceived usefulness, perceived ease of use, subjective norms, perceptual behavioral control, personal experience, perceived trust, behavioral attitude, behavioral intention, and video content marketing reliability for each variable of the questionnaire using the above method are shown in the table below. From the data in the table, it can be seen that the CITC values of 28 items are 0.598-0.768, which are all greater than 0.4, and none of the Cronbach's Alpha values after removing the items are significantly higher, the

reliability values of each variable are 0.802 - 0.830, so the results are stable and have a certain degree of reliability (see Table 4.9).

Table 4.9 Reliability test for each variable

Variables	item	CITC	Cronbach's $\alpha$ after deletion of itemss	Cronbach's $\alpha$
Perceived usefulness	SA1	0.696	0.682	0.802
	SA2	0.647	0.734	
	SA3	0.607	0.772	
Perceived ease of use	SEU1	0.768	0.814	0.875
	SEU2	0.756	0.826	
	SEU3	0.752	0.829	
Subjective norms	SN1	0.662	0.722	0.805
	SN2	0.676	0.707	
	SN3	0.617	0.768	
Perceptual Behavioral Control	PBC1	0.675	0.764	0.825
	PBC2	0.657	0.781	
	PBC3	0.71	0.729	
Personal Experience	PE1	0.676	0.721	0.809
	PE2	0.667	0.729	
	PE3	0.632	0.766	
Perceived Trust	PT1	0.675	0.748	0.819
	PT2	0.682	0.741	
	PT3	0.66	0.764	
Behavioral Attitude	BA1	0.706	0.748	0.830
	BA2	0.687	0.767	
	BA3	0.674	0.78	
Behavioral Intentions	BI1	0.682	0.711	0.808
	BI2	0.657	0.737	
	BI3	0.632	0.762	
Video Content Marketing	VCM1	0.666	0.757	0.817
	VCM2	0.622	0.776	
	VCM3	0.669	0.754	
	VCM4	0.598	0.789	

#### 4.2.4 Validity analysis (Confirmatory Factor Analysis)

Validity analysis refers to whether the measurement data can reflect the variables expected by the researcher. For example, for a research hypothesis, we use a measurement tool to collect data, then validity analysis will help us assess whether the tool effectively captures the variables related to the research hypothesis and the accuracy of the data. Confirmatory factor analysis (CFA) is a method of validity analysis, often used in measurement tool development and evaluation.

Confirmatory factor analysis can be used to measure the validity of concepts and variables. The validity of a construct is usually assessed by measuring the variable it represents, and the validity of a variable is usually assessed by measuring its own or its outcomes in relation to

other variables. CFA verifies the validity of the model by comparing the degree of fit between theoretical modeling and actual data.

The main steps of CFA include selecting an appropriate indicator to represent the construct, building a model of multiple hypothesis factors, comparing how well the model fits the data, making corrections based on the model, and repeating the above steps until the ideal fit is achieved (see Figure 4.1).

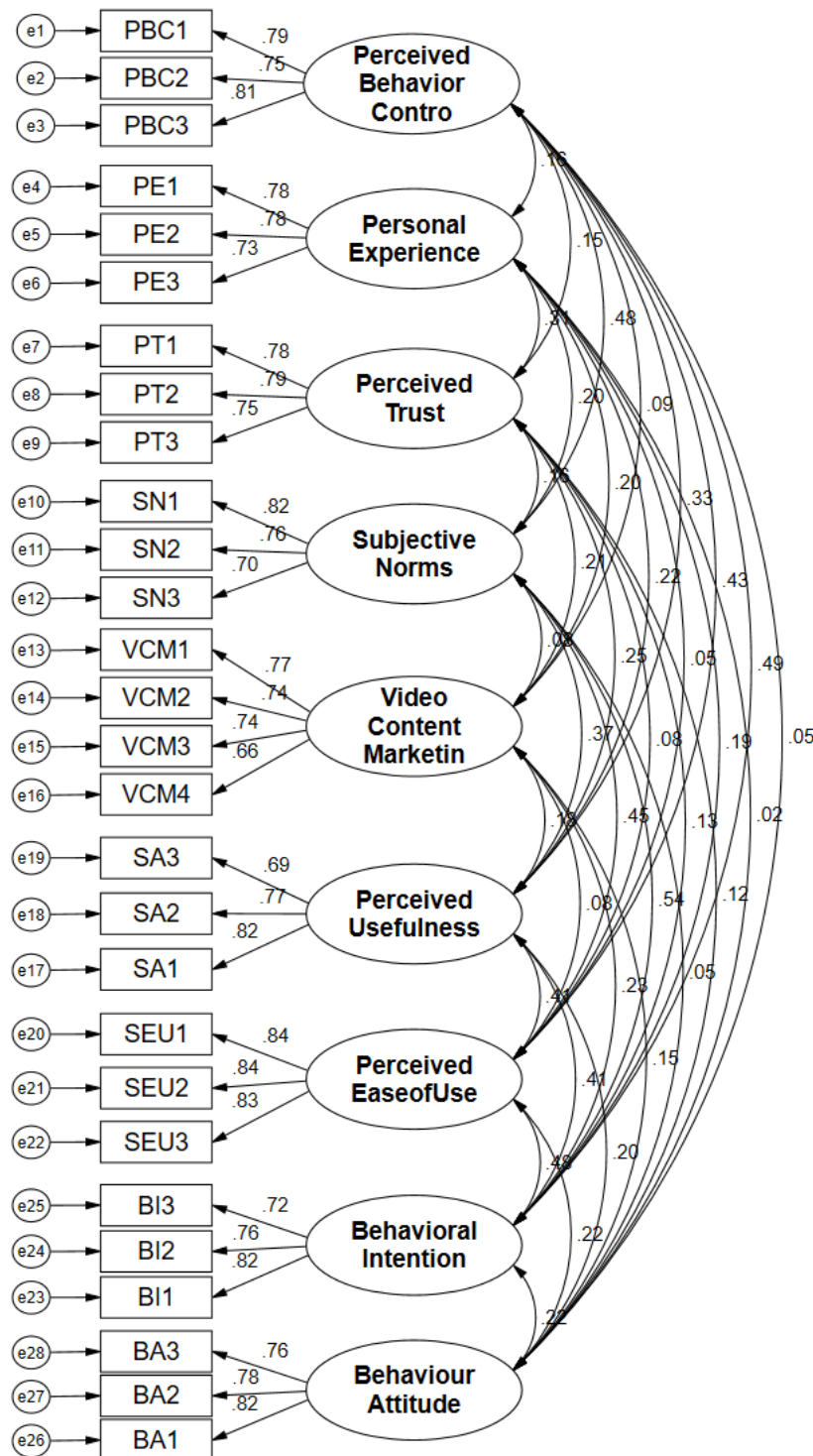


Figure 4.1 Confirmatory factor model of the overall scale

The fit of the structural equation model is an indicator that evaluates the degree of fit between the model and the actual observed data. Through the evaluation of fit, we can understand the fit of the model to the data (see Table 4.10).

Table 4.10 Model fit indexes for the overall scale

Indexes	Suggested values	Model indexes	Conformity
$\chi^2/\text{df}$	$1 < \chi^2/\text{df} < 5$	2.069	Conformity
RMSEA	$< 0.08$	0.035	Conformity
GFI	$> 0.8$	0.950	Conformity
CFI	$> 0.8$	0.967	Conformity
IFI	$> 0.8$	0.967	Conformity
TLI	$> 0.8$	0.961	Conformity
AGFI	$> 0.8$	0.935	Conformity

The fit indexes of the structural equation model are shown in the above table:  $\chi^2/\text{df}=2.069$ , which is less than 5; RMSEA=0.035 is less than 0.08; GFI=0.950, CFI=0.967, IFI=0.967, TLI=0.961, AGFI=0.935, which is greater than 0.8; according to the fit criteria of the table, the fit indexes of the structural equation model are all meet the requirements and are suitable for structural equation model analysis.

#### 4.2.5 Convergent validity test discriminant validity

Convergent validity refers to the degree of similarity of measurement results when different measurement methods are used to determine the same trait, i.e., different measurement methods should converge together in the determination of the same trait. Convergent validity means that the test indexes measuring the same potential trait (construct) will fall on the same common factor: this study tests convergent validity by construct reliability (C.R.) and average variance extracted (AVE), as suggested by T.S. Wing (2009, p. 145). The construct reliability is usually greater than 0.7 and the AVE is greater than 0.5 as a reference value for meeting the criteria.

Discriminant validity: A test has discriminant validity if it can be statistically demonstrated that indexes that are not supposed to be correlated with a preset construct are indeed not correlated with that construct. For example, if the theory of a test assumes that creativity and intelligence are significantly different, and there is no significant correlation between creativity scores and intelligence in the relevant test, then the test is considered to have good discriminant validity.

The factor loadings, construct reliability (C.R.) and average variance extracted (AVE) values for each variable observation of the overall scale are shown in the table. The factor loadings for each item are greater than 0.6, indicating high convergent validity, the construct reliability (C.R.) for each dimension is greater than 0.7 and the AVE is greater than 0.5 to meet the criterion, indicating good convergent validity of the scale in this study (see Table 4.11).



Table 4.11 Discriminant validity analysis

	1	2	3	4	5	6	7	8	9
Behavioral intention	0.766								
Perceived behavioral control	0.490	0.783							
Personal experience	0.195	0.158	0.766						
Behavioral attitude	0.220	0.054	0.02	0.788					
Perceived ease of Use	0.478	0.427	0.052	0.215	0.836				
Perceived usefulness	0.410	0.333	0.216	0.204	0.408	0.763			
Perceived Trust	0.131	0.149	0.307	0.120	0.083	0.254	0.776		
Subjective norms	0.545	0.484	0.205	0.051	0.446	0.368	0.157	0.761	
Video Content Marketing	0.230	0.086	0.197	0.154	0.085	0.176	0.208	0.080	0.729

From the above table, it can be seen that the square root of each dimension AVE is greater than the correlation coefficient between the dimensions, so it indicates that the scale has good discriminant validity.

#### 4.2.6 Structural equation model fit test

Structural Equation Modeling (SEM) is to establish the relationship model between multiple variables for parameter estimation and model fitting, so as to determine the causal relationship between variables and the influence mechanism between variables.

In SEM, goodness of fit test is an important index, which is used to test the suitability of the built model in the sample data. Commonly used goodness-of-fit indicators include Root Mean Square Error of Approximation Index (RMSEA for short), standardized Fit index (Comparative Fit Index, CFI) and Incremental Fit Index (IFI). Generally, RMSEA index is less than 0.08, CFI and IFI index is more than 0.90, which is considered as the standard of good model compliance.

For goodness of fit tests of structural equation models, specialized statistical analysis software can be used, such as AMOS, LISREL, et al. These software can perform parameter estimation, likelihood ratio test, residual analysis and other operations on the model to evaluate the suitability of the model.

In general, goodness of fit test is a very important index in structural equation model, which can reflect the quality of the model and guide researchers to further perfect and improve the model, so as to better explain the relationship and mechanism between variables (see Figure 4.2).

