

A Study on The Adoption Intention of Cold Chain Prepared Dishes Based on Consumer Orientation Mentality

Feng Luo ^{1,*}, Wei Shang ², Junwei Gan ¹

¹ School of Economics and Management, Sichuan Tourism University, No.459, Hongling Road, Chengdu, China.

² School of Management, Chengdu University of Information Technology, No.24 Block 1, Xuefu Road, Chengdu, China.

*Corresponding Author: 24003397@qq.com

ARTICLE INFO

Article history

Received : April 9,, 2023

Revised : April 12, 2023

Accepted : May 6, 2023

Keywords

Cold-chain premade dishes;

Perception of value;

Locate the mind;

Specification;

Adoption behavior.

ABSTRACT

Background: Cold chain prepared dishes, as a new type of food with low temperature and dual attributes, have attracted more and more attention from consumers. From the perspective of consumers' brand positioning mentality, this study integrated the brand, quality and other attributes of cold chain prepared vegetables, and studied the positioning mentality and adoption behavior of Chinese consumers. In this study, three cold-chain prefabricated dishes, "pickled cabbage fish", "tomato Braised beef brisket" and "Huangpi fishball", were selected as investigation objects.

Contribution: The contribution of this study is that different food value attributes explain the law of consumers' willingness to adopt cold chain prepared dishes through brand positioning mentality, and find out how different degrees of vulnerability and quality warranty

Method: Based on ZMET survey method, product effect data were used to analyze and verify structural equation model.

Results: Different value evaluation directly affects consumers' brand positioning mentality, brand positioning mind as an intermediate variable has a significant correlation with adoption intention. The degree of vulnerability moderates the relationship between value evaluation and brand positioning mentality, and the degree of warranty period regulates the relationship between quality value, brand positioning mentality and adoption intention respectively.

Conclusion: It also provides new marketing tools and theories for entrepreneurs and marketers in the cold chain food industry, which contributes to the promotion and diffusion of cold chain prepared food for consumers.

This is an open access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

Copyright © 2023 Feng Luo, Junwei Gan, Wei Shang



INTRODUCTION

According to the Research Report on the Development Trend of China's Prepared Dishes Industry in 2022 released by iMedia Consulting, the scale of prepared dishes market in 2021 has reached 345.9 billion yuan, with a year-on-year growth of 19.8%, and is expected to exceed one trillion yuan in 2026. The vast market potential attracts the attention of entrepreneurs and capital. Luckin founder Lu Zhengyao and the controversial Luo Min are both highly involved in premade dishes. Capital is also keen on prepared dishes. In 2021, Zhiweixiang went public, as the "first stock of prepared dishes". More than a year after that, there were 20 times brand investment, and financing of prepared dishes, and many new brands emerged. It is hard for the government and investors to change their behavior. However, companies need to grasp the strategy. Getting the big idea of a prepared dish right does not mean getting the product right. Categories are public, consumers will buy them only if they have good products.

1. Study consumer behavior and occupy the mental structure of consumers

To study customers more than your competitors, especially young consumers, the first step is to get familiar with and adapt to their consumption habits and behaviors; The second step is to get involved; The third step is to gradually change their consumption behavior, to achieve the purpose of educating consumers. Therefore, we must to make strenuous efforts in consumption habits, mentality, and behavior. On the one hand, enterprises should first occupy the mental structure of consumers, packaging products into the mental structure of consumers. Moreover, consumers' memories can be extended. Therefore, it is necessary to capture the consumption trend and the change in consumption habits from daily life. Only good products meet the needs and habits of customers. To attract customers to pay or buy, on the one hand, it depends on objective physical characteristics such as the nutritional composition of products; on the other hand, it depends on subjective indicators such as consumers' memory, product color, the connection between products and some stories, emotional and cultural value, etc. These two objective and subjective dimensions are full manifestations of consumers' purchasing behaviors.

2. Focus on suitable products and solidify them in innovation

Enterprises should target potential customers and establish their advantages by improving their products. Prefabricated vegetable enterprise products should be outstanding enough; without characteristics, it is easy to be overtaken. What consumers spend money on is product experience, and what they pursue is the maximum enjoyment under the constraints of time and money. We should start from the product itself. The product power + business model is the key to the survival and development of a prepared dish enterprise and brand. The product power is the flavor, taste, quality, safety and even packaging design of the product. Enterprise products to obtain the recognition of consumers, on the one hand, we should have the courage to innovate products, the more focus on the frontier, the more open ideas; In addition, in pursuing product innovation and ,researching durable, products.

3. Focus on cold chain logistics, focusing on product collection

The cold food chain refers to the processing, storage, transportation, distribution, and retail of perishables until they are in the hands of consumers after they have been purchased or salvaged from their place of origin. In order to ensure the quality and safety of food and reduce losses, each link of perishable food is always in the necessary low- temperature environment. Cold chain is suitable for a wide variety of food, primary agricultural products including vegetables, fruits, meat, poultry, eggs, aquatic products, and flower products. Processed foods include frozen foods, poultry, meat, aquatic products and other packaged cooked foods, ice cream and dairy products, and fast-food ingredients. From the point of view

of the product, prepared dishes are a collection of finished and semi-finished dishes. Prefabricated vegetables refer to finished or semi-finished products made from agricultural, livestock, poultry, and aquatic products with various auxiliary materials through preprocessing (such as cutting, stirring, curing, rolling, molding, and seasoning). In addition, prepared dishes are characterized by their unaltered physical properties, industrialization, convenience, and speed, and are often seasoned.

4. Excavate food attributes and analyze product characteristics

Prepared food can be divided into four categories: ready-to-eat food, hot food, cooked food, and ready-to-eat food. Ready-to-eat food refers to food that can be eaten in an open bag, such as ham sausage. That is, hot food refers to food that can be eaten simply by heating, such as haidilao Hi pot, etc. Instant cooking food refers to semi-finished ingredients that have been deeply processed in the early stage and can be cooked directly on the pot, such as a variety of pre-made pickled cabbage fish, etc. Ready-to-eat foods are cleaned, cut ingredients, such as shredded potatoes.

For consumers, the rise of prepared dishes is mainly in line with the current situation of consumers' fast pace of life and solves the problem of difficult cooking for social groups. However, how to improve the product brand of manufacturers, grasp the psychological perception of consumers, and establish a layer of interlinked connection between food and consumers has become crucial. The existing researches on adoption intention and adoption behavior are basically carried out from two dimensions of "user" and "system functionality". As a new type of food or product, cold chain prepared dishes have the characteristics of conventional food on the one hand, and the dual attributes of cold chain and low-temperature commodities on the other. Therefore, it is obvious that the existing technology adoption model cannot clearly explain the adoption intention and purchasing behavior of consumers. Therefore, how to enter the positioning mind of consumers through their perception based on the product value characteristics of cold chain prepared dishes, and how to improve the adoption willingness of consumers to a greater extent under the driving of consumption incentives has become the research focus of this paper.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

This part focuses on the theoretical progress of the research on the adoption of cold chain prepared vegetables, which is one of the hot topics in the research of cold chain food, including the research on food value perception, the research on consumer mentality, the research on the empowerment of consumption incentives, and the adoption intention and behavior.

1. Research on perceived value

The rise of customer- perceived value research is the inevitable result of enterprises' continuous search for competitive advantage. Many scholars have defined customer-perceived value. For example, believes that perceived value is "the overall evaluation of the utility of a product (or service) by customers based on perceived gain and loss". Scholars generally believe that such value can be regarded as the ratio or trade-off between quality and price, that is, the conceptualization of cost performance [1]. Used objective and quantitative evaluation methods to probe the dimensions of perceived service value [2]. They obtained the famous PZB model, according to which SERVQUAL (service quality Measurement Scale) was formed, including the following five dimensions: tangibility, reliability, responsiveness, authenticity and empathy. However the service quality detected

by their model is generally regarded as the perceived gain, but not the perceived gain and loss, so the research is not complete.

Proposed the theoretical framework of perceived value [3]. They argue that consumer choice is a function of multiple dimensions of "consumption value". They proposed five dimensions social, emotional, functional, cognitive, and conditional values. As their research has been confirmed by in-depth investigations in a wide range of fields, including economics, social psychology and experimental psychology, it has laid the best foundation for the subsequent value construction [4] created a 19-item scale called PERVAL that can be used to evaluate the perceived value of a consumer durables brand. This scale is applied to retail purchasing occasions to determine which consumption concepts drive the changes in purchasing attitudes and behaviors. The contribution of J.C. Sweeney and other scholars is that they found four value dimensions very helpful in explaining attitudes and behaviors [5].

Proposed that customer perceived value is the evaluation and preference formed by customers on products and services based on the balance between profit and loss, and is an important prerequisite for determining customer satisfaction [27]. Proposed the determinants model of customer service perceived value [28] and the matrix of customer service perceived value positioning based on the three dimensions of customer perceived value division: functional value, emotional value and, social value. Empirically studied the three types of promotion (gift, coupon, discount) and found the difference in their impact on Chinese consumers' perception of transaction value and consumption behavior intention [29]. Among them, discount promotion negatively impacts consumers' inner reference price, and consumers have the lowest degree of trust and value evaluation on coupon promotion. The research results of show that the financial value, social value, information value, image value and entertainment value of a virtual brand community [30] have significant influences on the community awareness and community loyalty of community members to varying degrees. Introduced the conceptual connotation of customer perceived value, customer satisfaction and behavioral tendency [31], as well as four models for the study of the relationship among CPV, CS and BI, and summarized the empirical models of Lapierre, verified that non-functional factors of service brand image directly affect perceived quality, perceived value, customer satisfaction, and customer loyalty [32], while functional factors only have a directly impact perceived quality.

Divided consumer perceived value in the network environment into three categories: outcome perceived value, procedural perceived value and emotional perceived value, and built a three-point model of consumer perceived value in the network environment [33]. Divided the perceived value of online shopping customers into three dimensions: product perception, service perception and social perception. Through massive data on Taobao, he found that online review length, commodity sales volume, seller credit rating, seller DSR service score and store opening time [34] had a positive impact on consumers' online purchase decisions. Introduced the theoretical model of perceived promotion value factors [35], and found empirically that coupons, additional service offers and discounts all have varying degrees of influence on purchase intention. Under discount strategy, consumers often indirectly influence purchase intention through the influence of two intermediate variables, perceived promotion cost and perceived promotion benefits. added anchor proximity as a moderating variable, and found that three independent variables, such as product cognition, on the one hand, have a direct impact on perceived value and perceived risk, and also have an indirect impact on purchasing behavior [36]. In addition, the perceived value and perceived risk of anchors have different moderating effects on the buying behavior.

According to the survey results of [37] some consumers reported that the prepared dishes they purchased went bad and corrupt, the ingredients were not fresh, the dishes contained foreign bodies and expired phenomena.

2. Research on consumption mentality

The so-called mind refers to the cognition of the external world that is deeply valued in people's heart, including the world outlook, life outlook, style, thinking, belief, logic and emotion, and even images and impressions. The so-called consumer mind is the cognition of consumer goods market deeply valued in consumer content, which can fully reflect consumer values and personality propositions, and it always appears to reflect a certain concept in line with consumers' acquired interests. In the process of people's pursuit of satisfying psychological needs, the consumer's mind plays a role in controlling the consumer's purchasing consciousness, so as to influence and decide the consumer's choice of consumption objects in the mind.

Define consumers' shopping decision-making style as a kind of mental orientation, which represents the way consumers make decisions and has cognitive and emotional characteristics, such as quality awareness and fashion awareness[6]. proposed the theory of mental perception, which explained the time when objects have minds, the inference of other objects' mental states, and the behavioral consequences of mental perception [7]. Believes that the two dimensions of human nature and human uniqueness in the two-factor model of dehumanization have a strong correlation [8]. Simulated people's mental state inference [9], including goal, intention, attitude, emotion, belief and knowledge, etc. Proposed that their own mental judgment and psychological choice have strong representation [10].