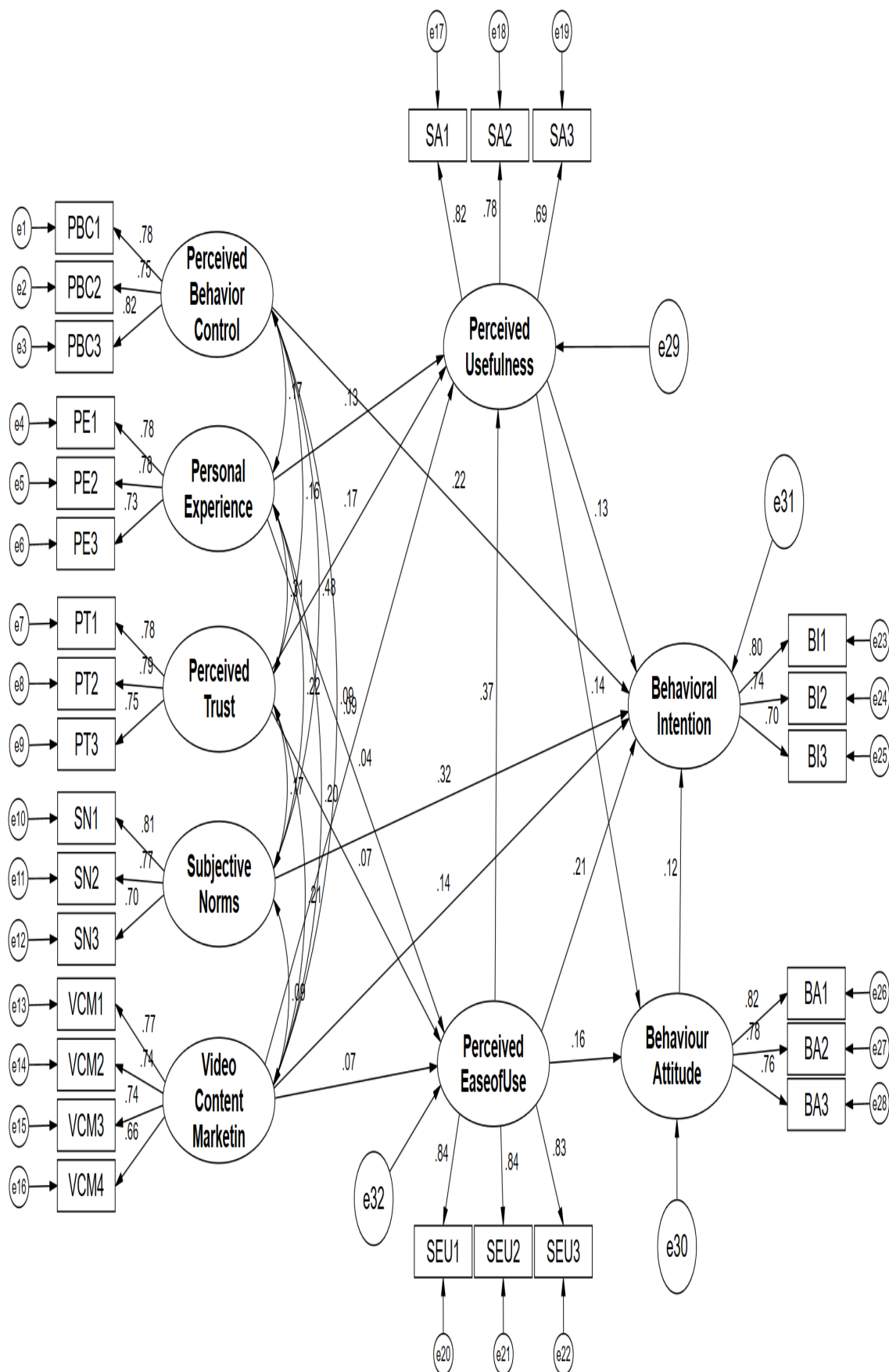


Figure 4.2 Results of structural equation model graph runs (initialization)

The structural equation model fit index is a measure to assess the degree of fit between the model and the actual observed data. Structural equation model fit indicators can provide quantitative assessment of model fit, and help researchers judge model fit, compare models and find problems in models, thus improving the explanatory power and predictive power of models (see Table 4.12).

Table 4.12 Structural equation model fit indexes (initialized)

Indexes	Suggested values	Model indexes	Conformity
$\chi^2/df$	$1 < \chi^2/df < 5$	2.717	Conformity
RMSEA	$< 0.08$	0.044	Conformity
GFI	$> 0.8$	0.935	Conformity
CFI	$> 0.8$	0.946	Conformity
IFI	$> 0.8$	0.946	Conformity
TLI	$> 0.8$	0.937	Conformity
AGFI	$> 0.8$	0.919	Conformity

The fit indexes of the structural equation model are shown in the above table:  $\chi^2/df=2.717$ , which is less than 5; RMSEA=0.044 is less than 0.08; GFI=0.935, CFI=0.946, IFI=0.946, TLI=0.937, AGFI=0.919, which is greater than 0.8; according to the fit criteria of the table, the structural equation model fitting indexes all meet the requirements and are suitable for structural equation model analysis.

Path analysis is a form of structural equation modeling. Path analysis generally uses the test method of regression analysis to test hypotheses, and uses mathematical statistical methods and principles to fit models, then compares the advantages and disadvantages of models, and finds the most suitable model (see Table 4.13).

Table 4.13 Path analysis among the variables of the initial model

	Regression path	$\beta$	b	S.E.	C.R.	P
Perceived ease of use	<-- Personal Experience	0.036	0.042	0.051	0.829	0.407
Perceived ease of use	<-- Perceived Trust	0.07	0.077	0.047	1.633	0.103
Perceived ease of use	<-- Video Content Marketing	0.069	0.102	0.061	1.677	0.094
Perceived usefulness	<-- Personal Experience	0.134	0.125	0.039	3.249	0.001
Perceived usefulness	<-- Perceived Trust	0.168	0.147	0.036	4.072	***
Perceived usefulness	<-- Perceived ease of use	0.375	0.298	0.031	9.724	***
Perceived usefulness	<-- Video Content Marketing	0.087	0.102	0.046	2.212	0.027
Behavioral attitude	<-- Perceived usefulness	0.144	0.204	0.064	3.176	0.001
Behavioral attitude	<-- Perceived ease of use	0.158	0.178	0.049	3.603	***
Behavioral Intentions	<-- Subjective norms	0.32	0.286	0.04	7.169	***
Behavioral Intentions	<-- Perceived usefulness	0.129	0.138	0.044	3.116	0.002
Behavioral Intentions	<-- Perceived ease of use	0.207	0.176	0.034	5.211	***
Behavioral Intentions	<-- Behavioral attitude	0.115	0.087	0.028	3.129	0.002
Behavioral Intentions	<-- Perceptual Behavioral Control	0.222	0.24	0.047	5.137	***
Behavioral Intentions	<-- Video Content Marketing	0.141	0.176	0.046	3.818	***

Note:  $\beta$ , standardized coefficient; b: non-standardized coefficient, \*\*\*,  $P < 0.001$

Based on the actual object explored by the model, the non-significant paths are to be deleted and the initial structural equation model is further revised (Ming-Lung Wu, 2010). Thus, the paths that are not significant in the initial structural equation model are deleted, and then the revised structural equation model is improved, and further calculated to obtain the final fit indexes of the revised model. According to the path analysis between the variables of the initial model, The three paths: video content marketing to perceived ease of use, perceived trust to perceived ease of use, and personal experience to perceived ease of use are not significant, so they need to be corrected (see Figure 4.3).

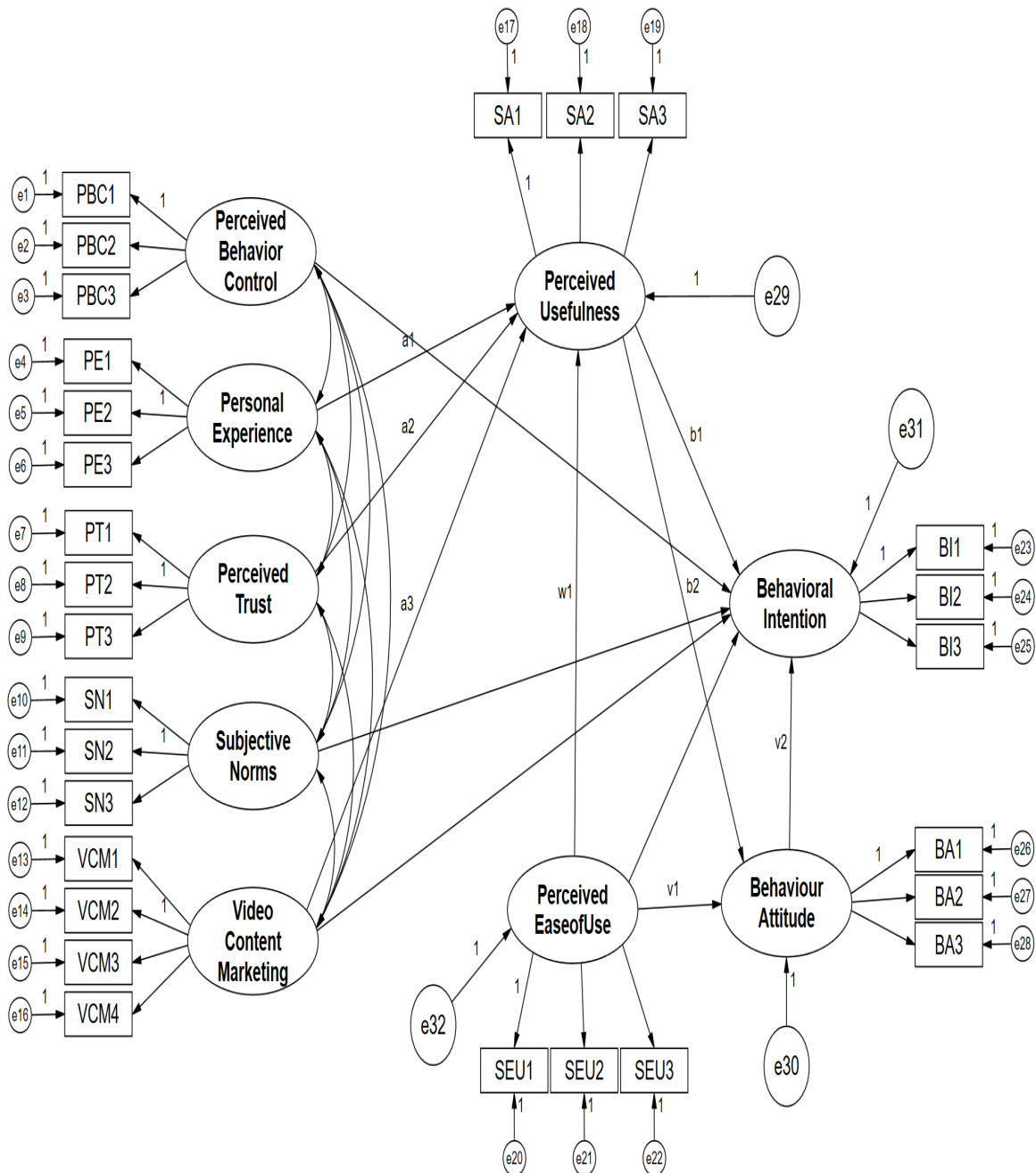


Figure 4.3 Results of structural equation model diagram runs (modified model)

According to the initial model operation results, the modified structural equation model fitting indexes are shown in Table 4.14.

Table 4.14 Structural equation model fit metrics (modified model)

Indexes	Suggested values	Model indexes	Conformity
$\chi^2/df$	$1 < \chi^2/df < 5$	2.724	Conformity
RMSEA	$< 0.08$	0.044	Conformity
GFI	$> 0.8$	0.935	Conformity
CFI	$> 0.8$	0.945	Conformity
IFI	$> 0.8$	0.945	Conformity
TLI	$> 0.8$	0.936	Conformity
AGFI	$> 0.8$	0.919	Conformity

The fit indexes of the structural equation model are shown in the above table:  $\chi^2/df=2.724$ , which is less than 5; RMSEA=0.044 is less than 0.08; GFI=0.935, CFI=0.945, IFI=0.945, TLI=0.936, AGFI=0.919, which is greater than 0.8; according to the fit criteria of the table, the structural equation model fitting indexes all meet the requirements and are suitable for structural equation model analysis.

#### 4.2.7 Path analysis

In this study, software AMOS 26.0 is used to conduct the structural equation model path analysis, which obtains the structural equation model path coefficient value and C.R. value. The path coefficient reflects the influence relationship and degree between variables, and the critical ratio (C.R.) can determine whether the regression coefficient is significant or not. It is generally considered that a C.R. value greater than or equal to 1.96 can indicate a significant difference at the 0.05 level of significance (Hou & Wen, 2005). The standardized regression coefficients and variance parameter estimates of the structural equation model in this study are shown in Table 4.15.

Table 4.15 Path coefficients between the variables

	Regression Path		$\beta$	b	S.E.	C.R.	P
Perceived usefulness	<--	Personal Experience	0.137	0.127	0.039	3.294	***
Perceived usefulness	<--	Perceived Trust	0.173	0.149	0.036	4.153	***
Perceived usefulness	<--	Perceived ease of use	0.382	0.301	0.03	9.898	***
Perceived usefulness	<--	Video Content Marketing	0.091	0.105	0.046	2.292	0.022
Behavioral attitude	<--	Perceived usefulness	0.144	0.207	0.064	3.229	0.001
Behavioral attitude	<--	Perceived ease of use	0.156	0.175	0.049	3.611	***

Behavioral Intentions	<--	Subjective norms	0.323	0.286	0.04	7.173	***
Behavioral Intentions	<--	Perceived usefulness	0.129	0.138	0.044	3.132	0.002
Behavioral Intentions	<--	Perceived ease of use	0.21	0.177	0.033	5.315	***
Behavioral Intentions	<--	Behavioral attitude	0.116	0.087	0.028	3.132	0.002
Behavioral Intentions	<--	Perceptual Behavioral Control	0.224	0.24	0.047	5.141	***
Behavioral Intentions	<--	Video Content Marketing	0.144	0.179	0.046	3.901	***

Note:  $\beta$ , standardized coefficient; b: non-standardized coefficient, \*\*\*,  $P < 0.001$

#### 4.2.7.1 Hypothesis testing of the relationship between personal experience and perceived usefulness

The path coefficient of personal experience on perceived usefulness is 0.137 and the C.R. value of 3.294 corresponds to a significance  $p < 0.001$ , therefore, personal experience has a significant positive effect on perceived usefulness, so the hypothesis is valid.

#### 4.2.7.2 Hypothesis validation of the relationship between perceived trust and perceived usefulness

The path coefficient of perceived trust on perceived usefulness is 0.173 and the C.R. value of 4.153 corresponds to a significance  $p < 0.001$ , therefore, perceived trust has a significant positive effect on perceived usefulness, so the hypothesis is valid.

#### 4.2.7.3 Hypothesis verification of the relationship between perceived ease of use and perceived usefulness

The path coefficient of perceived ease of use on perceived usefulness is 0.382 and the C.R. value is 9.898 corresponding to a significance  $p < 0.001$ , therefore, perceived ease of use has a significant positive effect on perceived usefulness, so the hypothesis is valid.

#### 4.2.7.4 Hypothesis validation of the relationship between video content marketing on perceived usefulness

The path coefficient of video content marketing on perceived usefulness is 0.091 and the C.R. value is 2.292 corresponding to a significance  $p < 0.05$ , therefore, video content marketing has a significant positive effect on perceived usefulness, so the hypothesis holds.

#### **4.2.7.5 Hypothesis testing of the relationship between perceived usefulness and behavioral attitudes**

The path coefficient of perceived usefulness on behavioral attitudes is 0.144 and the C.R. value is 3.229 corresponding to a significant  $P < 0.01$ , therefore, perceived usefulness has a significant positive effect on behavioral attitudes, so the hypothesis is valid.

#### **4.2.7.6 Hypothesis validation of the relationship between perceived ease of use and behavioral attitudes**

The path coefficient of perceived ease of use on behavioral attitudes is 0.156 and the C.R. value of 3.611 corresponds to a significant  $P < 0.001$ , therefore, perceived ease of use has a significant positive effect on behavioral attitudes, so the hypothesis is valid.

#### **4.2.7.7 Hypothesis testing of the relationship between subjective norms and behavioral intentions**

The path coefficient of subjective norms on behavioral intention is 0.323 and the C.R. value is 7.173 corresponding to a significant  $P < 0.001$ , therefore, the hypothesis is valid as subjective norms have a significant positive effect on behavioral intention.

#### **4.2.7.8 Hypothesis validation of the relationship between perceived usefulness and behavioral intention**

The path coefficient of perceived usefulness on behavioral intention is 0.129 and the C.R. value is 3.132 corresponding to a significant  $P < 0.01$ , therefore, perceived usefulness has a significant positive effect on behavioral intention, so the hypothesis is valid.

#### **4.2.7.9 Hypothesis validation of the relationship between perceived ease of use and behavioral intention**

The path coefficient of perceived ease of use on behavioral intention is 0.210 and the C.R. value is 5.135 corresponding to a significant  $P < 0.001$ , therefore, perceived ease of use has a significant positive effect on behavioral intention, so the hypothesis is valid.

#### **4.2.7.10 Hypothesis testing of the relationship between behavioral attitudes and behavioral intentions**

The path coefficient of behavioral attitude on behavioral intention is 0.116 and the C.R. value of 3.132 corresponds to a significant  $P < 0.01$ , therefore, the hypothesis is valid because behavioral attitude has a significant positive effect on behavioral intention.



#### **4.2.7.11 Hypothesis testing of the relationship between perceptual behavioral control on behavioral intention**

The path coefficient of perceptual behavioral control on behavioral intention is 0.224 and the C.R. value is 5.141 corresponding to a significant  $P < 0.001$ , therefore, perceptual behavioral control has a significant positive effect on behavioral intention, so the hypothesis is valid.

#### **4.2.7.12 Hypothesis validation of the relationship between video content marketing on behavioral intention**

The path coefficient of video content marketing on behavioral intention is 0.144 and the C.R. value of 3.091 corresponds to a significant  $P < 0.001$ , therefore, video content marketing has a significant positive effect on behavioral intention, so the hypothesis is valid.

### **4.2.8 Mediating effect test**

For mediating effect test, stepwise test, Bootstrap method, Sobel test and other methods are generally used. When using the stepwise test, it is assumed that the total effect of the independent variable on the dependent variable is  $c$ , the effect of the independent variable on the mediating variable is  $a$ , the effect of the mediating variable on the dependent variable is  $b$ , and the direct effect of the independent variable on the dependent variable is  $c'$ . First of all, the test coefficient  $c$  is significant in order to carry out the next step; if not significant, it indicates the presence of suppression effect and the test is stopped. Secondly, test the coefficients  $a$  and  $b$  respectively, if they are significant, then can into the next step, if at least one of them is not significant, then  $a$  and  $b$  should be tested with the help of Bootstrap method. If  $a$  and  $b$  are not significant that is, the mediating effect is not significant, only when  $a$  and  $b$  are significant can then go into the next step. Thirdly, test the coefficient  $c'$ , if  $c'$  is not significant, it means that it is a full mediation. If  $c'$  is significant, it is also needed to see whether the sign of  $a$  and  $b$  is the same as the sign of  $c'$ . If they are the same, it can be judged as a partial mediating effect, if they are different, means the existence of suppression effect.

The Bootstrap method can be used to directly test the presence of a mediating effect. The hypothesis for the direct test is  $H_0: ab=0$ . If the confidence interval derived from the test results contains 0, it means that there is no mediating effect.

According to the results of path analysis, the hypothesis test is valid. To explore whether there is a mediating effect in these significant paths, we run the Bootstrap method in AMOS 26.0, choosing 5000 replications with a 95% confidence interval criterion and tested by the bias correction method (see Table 4.16).

Table 4.16 Mediating effect test

Regression Path	Effective dos	SE	95% lower limit	95% cap	P
Personal experience → perceived usefulness → behavioral intention	0.018	0.01	0.003	0.043	0.009
Personal experience → perceived usefulness → behavioral intention	0.021	0.01	0.006	0.045	0.005
Personal experience → perceived usefulness → behavioral intention	0.015	0.01	0.001	0.042	0.041
Personal experience → perceived usefulness → behavioral attitude	0.018	0.01	0.003	0.043	0.009
Personal experience → perceived usefulness → behavioral attitude	0.021	0.01	0.006	0.045	0.005
Personal experience → perceived usefulness → behavioral attitude	0.015	0.01	0.001	0.042	0.041
Perceived ease of use → Perceived usefulness → Behavioral intention	0.042	0.01	0.01	0.079	0.01
Perceived ease of use → Perceived usefulness → Behavioral attitude	0.062	0.02	0.019	0.113	0.004
Perceived ease of use → Behavioral attitude → Behavioral intention	0.015	0.00	0.005	0.032	0.001

The above table is the test of mediating effect by bootstrap method, repeating the sample 5000 times and calculating the 95% confidence interval. From the results of the above table, we can see the 4 mediating paths, which the interval above and below the mediating path does not contain 0, the p-value is less than the significant level 0.05, the hypothesis is valid, the mediating effect is established. The interval above and below the mediating path contains 0, the p-value is greater than the significant level 0.05, the hypothesis does not hold, and the mediating effect does not exist.

1. personal experience → perceived usefulness → behavioral intention mediated path upper and lower intervals do not contain 0, the p-value is less than the significant level 0.01, so the hypothesis is valid and the mediating effect is established.

2. The upper and lower intervals of the personal experience → perceived usefulness → behavioral intention mediating path do not contain 0, and the p-value is less than the significant level 0.01, so the hypothesis is valid and the mediating effect is established.

3. The upper and lower intervals of the personal experience → perceived usefulness → behavioral intention mediating path do not contain 0, and the p-value is less than the significant level 0.05, so the hypothesis is valid and the mediating effect is established.

4. personal experience → perceived usefulness → behavioral attitude mediated path upper and lower intervals do not contain 0, p-value is less than the significant level 0.01, so the hypothesis is valid and the mediating effect is established.

5. The upper and lower intervals of the personal experience → perceived usefulness → behavioral attitude mediating path do not contain 0, and the p-value is less than the significant level 0.01, so the hypothesis is valid and the mediating effect is established.

6. personal experience → perceived usefulness → behavioral attitude mediated path upper and lower intervals do not contain 0, the p-value is less than the significant level 0.05, so the hypothesis is valid and the mediating effect is established.

7. perceived ease of use → perceived usefulness → behavioral intention mediated path upper and lower intervals do not contain 0, the p-value is less than the significant level 0.05, so the hypothesis is valid and the mediating effect is established.

8. perceived ease of use → perceived usefulness → behavioral attitude mediated path upper and lower intervals do not contain 0, the p-value is less than the significant level 0.01, so the hypothesis is valid and the mediating effect is established.

9. The upper and lower intervals of the perceived ease of use → behavioral attitude → behavioral intention mediating path do not contain 0, and the p-value is less than the significant level 0.01, so the hypothesis is valid and the mediating effect is established.

#### **4.2.9 Difference analysis**

T-test, also known as the student's t test, is mainly used for small samples (e.g.,  $n < 30$ ) with unknown overall standard deviation  $\sigma$  normal distribution. The t-test uses the theory of t-distribution to infer the difference in probability and thus compare whether the difference between two means is significant.

Analysis of variance (ANOVA) is the analysis of test data to test whether multiple normal overall means with equal variances are equal, and then determine whether the influence of each factor on the test index is significant, which can be distinguished into single factor ANOVA, two factor ANOVA and multi-factor ANOVA according to the number of conditions affecting the test index.

##### **4.2.9.1 Gender**

An independent samples t-test is used to test whether there are differences in perceived usefulness, perceived ease of use, subjective norms, perceptual behavioral control, personal experience, perceived trust, behavioral attitudes, behavioral intentions, and video content marketing among respondents of different genders.

There are no significant differences in subjective norms ( $t = -1.610$ ,  $p = 0.108 > 0.05$ ), perceptual behavioral control ( $t = 0.417$ ,  $p = 0.677 > 0.05$ ), personal experience ( $t = -0.094$ ,

$p=0.925>0.05$ ), behavioral attitude ( $t=-0.783$ ,  $p=0.434>0.05$ ), behavioral intention ( $t=-0.304$ ,  $p=0.761>0.05$ ), and video content marketing ( $t=-1.078$ ,  $p=0.281>0.05$ ). There are significant differences in perceived usefulness ( $t=-2.993$ ,  $p=0.003<0.01$ ), perceived ease of use ( $t=-2.093$ ,  $p=0.037<0.05$ ), and perceived trust ( $t=-4.010$ ,  $p=0.406<0.001$ ) among respondents of different genders. Women's scores are significantly higher than men's scores (see Table 4.17).

Table 4.17 Gender Differences

	Male		Female		t	P
	M	SD	M	SD		
Perceived usefulness	3.682	0.888	3.849	0.769	-2.993	0.003
Perceived ease of use	3.405	1.040	3.551	1.029	-2.093	0.037
Subjective norms	3.388	0.988	3.496	1.007	-1.610	0.108
Perceptual Behavioral Control	3.601	0.868	3.578	0.801	0.417	0.677
Personal Experience	3.469	0.887	3.474	0.920	-0.094	0.925
Perceived Trust	3.448	1.025	3.704	0.865	-4.010	0.000
Behavioral attitude	3.305	1.190	3.366	1.125	-0.783	0.434
Behavioral Intentions	3.825	0.904	3.843	0.864	-0.304	0.761
Video Content Marketing	4.017	0.778	4.072	0.747	-1.078	0.281

#### 4.2.9.2 Education

Single factor ANOVA is used to test whether there are differences in perceived usefulness, perceived ease of use, subjective norms, perceptual behavioral control, personal experience, perceived trust, behavioral attitudes, behavioral intentions, and video content marketing among respondents with different education levels.

There are no significant differences showed by respondents with different educational backgrounds in perceived usefulness ( $F=2.324$ ,  $p=0.074>0.05$ ), perceived ease of use ( $F=2.558$ ,  $p=0.054>0.05$ ), subjective norms ( $F=-1.610$ ,  $p=0.108>0.05$ ), personal experience ( $F=-0.823$ ,  $p=0.481>0.05$ ), perceived trust ( $F=1.389$ ,  $p=0.245>0.05$ ), behavioral attitudes ( $F=1.450$ ,  $p=0.227>0.05$ ), and video content marketing ( $F=2.091$ ,  $p=0.100>0.05$ ). There are significant differences in perceptual behavioral control ( $F=4.467$ ,  $p=0.004<0.05$ ) and behavioral intention ( $F=4.132$ ,  $p=0.006<0.01$ ) among respondents with different education levels (see Table 4.18).

Table 4.18 Education Differences

	High School and below	Professional training college	Undergraduate	Postgraduate	F	P
Perceived usefulness	3.59±0.827	3.758±0.857	3.807±0.821	3.863±0.813	2.324	0.074
Perceived ease of use	3.259±1.145	3.451±1.069	3.547±0.991	3.451±1.015	2.558	0.054
Subjective norms	3.308±1.107	3.441±1.003	3.489±0.971	3.255±0.968	1.483	0.218
Perceptual Behavioral Control	3.393±0.92	3.578±0.821	3.656±0.806	3.324±0.897	4.467	0.004
Personal Experience	3.353±0.998	3.476±0.83	3.493±0.906	3.539±0.998	0.823	0.481
Perceived Trust	3.61±1.03	3.611±0.885	3.542±0.979	3.863±0.657	1.389	0.245
Behavioral attitude	3.365±1.161	3.198±1.189	3.384±1.139	3.431±1.171	1.450	0.227
Behavioral Intentions	3.65±0.929	3.799±0.936	3.91±0.84	3.569±0.871	4.132	0.006
Video Content Marketing	3.97±0.923	3.987±0.784	4.099±0.708	3.897±0.749	2.091	0.100

#### **4.2.9.3 Income**

Single factor ANOVA is used to test whether there are differences in perceived usefulness, perceived ease of use, subjective norms, perceptual behavioral control, personal experience, perceived trust, behavioral attitude, behavioral intentions, and video content marketing among respondents with different incomes.