From the psychological perceiver's perspective, the two most basic motivations are to understand, predict, and control the behavior of others, and to establish social connections with others. Epley et al. proposed that inducing these two basic motivations can enhance the degree of individual mental perception [11]. Bering refers to the antecedent of independent individual behavior [12] as mental perception. Studied non-human entities and also found that they have similar personalities to people [13]. With the knowledge of preknowledge, mental perception will also bring different results. Ohtsubo and Cushman believed that people have a higher degree of cognitive processing and deeper experience of conscious behavior [14]. Similarly, Fessler and Norenzayan proposed that the arousal and awakening of mental features would reduce cheating [15] and monitor one's own behavior at any time.

Proposed that consumers' mental resources are limited, and brand positioning should be determined according to the specific conditions of consumers' mental resources and market competition [38]. Adopted the new research method of ZMET technology to explore the mental model of consumers. Through RPII scale, the personal consensus map of all respondents was constructed by ISM [39]. Proposed that a good mental model of Chinese enterprises can stimulate the potential and vitality of knowledge innovation [40]. Summarized the measurement indexes [41] and technical routes of various models by refining research literature on brand equity based on consumer mental model. Through the exploration of consumers' minds, adopted three marketing methods: on-site marketing, network marketing and experience marketing [42] to ensure that the target consumers of tobacco brands can accept it. Combined the ultimate value and instrumental value of Milton Rockich [43] (18 value contents) and proposed three feasible implementation strategies focusing on the consumer mind of children's book brands. Based on RAS information acceptance-acceptance model, discussed the enhancement effect of online community based consumer brand identity from the perspective of community average and consumer mind share [44], and found that it

enhances brand identity and sense in the changes of brand positioning, change, possession, identification, attack, etc.

Proposed a prediction model in which multinational brands can promote brand trust and purchase intention of consumers in host countries through home-country cultural positioning strategies (identified-oriented and emotive) [45]. Established a shared mental model of consumer food safety risk perception based on ID3 algorithm [46] to determine the credibility and support of each decision rule under the consumer risk perception model. Realized the maximization of internal resource allocation, external resource utilization and consumer mental resource occupation through the modularization method of brand marketing strategy based on consumer mind [47]. Established a quantitative index BMi that reflects the strength of brand advantage based on the difference in the share of consumers' mental resources. These two attributes formed four types of distribution brands of individuals and groups in reality from high and low levels respectively [48]. Proposed that mental game experience like puzzle movie is an important embodiment of "imaginative consumption" in the age of digital media [49], thus generating spatial immersion experience. Analyzed the scale of consumers' shopping decision-making style and extracted eight basic mental characteristics of consumers' shopping decision-making [50], namely, awareness of perfection or high quality, awareness of novel fashion, awareness of price and value for money, impulse shopping, awareness of entertainment, giddiness and habituation, brand awareness, and brand loyalty orientation.

3. Research on enabling regulation

The huge potential presented by data as a survival factor provides many possibilities for data empowerment, and influences human production mode, life mode and thinking mode formed on the basis of industrial civilization in a way different from the traditional industrial revolution, and promotes the upgrading of ethical framework. Based on the regulation theory of philosophy of technology, introduced a two-way feedback mechanism between ethics and technology to build an ethical matrix for data empowerment [51]. Introduced farmers' entrepreneurial activity as a moderating effect [52], giving full play to the moderating effect of farmers' entrepreneurial activity in promoting farmers' income increase in digital countryside. Adopted the environmental description item used and added the moderating variable of environmental uncertainty into the model [53]. The results showed that self-sacrifice is beneficial for leaders to take empowering behaviors in a highly uncertain environment. However, in low uncertainty environment, long-term outcome consideration is beneficial for leaders to take empowering behaviors.

Based on the perspective of structure empowerment and resource empowerment, empirically-analyzed the influence of the establishment of data management agencies on government governance performance by using the multi-period differential model and the moderating effect [54]. Finds that industry type (moderating variable) has a moderating effect on learning orientation and big data capability, and big data capability and business model innovation [55], but does not have a moderating effect on the relationship between learning orientation and business model innovation. Used the input-output method to calculate the degree of empowerment of the information industry for various industrial sectors [56], that is, the degree of empowerment of the information technology for the industry is equal to the proportion of the information technology input in the production process and the total output of the industry. Verified the relationship between overseas M&A and industrial technological innovation performance, and concluded that institutional distance between countries had a positive moderating effect on the relationship between overseas M&A and industrial

technological innovation performance, and that institutional distance also had a significant positive double moderating effect on the relationship between the two for different types of markets and enterprises of different nature [57].

Identified four regulating variables and measurement methods related to the rights subject of listed companies, including the identity of the controlling shareholder [58]. Among them, redundant resources are measured by the ratio of equity and debt. The larger the ratio, the more long-term redundant resources in the organization, that is, the higher the degree of resource endowment of the rights subject. Analyzed that structural empowerment mining continuously and effectively affects team innovation behavior. On the one hand, team psychological empowerment and knowledge sharing were introduced as mediating and moderating variables [59], and on the other hand, knowledge sharing was identified as the reverse moderating effect on structural empowerment and team innovation behavior. Introduced organizational innovation climate as a moderating variable of the leadership empowerment model [60], and the results showed that organizational innovation climate plays a significant moderating role in the relationship between employees' error handling ability and their innovation behavior. also proposed the influence mechanism of leadership empowerment on employee innovation behavior, and also found the moderating effects of uncertainty avoidance and error management climate [61].

4. Willingness and conduct to adopt

Proposed the first theoretical model of rational behavior (TRA), which explained the decision-making process of human beings by using attitudes towards behavior and subjective norms to influence individual behaviors. In order to enhance the accuracy of the model to predict user behavior, the theoretical research framework based on complex individuals has been gradually improved [16]. Proposed the theory of Planned behavior (TPB) [17], which believes that perceived behavioral control has a significant impact on behavioral intention. Believed that human behavior was promoted and promoted by social structure, and restriction emphasized the interaction process between individual behavior and organizational structure [18]. Pointed out that the adoption model accurately grasped the variables affecting the application of information systems in organizations, including the relationship between usefulness, ease of use and behavioral intent [19], and these factors helped organizations to implement and apply information systems more easily.