There is no significant difference in perceived usefulness, perceived usefulness ( $F = 1.100$ ,  $p = 0.348 > 0.05$ ), perceived ease of use ( $F=0.996$ ,  $p=0.394>0.05$ ), personal experience ( $F=0.856$ ,  $p=0.463>0.05$ ), perceived trust ( $F=1.988$ ,  $p=0.114> 0.05$ ). Respondents with different incomes differed in subjective norms ( $F=2.801$ ,  $p=0.039 <0.05$ ), perceptual behavioral control ( $F=3.794$ ,  $p=0.010 <0.05$ ), behavioral attitudes ( $F=2.942$ ,  $p=0.032 <0.05$ ), behavioral intentions ( $F=3.452$ ,  $p=0.016 <0.05$ ), and video content marketing ( $F= 4.138$ ,  $p=0.006 < 0.05$ ) on significant differences (see Table 4.19).

Table 4.19 Differences in income

	Less than 3,000 yuan	3,001-5,000 yuan	5,001-10,000 yuan	More than 10,001 yuan	F	P
Perceived usefulness	3.66±0.907	3.74±0.833	3.81±0.812	3.79±0.819	1.100	0.348
Perceived ease of use	3.41±1.114	3.54±1.022	3.52±1.05	3.4±0.978	0.996	0.394
Subjective norms	3.22±1.056	3.46±0.988	3.52±0.996	3.44±0.966	2.801	0.039
Perceptual Behavioral Control	3.38±0.866	3.55±0.779	3.66±0.845	3.64±0.828	3.794	0.010
Personal Experience	3.42±0.901	3.4±0.947	3.52±0.886	3.49±0.896	0.856	0.463
Perceived Trust	3.44±0.993	3.53±0.941	3.66±0.922	3.58±0.986	1.988	0.114
Behavioral attitude	3.12±1.166	3.27±1.178	3.36±1.129	3.49±1.16	2.942	0.032
Behavioral Intentions	3.63±0.994	3.82±0.859	3.85±0.873	3.95±0.835	3.452	0.016
Video Content Marketing	4.04±0.766	3.91±0.834	4.05±0.76	4.17±0.672	4.138	0.006

#### 4.2.10 Proportion analysis of multiple choice

The main purpose of purchasing pre-made food: time saving, easy cooking, delicious, nutritional health, sanitary clean, wide variety, expenditure saving and quality stability, and other multiple response set analysis.

“Saving time” accounts for 26.4%, “easy cooking” accounts for 29.30%, “delicious” accounts for 4.90%, “nutritional health” accounts for 6.4%, “sanitary clean” accounts for 7.10%, “wide variety” accounts for 16.30%, “expenditure saving and quality stability” accounts for 9.30%, and “other” accounts for 0.40% (see Table 4.20).

Table 4.20 Main purpose of purchasing pre-made food

Classification	Response		Percentage of cases
	Number of cases	Percentage	
Time saving	668	26.40%	76.30%
Easy cooking	740	29.30%	84.50%
Delicious	125	4.90%	14.30%
Nutritional health	161	6.40%	18.40%
Sanitary clean	180	7.10%	20.50%
Wide variety	411	16.30%	46.90%
Expenditure saving and quality stability	234	9.30%	26.70%
Other	10	0.40%	1.10%

A multiple response set analysis was conducted on the reasons for unwillingness of pre-made food: “poor taste”, “potential food safety problems”, “too many preservatives”, “brand distrusting”, “Price is too high”, “inconvenient purchase channel”, “single species variety”, and “other”, as shown in the following table: “Poor taste” accounts for 10.90%, “potential food safety problems” accounts for 28.70%, “too many preservatives” accounts for 19.90%, “brand distrusting” accounts for 11.40%, “Price is too high” accounts for 12.20%, “inconvenient purchase channel” accounts for 7.10%, “single species variety” accounts for 8.80%, “other” accounts for 1.10% (see Table 4.21).

Table 4.21 Reasons for unwillingness of pre-made food

	Response		Percentage of cases
	Number of cases	Percentage	
Poor taste	211	10.90%	25.40%
Potential food safety problems	553	28.70%	66.50%
Too many preservatives	384	19.90%	46.20%
Brand distrusting	219	11.40%	26.40%
Price is too high	235	12.20%	28.30%
Inconvenient purchase channels	136	7.10%	16.40%
Single species variety	169	8.80%	20.30%
Other	21	1.10%	2.50%



The views on the development of pre-made food are “hot development with optimistic prospects”, “just the hype of capital with pseudo-demand”, “different flavors of food in different places make it difficult to break through geographical restrictions”, “only a short-lived need for people during the epidemic”, and “other”, the results of which are shown in the following table: “Hot development with optimistic prospects” accounts for 29.20%, “just the hype of capital with pseudo-demand” accounts for 0.20%, “different flavors of food in different places make it difficult to break through geographical restrictions” accounts for 45.10%, “only a short-lived need for people during the epidemic” accounts for 23.10%, and “other” accounts for 2.40% (see Table 4.22).

Table 4.22 Views on the development of pre-made food

Classification	Response		Percentage of cases
	Number of cases	Percentage	
Hot development with optimistic prospects	349	29.20%	46.80%
Just the hype of capital with pseudo-demand	2	0.20%	0.30%
Different flavors of food in different places make it difficult to break through geographical restrictions	538	45.10%	72.20%
Only a short-lived need for people during the epidemic	276	23.10%	37.00%
Other	29	2.40%	3.90%

#### 4.2.11 Proportion analysis

##### 4.2.11.1 Analysis of the most common scenarios for ordering takeaway food

Work occasions accounts for 37.76%, family dinners accounts for 6.58%, friends dinners accounts for 2.72%, dinning alone accounts for 51.93% and other cases accounts for 1.02%.

##### 4.2.11.2 Cost per food purchase on the platform

Less than 20 yuan accounts for 12.59 %, 21 yuan to 50 yuan accounts for 70.18 %, 51 to 100 yuan accounts for 14.17 %, 101 yuan to 200 yuan accounts for 2.38 %, more than 200 yuan accounts for 0.68 %.

##### 4.2.11.3 Willingness to continue using takeaway platforms after normalization of epidemic prevention and control

The proportion of very reluctant to very willing (1 to 5 points) are 0.34%, 0.68%, 10.2%, 49.21%, and 39.57%, respectively, with an average of 4.27 points, indicating that respondents

are still willing to continue using the takeaway platform after the normalization of epidemic prevention and control.

#### **4.2.11.4 Willingness to buy pre-made food on takeaway platforms**

The proportion of those who chose “yes” is 59.66%, and the proportion of those who chose “no” is 40.34%.

#### **4.2.11.5 The impact of the epidemic on the willingness to purchase pre-made food**

The proportion of the willingness to purchase pre-made food increased by 40.25 %, the proportion of the willingness to purchase pre-made food decreased by 22.96 %, and the proportion of no impact is 36.79 %.

#### **4.2.11.6 The main purpose of purchasing pre-made food**

59.66 % of people are willing to buy pre-made food on the takeaway platform, and 76.10 % of them chose the “Time saving” option; the choice of “Easy cooking” accounts for 81.45 %. The proportion of choosing the “Delicious” option is 14.47 %; the proportion of “Nutritional health” option is 17.92 %; the proportion of “Sanitary clean” option is 20.13 %. The proportion of “Wide variety” is 45.91 %. The proportion of “Expenditure saving and quality stability” option is 24.53 %; other options accounts for 0.63 %, and those who chose other options considers that the pre-made food “could be stored for a long time”.

#### **4.2.11.7 Reasons for not wanting to choose pre-made food**

40.34% of people are reluctant to buy pre-made food on takeaway platforms, with 24.20% choosing the “Poor taste” option; 60.60% choosing the “Potential food safety problems” option; 42.40% choosing the “Too many preservatives” option; 25.89% choosing the “Brand distrusting” option; and 26.27% choosing the “Price is too high” option; 16.70% chose the option of “Inconvenient purchasing channels”; 20.26% chose the option of “Single species variety”; the proportion of choosing “other” option is 3.19%.

#### **4.2.11.8 Analysis of short video APP use behavior habits before and after the epidemic**

Compared with the time before the epidemic, after the normalization of epidemic prevention and control, 53.74% of people watching Tik Tok and other apps increased, 18.25% decreased, and 28.01% is little change.

Now people watch Tik Tok and other apps for one to two hours mostly, 32.09% of people choose “one hour”, 30.39% of people choose “two hours”, 24.26% of people choose “three

hours or more”, 9.86% of people choose “half an hour or less”, and 3.40% of people “hardly watch”.

Most people think it is because home isolation during the epidemic made them develop the habit of watching short video apps, with an average score of 3.6 (out of 5), of which 4.76% choose 1, 12.70% choose 2, 22.90% choose 3, 37.41% choose 4, and 5 points accounts for 22.22%.

#### 4.2.11.9 Analysis of shopping behavior in the process of using short video apps

Would you order food while watching short video apps such as Tik Tok? 13.61% of people choose “almost never buy”, 70.18% choose “buy occasionally”, and 16.21% choose “buy often”. Have you noticed the catering companies and cuisines you didn’t know about through the “web celebrity” on Tik Tok and other apps? The majority of people choose “yes”, with an average score of 3.96 (out of 5). Among them, 1.93% of people choose 1, 4.31% choose 2, 15.31% choose 3, 52.61% choose 4, and 25.85% choose 5. Would you try to buy food online through a video platform because of the “web celebrity” marketing? Most people choose yes, with an average score of 3.63 (out of 5). Among them, 4.76% of people choose 1, 8.05% chose 2, 27.32% choose 3, 39.12% choose 4, and 20.75% choose 5. What are the most influential factors for respondents to purchase food through video platforms? From Table 4.22, we can see that the most important influencing factors selected by respondents are food safety, followed by price and nutritional health, brand influence and convenience (see Table 4.23).

Table 4.23 The biggest influencing factors for purchasing food on video platforms

Variables	Sort by	Frequency	Percentage
Price	1	308	34.9
	2	167	18.9
	3	159	18
	4	118	13.4
	5	71	8
	6	34	3.9
	7	25	2.8
Product brand influence	1	87	9.9
	2	160	18.1
	3	167	18.9
	4	155	17.6
	5	197	22.3
	6	98	11.1
	7	18	2
“web celebrity” marketing	1	32	3.6
	2	68	7.7
	3	103	11.7
	4	103	11.7
	5	145	16.4
	6	180	20.4

	7	251	28.5
Food Safety	1	312	35.4
	2	135	15.3
	3	127	14.4
	4	175	19.8
	5	75	8.5
	6	49	5.6
	7	9	1
Contactless delivery	1	19	2.2
	2	40	4.5
	3	72	8.2
	4	90	10.2
	5	226	25.6
	6	234	26.5
	7	201	22.8
Nutritional Health	1	57	6.5
	2	224	25.4
	3	126	14.3
	4	93	10.5
	5	72	8.2
	6	222	25.2
	7	88	10
Convenience	1	67	7.6
	2	88	10
	3	128	14.5
	4	148	16.8
	5	96	10.9
	6	65	7.4
	7	290	32.9

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## **Chapter 5: Discussion, Conclusion and Recommendations**

This study attempts to integrate the planned behavior theory with the technology acceptance model, provide a model with better prediction of online catering consumption behavior, and explain the influencing factors of online catering consumption behavior in detail, so as to enhance our understanding of consumer online catering consumption behavior. The main contribution of this study is to empirically test the application of planned behavior theory and technology acceptance model in online catering consumption behavior.

This chapter is the conclusion section. First, the empirical research results of this study are summarized, analyzed and discussed in the context of previous studies. Then, the main theoretical contributions of this study are put forwards, and suggestions for applying the research results to management practice are proposed. Finally, this chapter analyzes the limitations of this study and points out the directions that can be further expanded in the future.

### **5.1 Discussion**

The results show that because of the relationship between the epidemic, people use mobile phones to watch videos for a lot longer than before the epidemic. Through mobile short videos, live broadcasts and other forms, they pay attention to the fact that it is not easy to know business information in daily life. Through video, they learn more about food and business related to introductions, and the probability of purchasing food by ordering during the video viewing process also increases. Therefore, video content marketing has a significant positive impact on perceived usefulness, and video content marketing has a significant positive impact on behavioral intention.

The algorithm of video APP is also improving day by day. The recommended video content is generally recommended according to the user's personality characteristics and hobbies. Whether the user is active search or passive recommendation, it is easier to understand the relevant content information. Therefore, video content marketing has a significant positive impact on perceived ease of use.

People rely on their existing experience to judge the usefulness of the system, because the previous shopping experience and the overall cognition of system security constitute the

individual's existing experience in judging the system, so personal experience has a significant positive impact on perceived usefulness and perceived ease of use.

Trust is a prerequisite for people to use APP for shopping. Because of perceived trust, people will use APP to search for the items they want to buy. Through the use of APP, they will perceive the usefulness and ease of use of APP. Therefore, perceived trust has a significant positive impact on perceived usefulness and perceived ease of use.

Perceived usefulness is an important factor of technology acceptance model, which is widely used in the field of information system research. When participants adopt mobile shopping methods and use mobile shopping systems, they involve interaction with information systems. When perceived usefulness is good, participants will feel that information systems can improve their efficiency, reduce effort costs and time costs, and gain benefits from them. In the context of mobile shopping, the perceived usefulness of participants is to perceive that the mobile shopping system can help complete the established shopping tasks and purchase the required goods quickly and easily. The mobile shopping system is considered to be efficient and useful and has a positive effect on participants. Therefore, participants will have positive emotions and attitudes towards the new shopping method of mobile shopping, forming a process of mutual promotion. From a positive point of view, the higher the participants perceived the usefulness of mobile shopping, the more positive their attitude towards mobile shopping behavior. Therefore, perceived usefulness has a significant positive impact on behavioral attitudes.

Similar to perceived usefulness, perceived ease of use is another important variable in the technology acceptance model. In the context of mobile shopping, when consumers use the APP, if they perceive that the APP is easy to use, the interface navigation is clear, the operation is smooth and there is no stop, they will be positive and optimistic about using the system for shopping. The advantage of mobile shopping is that it is not limited by time and space, and can be operated anytime and anywhere. If the perceived ease of use is high, this advantage will be further amplified. Therefore, perceived ease of use has a significant positive impact on behavioral attitudes;

subjective norms belong to a kind of social influence. As a member of social groups, human behavior is deeply influenced by social groups, and there is often a phenomenon of conformity. Individuals usually need to think about "whether others expect me to do this" before taking actions, and subjective norms have a restraining effect on individual behavior. New users of mobile shopping usually learn about this new way of shopping through the introduction and recommendation of relatives and friends around them. Consumers will project their trust in

relatives and friends to what they recommend. Therefore, when consumers perceive that others want me to take the view of mobile shopping behavior, they will have the intention of mobile shopping. In addition to relatives and friends, the wanton promotion of television and new media may also have an impact on consumers. Therefore, creating a good reputation has a good effect on promoting consumers' willingness to mobile shopping. Therefore, subjective norms have a significant positive impact on behavioral intention.

Perceptual behavior control is also a variable proposed by the theory of planned behavior. Many studies have confirmed its effect on behavioral intention. This study once again proves the effectiveness of the relationship between the two in the context of mobile shopping. Perceptual behavior control represents the individual's own judgment of his own independent behavior, that is, behavioral ability. The individual's own recognition that he can achieve a certain behavior is the antecedent of the individual's behavioral intention. In the context of mobile shopping, if consumers think they can complete the mobile shopping process operation independently, it is easier to generate mobile shopping intention. On the contrary, if consumers do not have the ability to complete the mobile shopping operation independently, or if they think they cannot learn to operate and have no confidence in completing the mobile shopping operation, they are not willing to carry out mobile shopping, that is, the willingness of mobile shopping is low. The hypothesis testing phase proves this inference. Therefore, perceptual behavior control has a significant positive impact on behavioral intention.

The relationship between behavioral attitude and behavioral intention is proposed by the technology acceptance model and the theory of planned behavior. The relationship between behavioral attitude and behavioral intention has been confirmed by several studies. This study re-validates this relationship in the context of mobile shopping. The attitude of consumers is a key variable in the field of marketing. Consumers with positive attitudes are more likely to have behavioral adoption intentions, because positive attitudes are usually supportive, acknowledging, and accepting attitudes, which are more likely to promote consumers' willingness to adopt behavior. On the contrary, the negative attitude is usually the attitude of resistance, rejection, opposition, disgust and so on. In the absence of special conditions, as a rational person, consumers will not be willing to adopt the behavior, because at this time, the behavior has no benefit to consumers, or cannot meet the needs of consumers. The various factors of the mobile shopping platform affect the consumer's attitude first and then affect the behavioral intention. Therefore, it is very important to grasp the consumer's attitude in promoting the consumer's willingness to adopt mobile shopping. Therefore, behavioral attitude has a significant positive impact on behavioral intention.



The indicators selected for the structural equation model fit test mainly include  $c2 / df$ , RMSEA, GFI, CFI, IFI, TLI, and AGFI. The research results show that the structural equation model assumed in this study has a high degree of fit and data fit. The results of this study provide some theoretical and practical implications, and the details and significance of these findings will be discussed in depth below.

### **5.1.1 People spend more time watching short videos than before the epidemic**

Compared with the time before the epidemic, 53.74 % of people watch more short videos, 32.09 % of people who watch short videos reached one hour a day, and 30.39 % reach two hours a day. Most of the people in the survey believe that they develop the habit of watching short videos during the epidemic (average score of 3.6 points, full score of 5 points).

70.18 % of people will occasionally order to buy food while watching short videos, and in the survey we found that consumers pay attention to the catering enterprises and food that they did not pay attention to before while watching short videos where “Internet celebrity” selling commodities, (average score 3.96 points, out of 5 points), and because of “Internet celebrity” selling commodities, they try to buy food online (average score 3.63 points, out of 5 points).

### **5.1.2 Consumers pay more attention to food safety and healthy nutrition factors in the post-epidemic era**

Consumers believe that the most important influencing factors for online food purchases are: from the respondents, the most important influencing factors are food safety, followed by nutritional health and price, brand influence and convenience. Therefore, we can see that consumers pay more attention to food safety and healthy nutrition factors in the post-epidemic era.

### **5.1.3 Female consumers are more willing to accept online food shopping**

From Table 4.16, we know that respondents of different genders have significant differences in perceived usefulness ( $t = -2.993$ ,  $p = 0.003 < 0.01$ ), perceived ease of use ( $t = -2.093$ ,  $p = 0.037 < 0.05$ ), and perceived trust ( $t = -4.010$ ,  $p = 0.406 < 0.001$ ). The score of women is significantly higher than that of men. It shows that female consumers are more willing to accept the use of the new system and prefer to buy food from apps.

### **5.1.4 There are significant differences in perceptual behavior control and behavioral intention among different educational backgrounds**

It can be seen from Table 4.17 that there are significant differences in perceptual behavioral control ( $F = 4.467$ ,  $p = 0.004 < 0.05$ ) and behavioral intention ( $F = 4.132$ ,  $p = 0.006 < 0.01$ ) among respondents with different educational backgrounds. The higher the education level, the more bound by the society and relatives and friends around. Therefore, highly educated people feel that they generally have to consider the impact on the surrounding people.

### **5.1.5 High-income groups have the greatest acceptance of video content marketing**

It can be seen from Table 4.18 that respondents with different incomes have significant differences in subjective norms ( $F = 2.801$ ,  $p = 0.039 < 0.05$ ), perceptual behavior control ( $F = 3.794$ ,  $p = 0.010 < 0.05$ ), behavioral attitude ( $F = 2.942$ ,  $p = 0.032 < 0.05$ ), behavioral intention ( $F = 3.452$ ,  $p = 0.016 < 0.05$ ), and video content marketing ( $F = 4.138$ ,  $p = 0.006 < 0.05$ ). Among them, high-income groups have the greatest acceptance of video content marketing (mean 4.138).

## **5.2 Conclusion and recommendations**

This study mainly uses questionnaires for quantitative research. By constructing structural equation model and difference research, there have been some major changes in food consumption behavior in the post-epidemic era. This study draws the following main conclusions and recommendations based on the final data analysis results of Chapter 4:

### **5.2.1 Increased demand for healthy diet**

Health became more of a topic of concern for consumers and people began to pay more attention to their diet and nutritional health. During the epidemic, some nutritionists and health professionals spread the concept of healthy eating more widely, which also led some consumers to pay more attention to healthy diet. As a result of the epidemic, consumers are more concerned about their own health, begin to understand the concept of healthy diet and alert themselves to the nutritional safety of their food and reduce their intake of unhealthy food.

Some nutritionists and health professionals are also actively promoting healthy diet and lifestyle through social media and other platforms, leading a new trend of healthy diet. This process has also boosted the development of the market and had a positive effect on the catering

industry. In addition, some experts say that the epidemic has also provides more opportunities for people to exercise, so that people can begin to understand their physical health rationally. In view of the high correlation between highly educated people's perceptual control behavior and behavioral intention, we can specially make some health content marketing videos for highly educated people, and accurately push them to highly educated people, so as to improve the brand perception of highly educated people.

Therefore, healthy diet has become a topic of greater concern for consumers, which is an opportunity and a challenge for catering enterprises. Catering enterprises need to pay attention to the trend of healthy diet, and timely launch more healthy and nutritious products to meet the needs of customers. At the same time, catering enterprises also need to strengthen food hygiene management and safety assurance to enhance consumers' trust and recognition of products, as a results, improve market competitiveness.

### **5.2.2 “Contactless delivery” will be popularized in the post-epidemic era**

As the restaurant industry was hit hard during the epidemic, some restaurants began adding take-out, packaged and delivery services. The huge increase in demand for take-out and delivery services during the course of the epidemic also contributed to the acceleration of new retail and smart delivery technologies by technology companies.

With the help of technology, take-out and delivery services for food service companies can operate more efficiently. For example, the emergence of products such as smart delivery robots and unmanned delivery vehicles has led to greater changes in the operational processes of the catering industry. With these innovative technologies, caterers can better control operating costs and provide faster and more accurate delivery services, enabling consumers to experience better service quality.

During the epidemic, many catering enterprises were forced to move towards a “contactless” business model, which has also promoted the digital transformation process of contact technology, logistics and catering enterprises. With trends such as unmanned restaurants, smart ordering systems and virtual menus set to continue in the future, catering enterprises need to keep up with the developments of market and strengthen digital transformation to bring more convenient and efficient services to consumers.

### **5.2.3 Pre-made food become a breakthrough for digital transformation of catering enterprises**

Due to the requirements of social distance and home isolation during an epidemic, some consumers began to order food and fresh food online. This also pushes the fields of e-commerce and logistics deeper to a deeper development.

Pre-made food have a space that cannot be ignored in the digital transformation of catering enterprises. With the improvement of consumers' demand for health, convenience and speed, prefabricated dishes are gradually becoming an important market trend. In addition, with the development of science and technology and the acceleration of digital transformation, Pre-made food have also become part of the digital transformation of catering enterprises.

First, Pre-made food can improve the production efficiency and operation efficiency of catering enterprises, reduce costs and enhance the competitiveness of enterprises. Prefabricated vegetables can be processed and packaged by means of food industry assembly lines to improve production efficiency. Prefabricated dishes can also achieve standardized production, reduce process risks, ensure product quality and taste stability, and improve consumer satisfaction.

Second, pre-made food can improve the digitization of catering enterprises. With the acceleration of digital transformation, catering enterprises need more digital and intelligent management methods. The process of pre-made food production and sales can be realized using digital and intelligent technologies, including production planning, inventory management, order tracking and distribution. These technologies can help companies optimize operational processes, fine tune management and reduce costs.

Finally, pre-made food can also provide more personalized services. Caterers can offer a variety of pre-made food according to consumers' needs and tastes, and can even customize them according to consumers' preferences. Through consumer feedback and big data analysis, caterers can continuously optimize the quality and taste of their products and provide better services.

### **5.2.4 Video content marketing becomes a key point of digital transformation for the catering industry**

Due to the blow to the catering industry during the epidemic, some catering enterprises began to promote upgrading and innovation. The short video platform has become a new outlet for the food and catering industry. Many online celebrities introduce food and cooking through short videos, which has promoted the rapid recovery and development of the catering industry. This

has also prompted many catering enterprises to pay more attention to marketing methods and network promotion to meet the new needs of consumers.

Video content marketing is an important part of the digital transformation of catering enterprises. As consumers are more and more inclined to watch video, video has become an important channel for digital marketing of catering enterprises. Through video content marketing, catering enterprises can achieve multiple goals such as brand promotion, user growth and sales growth.

First, video content marketing can enhance brand awareness and reputation. By making exquisite food videos, catering enterprises can show their own special dishes and services and improve brand awareness. At the same time, the video content can also help catering enterprises to establish brand image and improve consumers' trust and loyalty to the brand. In particular, it can enhance the brand awareness of high-income people and enhance the "healthy food" factor in brand awareness in video marketing, thereby increasing the recognition of corporate brands by high-income people.