Proposed TAM model for the behavioral intention and use behavior of information systems in the working environment, and argued that perceived usefulness and perceived ease of use directly affect the use intention, use attitude and behavior [20]. Proposed the matching degree of information technology and job to study the adoption intention [21]. In order to make up for the defects of TAM model limited to the adoption of information systems in the working environment and better predict the adoption intention, [22] constantly improved TAM model and developed TAM2 and TAM3 models by adding necessary dimensions and adjusting variables. [23] integrated eight mainstream models into the UTAUT model. The main variables include: usefulness, ease of use, convenience, social influence and behavioral intention, and added user characteristics as intermediate variables, such as age, experience, voluntary degree of use, etc., so as to have a deeper understanding of users' adoption decisions. UTAUT has significantly improved its accuracy in predicting adoption of new technologies.

On this basis, [62] verified five factors for users to accept m-commerce : perceived usefulness, perceived ease of use, perceived reliability, self-efficacy, and perceived financial resources. Verified the adoption decisions of individual users based on five hierarchical

factors [63], including general technology perception (usefulness, ease of use), clear technology perception (service availability, monetary value), individual consumption mentality (hedonism, individual needs), social influence and demographic characteristics (gender, age), through the adoption research of mobile data services [64] developed a complete Chinese consumer lifestyle scale, and studied and verified the impact on perceived value and consumer purchasing behavior. Based on the mobile commerce situation in China, [65] verified the influence on the initial adoption behavior of mobile payment users from the positive utility of comparative advantage and compatibility, and the disutility of perceived risk and perceived cost.

The existing research is an in-depth and extended study based on the two dimensions of "user" and "system functionality". With the development of logistics and catering industry, cold chain prepared dishes, as a new type of food or product, have increasingly become the key items that consumers pay attention to and adopt. On the one hand, prepared dishes have the characteristics of conventional food, but also have the dual attributes of cold chain and low-temperature goods. The existing technology adoption theory and model obviously cannot explain the adoption intention and purchase behavior of consumers. This study attempts to explore this problem.

THEORETICAL MODEL AND RESEARCH HYPOTHESIS

1. Research introduction

Based on the theoretical models of perceived value, UTAUT, brand psychology, etc., this paper establishes a consumer adoption model for cold chain prepared dishes, and explores the correlation of consumer's food adoption behavior under the influence of value perception (brand perception, quality perception, convenience perception and economic perception) of cold chain prepared dishes. At the same time, the adjustable effects of the variable of the vulnerability of prepared vegetables and the variable of the degree of cold chain warranty on the consumer's adoption of prepared vegetables were investigated. Although many theoretical literatures have mentioned the correlation between value perception and adoption intention, and many research materials have confirmed the direct and significant effect of consumer mentality or consumption habits on adoption intention, however, in view of the newly emerged prepared dishes and various kinds of difference adjustment in cold chain links, Few studies have systematically investigated the relationship between consumer and value adoption of such prepared dishes, nor have there been in-depth analyses of the different regulatory roles of vulnerability and quality assurance in cold chain environments and processes.

2. Theoretical model

Based on literature research, the research model framework of this paper is shown in the figure below (Figure 1). In the model, the value perception of prepared dishes is defined as the independent variable, the brand positioning mentality of consumers is defined as the intermediate variable, the willingness to adopt is defined as the dependent variable, and the two cold chain elements of vulnerability and warranty period are defined as the moderating variables.

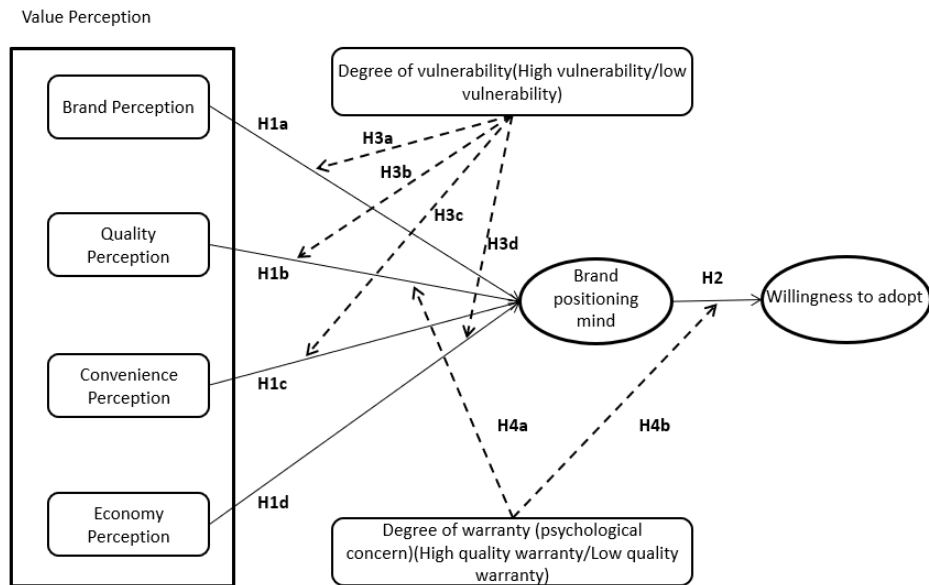


Figure 1. Research framework model.

3. Research hypothesis

Based on a literature review and in-depth discussion with experts in cold chain industry, prepared dish industry and logistics industry, this paper proposes a research model and related research hypotheses. It includes the regulating influence between the food value module and the consumer mind, between the consumer mind and the willingness to adopt, the variable of the degree of vulnerability between the value module and the consumer mind, and the regulating influence of the degree of quality guarantee between the quality value and the consumer mind.

a. Value perception and brand positioning mentality

The connection and bond between the perceived value of goods and the mind of consumers are more and more prominent. In recent years, luxury goods have developed rapidly, and global consumption has become a wave. There is also a strong correlation between the characteristics of luxury brands and consumers' perceived value of luxury brands, and the value has increasingly penetrated into consumers' minds [66]. Chinese software service quality has attracted the attention of more representative enterprises, and the mental model of consumers promoted by acquiring customers' perception of software service quality through structural elements has gradually developed and matured [67]. Living environment includes space, infrastructure and scientific and technological environment, and the convenience of information service for the elderly population has become the highest degree of mental satisfaction, and is also the core point of rich life quality for the elderly [68]. Effective psychological education can generate many aspects of social and economic value, and economic value perception can also develop their mental potential, and help the whole society to improve and enhance the physical and mental health level [69]. Therefore, based on relevant literature and theoretical traceability, this paper proposes the hypothesis related to value perception and brand positioning mind.