Second, video content marketing can increase user growth and sales growth. Through video content marketing, catering enterprises can attract more potential consumers and promote their consumption in catering enterprises. Video content can show the dishes, services and store environment of catering enterprises, so that potential consumers can better understand catering enterprises and improve their purchase intention. In particular, marketing videos relates to dietary health or cooking skills for female consumers can be produced to increase the viscosity of female consumers for catering enterprises.

Finally, video content marketing can increase consumer participation. Catering enterprises can attract more consumers to participate in the video production process by making interesting, interesting / easy-to-make food videos. This can not only increase consumer participation in catering enterprises, but also help catering enterprises to better understand consumer needs and feedback, improve the quality of products and services, and thus enhance consumer satisfaction.

Video content marketing plays a vital role in the digital transformation of catering enterprises, which helps catering enterprises achieve brand promotion, user growth and sales growth.

All of these trends show that major changes in food consumption behavior have occurred in the post-epidemic era, and that catering enterprises will continue to innovate and upgrade in the future to meet the changing needs of the market.

### **5.3 Lack of the research**

For reasons such as the impact of the epidemic, this study only used an online survey system to research the respondents. Subsequent offline qualitative interviews can be conducted for the quantitative analysis part of this study, and a hybrid research approach can be used to improve this study. In view of the research direction originally envisioned in this study, the catering behavior in the post-epidemic era is further discussed.

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## **Chapter 6: Outlook**

### **6.1 Future research directions**

From an academic point of view, follow-up research can focus on the digital transformation of catering enterprises from the following aspects:

#### **6.1.1 Research on the trend of digital transformation of catering enterprises**

Many studies have explored different trends in the digital transformation of catering enterprises. For example, some studies have shown that catering companies are increasingly focusing on the application of technologies such as artificial intelligence, the Internet of Things, and mobile payments to improve efficiency and optimize services. In addition, the use of digital marketing, continuous intelligent automation, entertainment, culture and other elements is also a new direction and trend in digital transformation.

#### **6.1.2 Research on the path of digital transformation of catering enterprises**

In terms of digital transformation, the researchers also discussed the path of digital transformation of catering enterprises. These studies emphasize the combination of the correct digital process and the companies' characteristics, and emphasize the digital business milestone and guidance direction to formulate a digital transformation strategy suitable for themselves.

#### **6.1.3 Research on digital transformation strategy of catering industry**

The strategic research on the digital transformation of the catering industry is also a key research direction. Many studies have proposed corresponding strategies, such as establishing new ideas for change in the digital age, strengthening the application of digital technology, cross-border integration, focusing on organizational change, and developing more distinctive products and services.



## **6.2 Management implications**

### **6.2.1 The significance of digital transformation of catering enterprises**

Philip Kotler said, “market changes faster than marketing”, “Within five years, if you’re in the same business you are in now, you’re going to be out of business” (Cao et al., 2017). The enlightenment of the digital transformation of catering enterprises in the future is not only more and more attention, but also has become the inevitable trend of the development of catering enterprises. For catering enterprises, digital transformation can improve business efficiency, reduce costs, optimize service quality, increase customer stickiness, improve market competitiveness et al.

This is an era of coexistence of transformation and change, digital transformation, what to turn, where to turn, how to turn? Internet+, what to add, where to add, how to add?

The development of many concepts in management is closely related to practical problems in the context of the big era. Based on “problem-oriented” thinking, we reflect on the confusion of management practice, combine practical experience and theoretical research, and form management theories applicable to enterprise management.

In any era, the real valuable theories are the highlighting and reflection of the problems of the times. The post-epidemic era is the era of digitalization, and enterprises are facing the problem of transformation and upgrading, the most urgent problem is how to realize the transformation of “Internet+”.

Digital transformation has become the only way for enterprise development. The future success of enterprises is inseparable from digital transformation. In traditional industries, some enterprises fail to carry out digital transformation due to ‘change panic’, which may lead to the risk of bankruptcy. The core reason for the rise of the wave of digital marketing is that today’s social environment is undergoing tremendous changes: digitization is constantly covering every corner of modern society, especially in the commercial field. The rise of new technologies and changes in consumer demand have made consumer-oriented enterprises begin to accelerate their digital transformation and move towards the future of business. The importance of digital transformation in business is becoming more and more prominent. Digital transformation helps enterprises better adapt to the trend of globalization, intelligence and networking, and realize the transformation from “industrial economy” to “digital economy”. Digital transformation is not only the demand of enterprise, but also the trend of market and consumers.

For enterprises, digital transformation needs to start from several aspects, including talent training, technology research and development, intelligent management, et al. The most important of them is to formulate the strategies and plans for digital transformation to clarify the goals and paths of digital transformation. At the same time, enterprises should pay attention to the construction of digital culture, strengthen the training of employees' digital literacy and digital awareness, and provide talent guarantee for digital transformation.

Digital transformation is the inevitable trend of the future development of catering enterprises. Only by constantly innovating and applying digital technology can we stand out in the fierce market competition.

### **6.2.2 The strategy of digital transformation of catering enterprises**

In the process of digital transformation, catering enterprises can consider the following strategies:

#### **6.2.2.1 Build a complete digital platform**

Establishing a complete digital platform, including an Internet ordering platform, a social media marketing platform, and an intelligent payment system, can improve user experience and satisfaction. Establishing a perfect digital platform is an effective way to improve user experience and satisfaction. Digital platform can include Internet ordering platform, social media marketing platform and intelligent payment system, et al.

##### **1. Internet ordering platform**

With the continuous development of Internet technology, the rise of Internet ordering platforms has become an irreversible trend in the catering industry. Internet ordering platform can conveniently allow consumers to order food online, saving consumers' time, improving service efficiency and shortening the waiting time in line at restaurants. In addition, consumers can choose their own dishes and flavors according to their own tastes and needs, so as to achieve the effect of personalized ordering. After the meal is completed, consumers can evaluate it on the platform, providing the restaurant with feedback and opportunities for improvement.

##### **2. Social media marketing platforms**

Social media marketing platform can help catering enterprises enhance brand awareness and reputation. Through the social media platform, catering enterprises can display dishes, promote features, monitor user feedback, et al. In addition, social media platforms can also accurately push advertisements according to users' interests and needs to improve marketing

effectiveness. At the same time, consumers can also interact with restaurants through social media platforms to share food experiences and form word-of-mouth marketing effects.

### 3.Intelligent payment system

Intelligent payment system can improve the service level and user experience of catering enterprises. Consumers can pay online through mobile apps or code scanning to improve the speed and convenience of payment. In addition, the intelligent payment system can also provide points, coupons and other preferential services to increase user loyalty and satisfaction. For catering enterprises, intelligent payment system can also provide payment data analysis, understand customer payment behavior and needs, and further optimize service and marketing strategies.

Establishing a perfect digital platform can improve user experience and satisfaction. Digital means such as Internet ordering platform, social media marketing platform and intelligent payment system can bring more business opportunities and development opportunities for catering enterprises.

#### **6.2.2.2 Digital marketing through data**

Through data analysis to understand market demand, fine management in production, can be based on customer preferences and historical order data to optimize the food supply and inventory management.

Digital marketing is to realize the interaction and communication with consumers, marketing promotion, brand building and other activities through the Internet and digital technology. In the catering industry, digital marketing has become an important means for enterprises to expand the market, improve marketing efficiency and brand image. There are various digital marketing methods, including social media marketing, search engine optimization (SEO), search engine marketing (SEM), e-mail marketing, content marketing, data analysis, et al., which need to be selected according to the actual situation of the enterprise.

For the digital marketing of catering enterprises, the following strategies can be adopted:

1.Establish professional brand image: Catering enterprises should pay attention to the establishment of professional brand image. The corporate image and special dishes can be displayed through social media, website and WeChat public accounts and video numbers.

2.Guiding consumers to share: Through excellent word-of-mouth marketing and interactive marketing methods, consumers are guided to share catering services and products, thus creating more effective communication and drainage.

3.Strengthen brand attention: Enhance your company's website traffic and brand exposure through search engine marketing (SEM) and search engine optimization (SEO), et al.

4.In-depth data analysis: Through in-depth analysis of customer data, consumption habits and feedback, we find new marketing tools and opportunities to improve service quality.

### **6.2.2.3 Explore new business models**

Such as unmanned restaurants, smart restaurants, et al., rely on technical means to increase turnover. With the continuous development of science and technology, the business model of the catering industry is also constantly innovating and exploring. In exploring new business models, unmanned restaurants and smart restaurants have become hot topics in the industry. The following will explain the two business models separately.

#### **1.Unmanned restaurants**

Unmanned restaurant is a new catering mode, which realizes unattended catering service through artificial intelligence and automation equipment. Consumers can complete the whole dining process through self-service ordering, self-service dining and self-service payment. Unmanned restaurants can greatly improve service efficiency and save labor costs, while also providing a more personalized service experience, which is welcomed by more and more consumers. At present, many unmanned restaurants have opened on the market and achieved certain commercial success. However, due to technical limitations and people's different views on the degree of automation, the popularization and commercialization of unmanned restaurants still face some challenges.

#### **2.Smart Restaurant**

Smart restaurant is a catering mode that focuses on information technology application and intelligent management. It integrates and optimizes catering services through digital means. Smart restaurants can use big data and artificial intelligence technology to analyze customers' catering preferences and consumption habits, and provide more personalized service experience. The smart restaurant can also integrate multiple catering services to improve service efficiency and reduce costs. For example, through online ordering and smart menus, consumers can easily browse restaurant dishes and price information while also being able to pay online. Smart restaurants can meet the growing personalized needs of consumers and improve the competitiveness and market share of enterprises.

In general, unmanned restaurants and smart restaurants are emerging business models in the catering industry and play an important role in using technical means to enhance commercial

value. However, these two business models also face some difficulties and challenges, which need to be explored and improved in the process of practice.

### **6.2.3 The significance of the existence of pre-made food in the digital transformation of catering enterprises**

Pre-made are of great significance in the digital transformation of catering enterprises. They can help catering enterprises reduce costs, improve efficiency and meet customer needs. The following is the specific significance of pre-made food in digital transformation:

#### **1. Cost reduction**

Pre-made food refer to semi-finished or finished products made in advance, which can help catering enterprises save some manpower, time and material costs in the production process. Especially in the digital age, pre-made food can be combined with digital warehouse and supply chain management system to realize the automation and informatization of production scheduling and effectively reduce costs.

#### **2. Improve efficiency**

The addition of pre-made food can improve the production efficiency of catering enterprises, especially the production and sales during peak hours, which can save the production time of catering enterprises and improve the service speed and efficiency. In addition, the application of digital technology, such as the use of intelligent service robots, can provide customers with personalized food recommendations during the dining process to further improve efficiency.

#### **3. Meet consumer needs**

Pre-made food can meet consumers' fast, convenient and healthy catering needs. Through pre-packed processing such as processing and seasoning, pre-made food can not only meet consumers' needs for taste, but also increase nutritional value. At the same time, because pre-made food can ensure the stability and quality of dishes, they can better meet consumers' demand for quality.

#### **4. Promote innovation**

Pre-made food bring new business models and innovative ideas to catering enterprises. By combining with other technologies such as induction furnace, 3D printing and robotics, you can create more unique, innovative and high value-added dishes. Such dishes can not only meet the needs of young consumers for fashion and novelty, but also increase the competitiveness of the brand.

The significance of pre-made food in the digital transformation of catering enterprises is multifaceted. It can help catering enterprises reduce costs, improve efficiency, meet consumer demand and promote innovation. Therefore, in the catering industry in the digital age, pre-made food have become a trend in the development of catering enterprises.

#### **6.2.4 Digital marketing mode of pre-made food**

With the advent of the digital era, the pre-made food industry has gradually begun to transform to digital marketing. The following are the ways in which pre-made food in digital marketing:

##### **1.E-commerce platform**

Prep-made food enterprises can build their own online sales channels through e-commerce platforms to provide consumers with more convenient services such as purchase and payment. For example, e-commerce platforms such as Jingdong, Taobao, and Tik Tok have started to provide sales channels for pre-made food.

##### **2.Mobile APP**

In the future, pre-made food enterprises can use mobile applications for product sales and promotion. Users can not only understand the production and sales information of pre-made food through APP, but also order purchase and participate in interactive activities. For example, APPs on platforms such as Meituan takeaway and hungry have already had pre-made food product lines.

##### **3.Social media**

pre-made food enterprises can use social media, such as titok, Weibo, WeChat, Red and other platforms to promote and promote products on social media. On social media, enterprises can not only publish product information, but also interact and communicate with consumers to increase consumer stickiness.

##### **4.Data analysis**

pre-made food enterprises can guide the formulation of digital marketing strategies through data analysis. Through the analysis of consumer demand, taste preference, purchase behavior and other information, pre-made food enterprises can better understand the market demand and product optimization direction, and then formulate more effective marketing strategies.

In a word, the pre-made food industry has broad development prospects in digital marketing. Enterprises can choose suitable digital marketing methods according to their own situation, and inject new impetus into the development of the pre-made food industry.