H1. Value perception is significantly correlated with brand positioning mentality

H1a. Brand perception and brand positioning mind have significant correlation

H1b. Quality perception has significant correlation with brand positioning mentality

H1c. Convenience perception has significant correlation with brand positioning mentality

H1d. Economic perception and brand positioning mentality have significant correlation

b. Value evaluation between brand positioning mentality and adoption intention

"Positioning" has been rated as the theory with the greatest influence on American marketing in the 20th century. Positioning theory has become the core of marketing strategy and brand positioning has become the core of brand building [70]. Whether information personalized push is efficient or not becomes the key for consumers to find information and adopt it, while the psychological and mental influences of information, situation and consumers will significantly improve the adoption of personalized push service [71]. Privacy issues are increasingly serious in the mobile commerce environment, and users' psychological comfort has a significant impact on their behavioral intentions [72], which provides a theoretical basis for mobile service providers to design privacy feedback. Therefore, based on relevant literature and theoretical traceability, this paper proposes the hypothesis related to brand positioning mind and adoption behavior.

H2. There is a significant correlation between brand positioning mentality and adoption willingness.

c. Adjustment of damage degree between value perception and brand positioning mentality

Food quality and food safety have been widely concerned in the world. Food packaging and food freshness detection play an important role in food quality control and monitoring. Under the packaging and logistics methods of food quality, such as preservation and preservation, consumers' confidence in food quality will be greatly improved once good detection and discrimination tools and models are available [73]. Fresh food from factory to transport, and then to storage, all need professional control and control. Easy preservation and easy damage are double-edged swords. Improving preservation technology, enhancing equipment capacity and improving freshness management are conducive to enhancing the vitality of food in the minds of consumers [74]. Due to the global economic integration, perishable commodities are often special commodities and commodities that are in short supply for the common people. How to prevent damage, rot, volatilization, depreciation, etc., on the one hand, to avoid the loss of economic value, on the other hand, to enhance the trust of retailers and consumers on commodities [75]. The frequent occurrence of food quality and safety problems causes consumers to have a crisis of confidence and a certain degree of panic about Chinese food, especially many well-known brand enterprises and some household products and food, which also makes consumers' subjective perception more or less affect the purchase intention [76].

Improving consumers' attachment to the brand is an important way to continuously obtain consumers' brand loyalty. Consumers' product functional association has an impact on brand attachment through brand correlation degree cognition and psychological location cognition respectively [77]. The purchasing behavior of traceable subtropical fruits has an important impact on the effective implementation of the quality and safety traceability system. The purchasing experience moderates the causal relationship between purchasing motivation and traceability and other factors [78]. The value of online word-of-mouth is well known. The number, rating and negative review rate of online word-of-mouth in Dianping have a significant impact on the brand value positioning of products [79].

H3. Vulnerability moderates the influence of value perception and brand positioning mentality

H3a. The degree of vulnerability regulates the correlation intensity of brand perception and brand positioning mind

H3b. The degree of vulnerability regulates the correlation intensity of quality perception and brand positioning mind

H3c. The degree of vulnerability moderates the correlation intensity of convenience perception and brand positioning mind

H3d. Vulnerability moderates the correlation strength of economic perception and brand positioning mind.

d. The degree of warranty is adjusted between the antecedents and consequences of the intermediate variable brand positioning

Any commodity, item or food is a quality and safety item. Once it enters the consumer's perspective or demand point, quality value becomes a key point. It is not only necessary to consider the shelf life and food quality, but also to pay attention to the so-called "hygiene" and "convenience" adjustment degree, which will convey an illusory psychological expectation to people [80]. In recent years, the food industry has developed rapidly. In order to enhance the edible value of food and improve the taste of food, food additives have become an effective quality assurance transition product, which can not only truly prolong the effective quality value of food, but also improve consumers' psychological perception of food positioning [81]. Imminent food is a common food, and food safety naturally becomes the most critical issue. On the one hand, food quality and safety should be guaranteed, on the other hand, consumers' psychological worries should be reduced, and the best way to improve consumers' right to know about quality is [82].

H4. The degree of warranty period moderates the correlation between value perception, brand positioning mentality and adoption intention

H4a. The degree of warranty period regulates the correlation intensity of quality perception and brand positioning mentality

H4b. The degree of warranty period regulates the correlation intensity of brand positioning mind and adoption intention

RESEARCH DESIGN

1. Research methods

This research focuses on value perception and consumer mind. In the research, we obtain model sample data in three ways, and verify theoretical models and hypotheses through structural equation models. Through the value attributes of cold chain prepared dishes, this paper explores the value perception of different consumers, which directly or indirectly affects the adoption intention of prepared dishes, and explains the role of intermediate variables in brand positioning mentality. Meanwhile, it also explores the strong and weak role of variable of easy damage degree and quality guarantee degree in the adjustment process. In order to further explain the universality and particularity, based on the combination of qualitative research and quantitative research, this paper selects three types of prepared dishes with different characteristics, and explores the model particularity of different types of prepared dishes through the difference of structural equation model and correlation.

a. Research measures the population

Pre-survey: Based on the survey questions and measurement contents, face-to-face interviews were conducted with two groups of sample people (each group of three) to check whether the contents of the survey questionnaire were correct and clear. Then, the final survey questionnaire was further optimized and solidified according to the interviewees'

feedback. See appendix I Part Four: Personal information for details. Before carrying out the questionnaire, the respondents were trained to fully understand the procedures and links of the survey. The pre-survey of the small sample was conducted from July 5 to July 25, 2022 (summer), and a total of 82 sample data were collected. Based on the sample data of the pre-survey, a formal questionnaire can be formed after fine tuning and improvement. According to the formal survey of large samples, since August is the full season (peak season) for the products of limited companies in various provinces or cities, both the types of prepared dishes and the demand of consumers are quite sufficient, so we will conduct a formal survey from August 8 to 18, 2022. A formal survey was conducted on experimental base companies and downstream distribution points of Chengdu Xindu Logistics, Jingdong Logistics Chengdu, Luzhou Logistics, Guiyang Logistics, etc. In order to ensure the diversity of different regions and fields, as well as to better collect real original data, we rewarded visitors with red envelopes and points. A total of 476 points were collected in the formal questionnaire, and 418 samples were obtained after screening.