### **6.2.5 The application of video content marketing in catering enterprises in the post-epidemic era**

Short video marketing has become a new way to stimulate consumption in the post-epidemic era. After the COVID-19 prevention entered the normalization, independent short video platforms began to integrate for the purpose of marketing, forming a multi-form short video marketing type.

#### **1.Series marketing**

The series marketing type of short video refers to the series marketing activities of short video around a product or service through information advertising rendering, native content creation and brand strategy adjustment. This marketing method shifts the focus of short video marketing to user interaction and communication, arousing consumers' interest in the brand, so as to achieve the purpose of brand promotion to product and service marketing. The advantages of this marketing method are mainly reflected in the official intervention of the brand, making the product or service more authoritative, opening up the communication and trust channels between users and products or services, thus enhancing the loyalty and recognition of users to the brand.

#### **2.Traffic marketing**

Traffic marketing is essentially a way to stimulate consumers' emotional resonance and purchase desire by continuously gathering user volume, obtaining user characteristics, generating secondary communication. On the basis of clarifying the motivation and influencing factors of short video users' behavior, this marketing method can more accurately match products and services with users, and use traffic to gather large and willing users in a short time, which not only enhances the user's experience, but also conforms to the user's consumption decision under the "conformity effect" and accelerates the sales of products or services.

#### **3.Knowledge marketing**

Knowledge marketing is a way to provide content products to meet users' knowledge needs, which are paid by users and earn returns in virtual space.

Under the multi-form effects of series marketing, traffic marketing and knowledge marketing, short video marketing in the post-epidemic era presents more complex marketing problems in the aspects of short video creators' main content creation, follow-up matching of marketing products or marketing services, spatial expansion of marketing environment and realization of web celebrity traffic.

To sum up, the optimization of short video marketing mode should start from the following aspects: based on content marketing, integrating short video creator strategy and brand strategy layout, and constantly evolving short video marketing from a single marketing mode to a diversified marketing mode; using the readability and image of short video content, adjust the acceptance of short video marketing content, and stimulate consumers' emotional mobilization and purchase desire.

Catering enterprises should carry out commercial short video content production layout around the traffic economy, optimize the pre-sale process, in-sale guarantee and after-sale service links of short video e-commerce, and improve the conversion rate from users to consumers by testing traffic, guiding traffic, expanding traffic and other traffic coverage methods. With the help of cultivating users' web celebrity, we can solve the problems of short video creator' lack of distinctiveness and poor secondary communication effect, fundamentally promote the consumption transformation of short video marketing products or services, stimulate the innovation consciousness and value guidance of short video creators, and promote the development of short video industry based on marketing.

### **6.2.6 Marketing strategies in the post-pandemic era**

As a result of this uncertainty in the post-pandemic era, the challenges facing companies in the future marketing environment will become more complex and diverse. In this case, the adoption of effective marketing strategy for the survival and development of enterprises is very important. Here are some post-pandemic marketing strategies:

1. Emphasize the value of products and services: Consumers pay more attention to practical value and quality when purchasing products or services. Therefore, enterprises should emphasize the actual value of their products and services to provide consumers with high quality and cost-effective products and services when formulating marketing strategies. In the face of rising consumer expectations, enterprises really need to emphasize the value of products and services and provide high-quality, cost-effective products and services. Here are some specific suggestions for this problem:

First, provide useful information to consumers. In marketing activities, enterprises should provide consumers with useful information and solutions to problems, rather than just over-marketing their products or services. By providing useful information, businesses can build trust and relationships with consumers.



Second, join the sense of social responsibility. In the design and development of products or services, enterprises should consider social responsibility to ensure that the impact of their products or services on the environment and society is minimized as far as possible. This can not only enhance the reputation of the company, but also satisfy consumers' expectations of social responsibility.

Third, attach importance to the quality of products and services. The quality of products and services is an important standard for consumers to judge the value of enterprises. In order to improve the quality of products and services, enterprises should establish strict quality standards, and carry out quality control and monitoring.

Fourth, provide high-quality customer service: enterprises should provide high-quality customer service, including timely response to customer inquiries and always pay attention to customer needs. By providing excellent customer service, a business can increase customer loyalty and improve its reputation.

In short, enterprises should emphasize the actual value of products and services when developing marketing strategies. While providing high-quality and cost-effective products and services, enterprises should also consider their interests and image from the perspective of social responsibility and customer service.

2. Use digital marketing: During the pandemic, online transactions and consumption have grown rapidly, and digital marketing has become an effective way for enterprises to win market share. In the post-pandemic era, digital marketing will become an important means for enterprises to gain traffic, increase sales and cultivate customer loyalty.

With online transactions and consumption growing rapidly during the pandemic, digital marketing has become an effective way for companies to win market share. In the post-pandemic era, digital marketing will become an important means for enterprises to gain traffic, increase sales and cultivate customer loyalty. To solve this problem, here are some effective ways to use digital marketing:

First, social media marketing. Social media has become an integral part of enterprise digital marketing. By using social media, group marketing, content marketing and other means, customers can be attracted to the enterprise pipeline for transactions.

Second, search engine optimization (SEO). Businesses improve their accessibility in search engines by using SEO techniques to improve the ranking of their websites, applications, content, et al. Through the use of SEO techniques, companies can introduce target customers into their sales funnel and promote brand awareness.

Third, SMS marketing. While SMS marketing has been around for years, its effects have not been forgotten by consumers. By sending coupons, promotions, et al. to consumers and offering some incentive for them to respond, companies can maximize response and conversion rates.

Fourth, content marketing. Content marketing is about engaging and keeping new and existing customers interacting with the business by producing valuable, relevant, and consistent content. By crafting compelling blog posts, white researchs, videos and pictures, companies can build trust and loyalty among their customers.

In short, digital marketing is an effective means for enterprises to gain traffic, increase sales and cultivate customer loyalty, including social media, search engine optimization, email, content marketing and other forms.

3. Pay attention to brand image building: the position of brand image in the eyes of consumers can not be ignored. In the post-epidemic era, enterprises should focus on building brand image and build consumers' trust in enterprises by providing products and services with a sense of social responsibility, humanized characteristics and public interest.

In the post-epidemic era, enterprises should focus on building brand image and build consumers' trust in enterprises by providing products and services with a sense of social responsibility, humanized characteristics and public interest. Here are some effective ways to focus on brand image:

First, determine the right brand positioning. Brand positioning is the first step for an enterprise to establish its own brand image in the market. An enterprise should determine its brand's target market orientation, attribute characteristics, differentiation strategy and so on. This can let consumers know the target customers of the enterprise, and establish a better foundation for the brand structure.

Second, establish a sense of social responsibility. Enterprises should actively participate in social public welfare undertakings, improve the good character of brand image. Through supporting environmental protection, charitable donations and community activities, the company conveys its serious attitude towards social responsibility and builds the public's trust in the brand.

Third, provide personalized service. In the process of brand image building, enterprises should listen to the needs of consumers and pay attention to the humanized design of products and services. For example, make products more interactive with customers, provide more crisis services, increase personalized customized services, et al., so as to arouse customers' aesthetic sense and emotional resonance for the brand.

Fourth, enterprises should focus on contributing to the public interest. For example, to launch environmental protection products, create sustainable development projects, build green energy, et al., better reflect the corporate social responsibility, and strengthen the credibility and value of the brand.

In a word, paying attention to brand image building is an important factor for the development of enterprises, which can be effectively constructed through brand positioning, social responsibility, humanized characteristics and public welfare significance.

4. Pay attention to social media marketing: The popularity and wide application of social media provide great marketing opportunities for enterprises. In the post-pandemic era, enterprises should pay attention to social media marketing and carry out targeted advertising and community marketing activities according to the characteristics of different platforms and user needs.

With the popularity of social media and people's increasing dependence on digital life, social media marketing has become one of the important means for modern enterprises to promote products and brands. In the post-pandemic era, companies should incorporate social media marketing into their marketing strategies and gradually achieve digital transformation. Here are some effective ways businesses should focus on social media marketing:

First, target specific users. In order to increase the conversion rate of social media advertising, enterprises need to develop different advertising strategies for different users. For example, for users who have the intention to buy, they can try to arouse their interest in buying through full reduction, coupons and other promotional means.

Second, make full use of the characteristics of social media platforms. Businesses need to engage in dramatic and creative activities on social media platforms to interact and influence social media users. For example, engaging customers with interesting interactions, good content, and a better interactive experience.

Third, focus on the needs of users. Through data analysis of users' behaviors and preferences, enterprises can better understand target users, understand their concerns and needs, and develop more feasible marketing strategies.

Fourth, build social media communities. Group users on the platform to form community and expand the influence of the brand. Through community operations, companies can get better feedback from users, so that they can promote their brand features and the benefits of their products or services on a wider scale.

In conclusion, in the post-pandemic era, enterprises need to pay more attention to social media marketing, actively use social media platforms to provide good opportunities for the

promotion of brand products and services, and accelerate the digital transformation of enterprises.

5. Provide value-added services: Consumers pay more attention to added value and good experience when purchasing products or services. Therefore, enterprises should provide more innovative, professional and differentiated value-added services, including after-sales service, technical support, patient consultation, et al., to enhance consumer satisfaction and loyalty through service quality and professional quality.

When buying a product or service, consumers not only have a demand for the product or service itself, but also pay more attention to the whole purchase and use experience. Therefore, enterprises should not only provide basic functions and quality, but also need to provide more innovative, professional and differentiated value-added services to improve the added value and brand loyalty of products or services. Here are some value-added services that businesses can offer:

First, after-sales service. In addition to product quality, consumers also pay attention to the quality of after-sales service. Therefore, enterprises need to provide professional and fast after-sales services, such as technical support and repair services. In addition, if companies can provide value-added services, such as free maintenance and repair services, it will help increase consumer satisfaction and brand loyalty.

Second, technical support. Enterprises can provide specialized technical support services to help consumers solve any problems when using products. This service can provide various forms of support, such as telephone, online chat, E-mail, et al., to meet the different needs of consumers.

Third, customized services. Businesses can provide customized services tailored to individual needs. For example, in the tourism industry, enterprises can provide customized tourism services according to customers' needs and interests, aiming to provide a more personalized service experience and meet customers' personalized needs.

Fourth, professional consultation. Enterprises can provide professional consulting services to help consumers better understand the features, usage methods and precautions of products or services. In addition, if enterprises can provide free consulting services, it will help to increase consumer loyalty and satisfaction.

In a word, it is very important for enterprises to provide value-added services, which can improve consumers' awareness of enterprises and brand loyalty. Enterprises need to provide consumers with more innovative, professional and differentiated value-added services according to their own characteristics and consumer needs.

The above points are the main content of marketing strategy in the post-epidemic era. Of course, with the change of market and consumer demand, enterprises also need to timely adjust marketing strategies according to the situation, and constantly improve market competitiveness and business value.

The post-epidemic era is an era of gradual digitalization, and digital marketing will become an important part of enterprise strategy in the post-epidemic era. With the long-term impact of the pandemic, the way consumers buy has changed, showing a trend of digital and online. As the core of enterprise Internet strategy, digital marketing is very important to improve the market competitiveness and sustainable development of enterprises. Here are some of the impacts of digital marketing on corporate strategy:

1. Expand the network coverage of consumers: Digital marketing can expand the network coverage of consumers through various digital channels, such as social media, email, search engines, et al. By using technologies such as artificial intelligence and big data, companies can more accurately target customers and provide personalized product recommendations and marketing based on user behavior and interests.

2. Improve marketing efficiency and effectiveness: Digital marketing can help enterprises effectively manage and analyze customer data, while providing enterprises with opportunities to optimize marketing efficiency. The application of digital marketing can enable enterprises to realize the automation and refinement of marketing process, improve marketing effect and conversion rate.

Digital marketing is a way to expand consumer network coverage and increase brand awareness and sales through digital channels. For enterprises, more importantly, digital marketing can help enterprises effectively manage and analyze customer data. Through the analysis and mining of customer data, enterprises can understand the interests and behaviors of users, and provide personalized product recommendation and marketing to users according to different user portraits, so as to improve the marketing effect and conversion rate.

The application of digital marketing can make enterprises realize the automation and refinement of marketing process. Enterprises can use automated marketing tools, such as marketing automation software and email marketing platform, to automate the marketing process and improve marketing efficiency and effect by setting automatic marketing processes and customizing emails. At the same time, enterprises can also apply intelligent marketing strategies based on big data and artificial intelligence technology to provide the best marketing plan and effect evaluation by analyzing the data and behaviors of different users, as well as the characteristics of different marketing scenarios.

The advantage of digital marketing is that it can provide enterprises with the opportunity to optimize the efficiency and effectiveness of marketing. Companies can improve marketing efficiency by analyzing customer data and using automated marketing tools, while using big data and artificial intelligence technologies to improve marketing effectiveness and conversion rates. This enables enterprises to more accurately target customers, and according to user behavior and interests, provide personalized product recommendation and marketing, further improve the effect of marketing.