b. Research analysis tools

In this paper, SPSS17.2 software was used for preliminary analysis and test of sample data, and WarpPLS3.0 software was used for analysis and verification of structural equation model. Specific steps were carried out according to the two steps of Anderson and Gerbing (1988). First, SPSS software was used to test the consistency and difference of the measurement model. Then, WarpPLS3.0 software was used to analyze the hypothesis correlation in the theoretical research model, as well as the significance and strength of the variables.

2. Research objects

From the type of prepared food, prepared food is generally divided into four categories: ready-to-eat food, hot food, cooked food, ready to serve food. Ready-to-eat food refers to food that requires no additional processing and can be eaten straight from the packaging. Dried beans, chicken feet with pickled peppers, and chicken breasts are all in the supermarket snack section. Hot food refers to the food that can be eaten immediately after heating with hot water or microwave oven, such as instant noodles, instant rice and other instant food, which is extremely convenient. Cooked food generally refers to the food that can be eaten after seasoning and other processing and cooking under the conditions of cutlery, POTS and utensils, such as frozen dumplings, boiled fish, frozen steak and so on. That is, with food refers to the combination of small stir-fried vegetables, meat, accessories and so on, which are packaged according to the portion size after preliminary processing such as cleaning and cutting. More and more people are buying prepared food. What is more popular? In addition to going to supermarkets and food markets to buy, fresh e-commerce and live streaming have also become a gathering place for people to place orders. We scoured popular prepared dishes on various platforms, trying to find the selling points of prepared dishes to attract consumers. What are the popular pre-made dishes on Ding Dong Mai, Hema and Douyin?

Based on the actual online and offline data information to match the type of this study, we choose three kinds of prepared dishes as the research model food. On the one hand, the sales volume of this kind of prepared dishes ranks top; on the other hand, the various components in the prepared dishes have extended vulnerable properties and different levels of quality assurance. Finally, We chose "Fish with pickled cabbage" with Sichuan characteristics, "beef brisket with tomato" with northern characteristics and "Huangpi fishball"

with Hubei characteristics. At the same time, from the perspective of consumer evaluation, these three products have some similarities and differences in value perception, brand positioning, product appearance, food damage, main material material, cold chain logistics and other aspects. Therefore, these three prepared dishes are suitable for the analysis and verification of this study.

3. Variable definition and measurement

a. Factor variable: traditional survey method.

The factor questionnaire used a popular 5-point Likert scale, with a scale from 1 to 5 representing the lowest to the highest degree. See Appendix I for a detailed survey questionnaire.

- (1) Value perception. The research found that cold chain prepared dishes are the expansion products of food, and the brand identity value of cold chain prepared dishes is deeply rooted in people's hearts [83-86], on the one hand, prepared dishes and other foods have food quality value [87-90], on the one hand, it needs to have the characteristics of convenience [91-92] [103-104], meanwhile, the economic value of food is also indispensable [93-95]. Therefore, this study constructs the value perception scale in this paper by referring to the research of relevant experts and scholars, questionnaires and scales, etc., with a total of 12 questions.
- (2) Easy to damage degree. It is found that food or food will be damaged, especially cold chain prepared dishes, which require high temperature and logistics environment. Therefore, this study referred to the research of relevant experts and scholars, questionnaires and scales to construct the vulnerability scale of this paper, with a total of 3 items.
- (3) The degree of warranty. According to the Research Report on the Development Trend of China's Prepared Dishes Industry in 2022 released by iMedia Research, 35.9% of consumers prefer prepared dishes with a shelf life within 7 days; 27.5% of consumers prefer prepared dishes with a shelf life of less than 1 month; The lowest percentage of consumers, at 1.3 percent, preferred prepared dishes with a shelf life of more than a year. The study found that the meat products, vegetables, ingredients, sauce bags and other internal bags in the prepared dishes have a certain period of shelf life, among which the shortest shelf life of 1-3 days, the longest shelf life of up to 12 months. Not only that, the preservation methods marked on the inner packaging bags are also different. Some are stored at room temperature, while others need to be frozen at -18°C [96-98]. Therefore, this study referred to the research of relevant experts and scholars, questionnaires and scales to construct the quality warranty scale in this paper, with a total of 3 items.
- (4) Brand positioning mentality. This paper modified the maturity scale which has been empirically tested and combined with the actual situation of cold chain food research. Refer to consumer Shopping Style Scale (CSI) (Xue Haibo, 2008), Social responsibility Consumption Behavior Scale [99], three-dimension factor scale of consumer behavior[100], consumption experience and interactive consumer cyclical mental model [101]. Therefore, In this study, the brand positioning value scale of this paper is constructed by referring to the research of relevant experts and scholars, questionnaires and scales, etc., with a total of 4 questions. At the same time, open coding survey method was also adopted in the scale design process [44].

(5) Measurement of users' willingness to adopt and purchase behavior. This study refers to the AIO scale [24], the Stanford Research Institute (SRI) VALS scale [25], the influence of purchase intention [26], and the purchase intention of consumers [107], purchase intention Scale [105], and purchase intention [106]. Behavioral intention and purchase behavior are the most common variables used to measure adoption and purchase. Three questions were designed for behavioral intention and purchase behavior

b. Independent variable perception conversion review variable evaluation: cross operation processing.

In this paper, we innovatively propose a new measurement method of value perception, namely the dual role of value importance and value perception. Proposed in his research that the evaluation of mobile terminal device loss behavior [27] was formed by the cross operation of perceived damage and perceived importance. Similarly, in this paper, the research items of value perception are divided into two categories (perceived importance and perceived value). The specific calculation process of value perception and value evaluation are described as follows (formula and Table 1).

$$\text{Value assessment}_i = \left(\frac{\text{Value importance}_i}{5} \right) \times \text{value perception}_i ; i=1,2,3,4,5$$

Table 1. Description of valuation.

Value assessment	(Value importance / 5) × Value perception
Brand value evaluation	(∑ brand importance / 5) × ∑ brand perception
Quality value evaluation	(∑ quality importance / 5) × ∑ quality perception
Convenience value assessment	(∑ convenience importance / 5) × ∑ convenience perception
Economic value assessment	(∑ economy importance / 5) × ∑ economy perception

c. Model comparison: ZMET survey method

As a traditional survey questionnaire, it is mainly used for consumers' opinions on traditional commodities, household items or electronic products, etc., but prepared dishes have special characteristics such as color, fragrance, etc., so it is more appropriate to adopt ZMET which is more intuitive and easy to quantify (a new ZMET technology measurement method [39]).

After characteristic processing of all variables and logical optimization of components, the research model of this paper is shown in Figure 2.

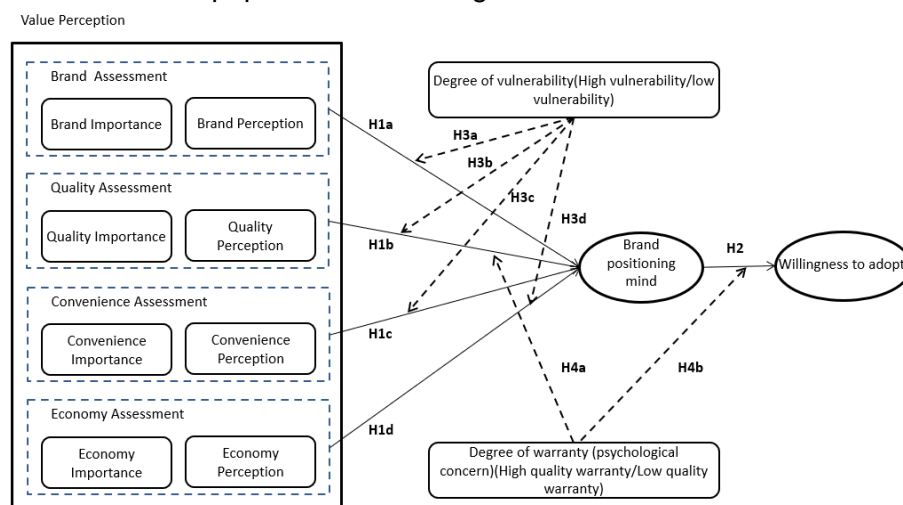


Figure 2. Purchasing behavior model of cold chain prepared vegetables

RESULTS AND DISCUSSION

In this study, structural equation model SEM was used to test the relationship between variables and research hypotheses of the hypothesis theoretical model. 418 compliance research samples were collected through questionnaires, following the two-stage analysis method [78]. In the first stage, SPSS software was used for exploratory analysis to test the reliability and validity of the measurement model. In the second stage, WarpPLS software was used to measure the correlation and overall situation of the structural model. The exploratory factor analysis and structural equation analysis processes were introduced below.

Exploratory analysis

In this paper, SPSS17.0 is used to conduct exploratory factor analysis for value perception, positioning mind, adoption willingness, and moderating variables. The questionnaire of value evaluation consists of two parts. The first part is the importance of value attributes recognized by consumers, and the second part is the value perception of cold chain prepared dishes. The factors of value importance are consistent with those of value perception, so we only conduct exploratory factor analysis for value perception.

1. Prerequisites for factor analysis

Table 2 shows the results of the exploratory factor prerequisite analysis. In the scale of perceived value, KMO value was 0.882, higher than 0.6. Other KMO readings were also above 0.6. Bartlett test of Sphericity sphericity has an approximate chi-square value of 3418.952, which rejects the hypothesis of non-correlation between variables. Meanwhile, with 12 degrees of freedom and 0 significance ($p < 0.001$), it passes the significance test with a significance level of 1%. So the results satisfy the prerequisite of factor analysis.

Table 2. KMO and Barlett's analysis of structural equation models.

Class of measurement	Kaiser-Meyer-Olkin KMO	Bartlett's Test of Sphericity		
		Approx. hi-Square	df	Sig.
Value perception	0.882	3418.952	12	0.000
Brand positioning mind	0.651	252.796	4	0.000
Degree of vulnerability	0.696	353.440	3	0.000
Degree of warranty	0.729	242.195	3	0.000
Willingness to adopt	0.773	308.668	3	0.000

2. Credibility analysis

First of all, SPSS software was used to test the model: Cronbach's alpha value of Klonbach coefficient tests whether each component presents strong internal consistency reliability. It is generally believed that when the value of Klonbach coefficient is higher than 0.7, it belongs to high reliability. The principle of mixed reliability evaluation is that the estimation coefficient of the measurement item is significant to the hidden component factor. Klonbach coefficients of all latent variables in the scale in this study were greater than 0.7, indicating that the scale had good internal consistency and the questionnaire and measurement model had high reliability. See Table 3 for details.

In the exploratory factor analysis, principal component analysis (PCA) was selected to conduct exploratory factor analysis on 25 items of the scale, and the maximum variance method was used for rotation. Finally, four principal component factors with initial eigenvalues

greater than 1 were extracted. The accumulated variance interpretation rate loaded by the sum of squares was 74.341%, exceeding 60%. The situation of other factors also exceeded the standard (see Table 3 for details), indicating that the 8 factors extracted from the 25 items in this study had ideal interpretation of the original data, and the scale had good structural validity.