To sum up, digital marketing can help enterprises improve marketing efficiency and effectiveness. By analyzing customer data and using automated marketing tools, enterprises can realize the automation and refinement of marketing process and improve marketing efficiency. At the same time, using big data and artificial intelligence technology, enterprises can more accurately target customers, improve the marketing effect and conversion rate.

3. Expand market share: Through the expansion of digital channels, enterprises can enter more regions and markets and expand their market share. At the same time, digital marketing can provide enterprises with data analysis and feedback mechanisms to help them discover market changes and consumer demands more quickly, so as to create more competitive products and services.

The expansion of digital channels can help enterprises enter more regions and markets, thus expanding their market share. Digital marketing can be achieved through a variety of marketing tools and channels, such as social media, search engine marketing, email marketing, mobile marketing, et al. These digital channels provide more opportunities for publicity and interaction with consumers, and at the same time help enterprises collect more consumer data and analyze their behaviors, so as to provide more comprehensive data feedback mechanism for enterprises to detect changes in the market and consumer demand.

Among them, social media channel is a very popular digital marketing means. Through social media platforms, enterprises can better understand the needs of their target consumers, and at the same time, combined with the interaction and sharing of social media, promote word-of-mouth communication among users, strengthen brand influence and improve corporate awareness. In addition, email marketing is also a very effective digital marketing channel. Through email marketing, enterprises can divide customers into different market segments, so as to launch different marketing strategies and product promotion programs for different market groups.

The advantages of digital marketing are not only that it helps companies enter the market more effectively, but also that it provides data analysis and feedback mechanisms. By

comprehensively understanding consumer data and behavior patterns, enterprises can better understand the market and consumers and improve the quality and competitiveness of products and services. In addition, digital marketing can also help enterprises to grasp market changes and trends in real time, so as to adjust their marketing strategies and promotion programs more quickly, and enhance the competitiveness of enterprises in the market.

In short, through the expansion of digital channels, enterprises can expand their market share to more regions and markets. Digital marketing can provide enterprises with data analysis and feedback mechanism, help enterprises to discover market changes and consumer needs more quickly, and thus help enterprises to build more competitive products and services.

4. Enhance brand image and loyalty: Digital marketing can help enterprises build more excellent brand image and improve customer loyalty. Through relevant information and real-time results, digital media can enable customers to better understand the value and characteristics of enterprises and brands, and actively participate in the social media interaction of enterprises, so as to increase customers' trust and loyalty to enterprises.

Digital marketing can indeed help enterprises build a better brand image and improve customer loyalty. Through digital channels and marketing tools, enterprises can display their brand image and value concept to customers more comprehensively and directly, and at the same time, they can also deliver more information and marketing activities to customers. Specifically, digital marketing can have the following impacts on brand image and loyalty:

First, publicity and interaction. Digital marketing can promote brand concepts and features through various channels such as social media platforms and mobile applications, and carry out marketing activities such as product promotions. These digital channels enable customers to learn and spread information more widely in their social circle, thus making the brand image more dynamic and attractive.

Second, provide a personalized experience. Digital marketing can carry out data analysis and mining through user data, access records, transaction records and other information, so as to provide customers with more personalized marketing strategies and experiences. These strategies and experiences not only improve customer satisfaction and loyalty, but also enhance the brand image and competitiveness of the enterprise.

Third, interaction and feedback. Digital marketing can collect and feedback customer feedback, comments and suggestions in a more timely manner, so that enterprises can respond and improve faster, thus strengthening customer trust and loyalty. This interaction and feedback can take place through social media, email, online customer service and online surveys.

Fourth, enhance cross-platform successful transformation. Digital marketing also allows brand image and content to be displayed across multiple channels, thereby deepening impressions and increasing awareness. Digital marketing can provide enterprises with a variety of cross-platform cooperation opportunities and help them achieve successful transformation on multiple stages.

Therefore, digital marketing is one of the important strategies for enterprises to effectively cope with market changes and enhance competitiveness in the post-epidemic era. Digital marketing is an indispensable strategy in modern enterprises, especially in the post-pandemic era. Through online operations, data-driven marketing strategies and the influence of social media, digital marketing can improve the efficiency and marketing effect of enterprises, as well as enhance customer satisfaction and loyalty.



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## Annex A

### Questionnaire

Dear Madam/Sir,

Thank you very much for taking this survey. This is a questionnaire on the influencing factors of catering behavior in the platform economy in the post-epidemic era. The data is only used for academic research without fear of revealing your privacy. Please finish the questionnaire according to your true feelings and understanding in the process of using the food delivery platform. There is no standard answer but your real thoughts and actual situation are the best answer. Thanks for your participation!

Part one: The use of delivery platform

A0 Have you ever ordered food online?

A. Yes B. No

Process: Skip to the end of the questionnaire if the answer is No.

A1 Did you often order food on online platforms before the pandemic?

A. Yes B. No

A2 How long has it been since your first time to order food on the delivery platform? ( )

A. Less than a year B. 1-3 years

C. 5-8 years D. 8 years above

A3 How many times did you order food on the platform per week before the pandemic?

A. 1-3 times B. 4-6 times C. 7 times above

A4 How often do you use the delivery platform per week on average? ( )

A. 1-3 times B. 4-6 times C. 7 times above

A5 Which of the following delivery platforms do you use frequently? ( )

A. Meituan takeout B. ELEME takeout C. Tik Tok

D. JD.com E. Wechat mini program F. Merchant-owned application

G. Others

A6 Where do you most often order takeaway? ( )

A. Workplace

B. Family dinner

C. Friends gathering

D. Dine alone

E. Others

A7 Your present expense of every-time takeaway is ( )

A. Less than 20 yuan/ per person B. 21-50 yuan/ per person

C. 51-100 yuan/ per person D. 101-200 yuan/ per person

E. more than 200 yuan/per person

A8 You would keep ordering takeout on the platform under the regular epidemic prevention and control ?

(1 Strongly disagree, 2 disagree, 3 Not sure, 4 Agree, 5 Strongly agree)

Process: Skip to Question 16 if the answer is 5, which signifies strong agreement.

A9 Would you consider buying pre-made dishes on the platform?

Process: Skip to Question 10 if the answer is Yes, while to Question 13 if No.

A. Yes B. No

A10 Since the outbreak of the pandemic, your consumption of pre-made dishes: ( )

A. Has increased B. Has decreased C. Has not changed

A11 Which type of food do your daily expense focuses on? Finished food or pre-made food?

(Matrix scale question)

A. Finished food (1 Strongly disagree, 2 Disagree, 3 Not sure, 4 Agree, 5 Strongly agree)

B. Pre-made food (Semi-finished food) (1 Strongly disagree, 2 Disagree, 3 Not sure, 4 Agree, 5 Strongly agree)

A12 The main reason(s) why you buy pre-made is/ are: ( ) (Select all that apply)

A. It's time-saving. B. It's easy to cook. C. It's delicious.

D. It's nutritious and healthy. E. It's sanitary and clean F. It has various choices.

G. It is economical and reliable.

H. Others (Supply your reason in the blank)

A13 The reason(s) why you don't want to choose pre-made food is/ are: ( ) (Select all that apply)

A. It tastes bad. B. It has potential risks of food security.

C. It has too much preservatives.

D. There's no reliable brands.

E. Its expensive price.

F. It is inconvenient to purchase.

G. Its onefold product type.

H. Others (Supply your reason in the blank)

A14 Your acceptable price of pre-made food is:( )

A. Cheaper than ordinary food.

B. The same as ordinary food.

C. A bit higher than ordinary food.

A15 What's your views on the development of pre-made dishes? (Select all that apply)

A. Rapid and promising

B. Gimmick of the capital

C. Hard to break through regional restrictions because of the different food flavors in different places

D. Only a short-term demand during the pandemic

E. Others

A16 How do you usually have dinner under the regular epidemic prevention and control?( )(Rank your preferences)

A. Dine in the restaurant

B. Buy food online and cook at home

C. Buy food offline and cook at home

D. Buy pre-made dishes

Part two: Food purchasing behavior on the video platform

B1 After the COVID-19 pandemic and under the regular epidemic prevention and control, do you spend more or less time watching Tik Tok or other applications?

A. Less B. More C. The same

B2 How much time do you spend on watching video apps like Tik Tok?

A. Seldom B. Less than half an hour C. One hour

D. Two hours E. More than 3 hours

(Skip to the end of the second part of the questionnaire if the answer is A)

B3 Do you think you developed this habit due to the home quarantine?

(1 Strongly disagree, 2 Disagree, 3 Not sure, 4 Agree, 5 Strongly agree)

B4 Would you order food while browsing Tik Tok or other applications?

A. Almost never B. Once in a while C. Often

B5 Have you noticed any catering enterprises or delicacies that you did not know before through “Internet celebrities” on Tik Tok or other applications?

(1 Strongly disagree, 2 Disagree, 3 Not sure, 4 Agree, 5 Strongly agree)

B6 Will you try to purchase food online through video platforms due to “Influencer” marketing?

(1 Strongly disagree, 2 Disagree, 3 Not sure, 4 Agree, 5 Strongly agree)

B7 What do you think is the biggest factor for you to buy food through video platforms? (Rank your preferences)

A. Price

B. Brand influence

C. “Influencer” marketing

D. Food safety

E. Contactless delivery

F. Nutrition and health

G. Convenience

## Part three: Willingness to use the online platform

Please choose the option that best fits your attitude after each question according to your true feelings and understanding in the process of using the online platform (PS: 1 Strongly disagree, 2 Disagree, 3 Not sure, 4 Agree, 5 Strongly agree)

C1 Perceived usefulness	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.The online platform can meet my needs	1	2	3	4	5
2.The online platform can save my time	1	2	3	4	5
3.The online platform will increase my desire to place orders	1	2	3	4	5
4.Through watching the videos on the online platform, I get to know more about the product	1	2	3	4	5
C2 Perceived ease of Use	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.The online platform is very easy to operate	1	2	3	4	5
2.The online platform can intelligently identify my needs	1	2	3	4	5
3.It is very convenient to search products on the online platform	1	2	3	4	5
4.Online platform software is convenient to download	1	2	3	4	5
C3 Subjective norm	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.I think using online platforms conforms with the current national policy of epidemic prevention	1	2	3	4	5



2.I think using online platforms is beneficial to the health protection of myself, my family, friends and colleagues	1	2	3	4	5
3.I think using online platforms helps to reduce the risk of epidemic transmission during meals	1	2	3	4	5
4.Using online platforms to buy food is in line with the views of my friends and families	1	2	3	4	5
C4 Perceived behavioral control	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.I have enough time to buy the food I want on the online platform	1	2	3	4	5
2.I have enough money to buy the food I want	1	2	3	4	5
3.The government has corresponding policies for publicity	1	2	3	4	5
4.I am very familiar with the current policy of epidemic prevention	1	2	3	4	5
C5 Personal experience	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.I have heard people around me use the platform before	1	2	3	4	5
2.I have used the online platform to order food	1	2	3	4	5
3.I have recommended this online platform to people around me	1	2	3	4	5

C6 Perceived trust	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.The use of online platforms enjoys high security	1	2	3	4	5
2.The use of online platform has established privacy protection	1	2	3	4	5
3.I am inclined to trust the service environment of online platforms	1	2	3	4	5
4.I think the online platform is reliable and can guarantee my daily diet	1	2	3	4	5
C7 Behavioral attitude	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.Under the regular epidemic prevention and control, using online platforms reduces time and space limitation	1	2	3	4	5
2.Under the regular epidemic prevention and control, I think it is meaningful to use online platforms	1	2	3	4	5
3.Under the regular epidemic prevention and control, I am very interested in using online platforms	1	2	3	4	5
C8 Behavioral intention	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.I will use online platforms during the pandemic	1	2	3	4	5
2.I will continue to use the online platform after the pandemic is over	1	2	3	4	5
3.I will recommend this online platform to people around me	1	2	3	4	5

C9 Video content marketing	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.I agree with the presentation of short food videos on online platforms	1	2	3	4	5
2.Short food videos make me marvel at the rich contents of Chinese food culture	1	2	3	4	5
3.I think the content of the short video makes me feel excited	1	2	3	4	5
4.I was truly impressed by the exquisite cooking skills of cooks in short food videos	1	2	3	4	5
5.I think making short food videos is a great way to show one's creativity	1	2	3	4	5
6.I think watching short food videos is an important way for young people to enjoy themselves	1	2	3	4	5

Part four: Basic information

D1 Your gender

A. Male B. Female

D2 Your age

A. Under 18 years of age B. 19 to 24 years old C. Between 25 and 30  
D. 31 to 40 years old E. Between 41 and 50 F. 51 years of age and older

D3 Your educational background:

A. High-school diploma and below B. Associate degree

C. Bachelor degree D. Master degree

D4 Marital status:

A.Married B.Unmarried

D5 Whether you have minor children

A. Yes B. No

D6 Your personal average monthly income:

A. Under 3,000yuan B. 3,001 - 5,000 yuan

C. 5,001 - 10,000yuan D. 10,001 yuan and above