Table 3. Exploratory factor analysis

Latent variable	Value perception	Klonbach α	Standardized factor load	Eigenvalue Ev	Reliability C α	Interpretation Variable %	Cumulative explanatory variable %
Value perception factor 1: brand perception	Brand awareness 1: Lift cold chain prepared dishes **. Brand Awareness 2: I think it works with all kinds of brands. Brand Awareness 3: Ingredients included in cold chain prepared dishes ***	0.78	0.818 0.830 0.836	2.627	0.933	19.185	19.185
Value perception factor 2: quality perception	Quality perception 1: Usually, cold chain ***. Quality Perception 2: The prepared dishes you eat ***. Quality perception 3: If the ingredients of prepared dishes include ***	0.74	0.905 0.912 0.926	2.809	0.958	17.213	36.398
Value perception factor 3: convenience perception	Convenience perception 1: The enterprise can provide better **. Perception of Convenience 2: Food in transit. Perception of Convenience 3: Buy the combination of ***	0.69	0.865 0.860 0.854	2.779	0.964	18.877	55.275
Value perception factor 4: economic perception	Economic perception 1: After the approximate raw materials, packaging perfect. Economic Awareness 2: Same category of Ready-to-cook Prepared food ***. Economic perception 3: There are many brands of similar prepared dishes	0.77	0.903 0.877 0.864	2.699	0.917	19.066	74.341
Latent variable	Regulating variable		Factor item	Ev	C α	Ed (%)	Cvc (%)
Regulating variable factor 1: vulnerability degree	Easy to damage 1: in the process of food logistics. Easy damage degree 2: in the process of transporting food, due to ***. Easy damage degree 3: from raw material collection to finished product packaging	0.85	0.811 0.786 0.700	1.959	0.712	36.326	36.326
Regulating variable factor 2: degree of warranty period	Warranty Degree 1: When buying cold chain prepared vegetables ***. Warranty period Degree 2: food processing technology for cold chain prepared vegetables ***. Warranty Level 3: Your purchase of cold chain prepared vegetables ***	0.76	0.759 0.694 0.533	1.424	0.651	31.859	68.185
Latent variable	Brand positioning mind		Factor item	Ev	C α	Ed (%)	Cvc (%)
Brand positioning mind	Mental factor 1: recognize the enterprise adhere to the "quality above all" **. Mind Factor 2: Prepared food is more than just a recipe for innovation. Mental Factor 3: Material products are abundant ***. Mental factor 4: The core of cold chain logistics transportation lies in the revolution	0.88	0.813 0.757 0.690 0.725	1.784	0.662	61.286	61.2863
Latent variable	Willingness to adopt		Factor item	Ev	C α	Ed (%)	Cvc (%)

	Adoption willingness factor 1: When prepared dishes are heavily promoted **		0.844				
	Adopt willingness Factor 2: When you entertain friends and family ***	0.87	0.809	2.834	0.825	67.116	67.116
Willingness to adopt	Adoption willingness factor 3: In addition to buying prepared food yourself ***		0.883				

In the value perception component, according to the content of the measurement items, the factor of the first value perception component reflects the relevant content of prepared dishes and enterprise brands, so the factor is defined as "brand perception". By the same principle, the second factor is defined as "quality perception"; The third factor was defined as "convenience perception"; The fourth factor is defined as "economic perception". In the value importance measurement scale, according to the content of measurement items, the first factor also reflects the importance of prepared dishes and enterprise brand related content, so the factor is defined as "brand importance", similarly, the second factor is defined as "quality importance", and the third factor is defined as "convenience importance". The fourth factor is defined as "economic importance". The loads of all measurable variables were greater than 0.5, meeting the minimum limit of factor loads, and the constructed measurement structures all explained more than 50% of the variance, as shown in Table 3.

Confirmatory analysis

1. Consistency validity

The convergence validity of the scale was tested by standardized factor load values, combination reliability (CR) and mean variance sampling (AVE). According to the test criteria proposed By [59], ① the factor loading (λ) of all the measured items should be significant, and the Cronbach α value should exceed 0.7; (2) The combined reliability of each variable should exceed 0.8; ③ The average extraction variance (AVE) of each variable should exceed the deviation caused by component measurement errors (e.g. AVE should exceed 0.5).

Table 4. CR, AVE, Cronbach's α , VIF model validity table

Model	Brand perception	Quality perception	Perception of convenience	Economic perception	Degree of vulnerability	Degree of warranty	Brand positioning mind	Willingness to adopt
Crobach a	0.78	0.74	0.69	0.77	0.85	0.76	0.88	0.87
AVE	0.886	0.885	0.843	0.892	0.883	0.859	0.896	0.893
CR	0.961	0.955	0.911	0.966	0.978	0.929	0.981	0.976
VIF Sauerkraut fish	5.562	5.663	4.379	5.505	5.772	4.184	5.758	5.773
VIF Stewed beef brisket with tomato	5.837	5.713	4.355	5.612	5.784	4.091	5.772	5.791
VIF Huangpi fish balls	5.533	5.691	4.343	5.608	5.776	4.133	5.749	5.755
Item number	3	3	3	3	3	3	4	3

As the second part of the questionnaire, it is the value evaluation model of three cold chain prefabricated dishes, one is the pickled cabbage and fish prefabricated dish model, the other is the tomato stewed beef belly prefabricated dish model, and the other is the Huangpi fish ball prefabricated dish model. We respectively conducted confirmatory factor analysis on the three prefabricated dish models, and the coefficients of structural variables, For example, CR, AVE and VIF coefficients are shown in Table 4. The standardized factor loading values of each item corresponding to the 8 latent variables are close to or greater than the standard value 0.7, indicating that each latent variable has a good representation of the corresponding topic,

satisfying ①. The combined reliability of each latent variable ranges from 0.911 to 0.981, all greater than the standard value of 0.7, satisfying ②. AVE of other latent variables is greater than the standard value 0.5, satisfying ③. In summary, the convergence consistency validity of the scale is ideal.

2. Discriminant validity

Discriminant validity [59] is the difference that measures the AVE of each variable and its cocorrelation with other variables. To ensure the discriminant validity, we must ensure that: (1) the square root of AVE of each variable is more cocorrelated (non-diagonal) than it is with other variables; ② The item loads of each variable are larger than their cross-loads on other variables [87].

In the internal correlation measurement facilitated by the model, the maximum correlation of structural variables is 0.763 respectively, namely quality perception and economic perception. Meanwhile, the minimum square root of AVE is 0.918. Satisfy ①; Item loads of each variable are larger than their cross loads in other variables [66], satisfying ②. Therefore, the results show that the research model meets the discriminant validity level. As shown in Table 5.

Table 5. Matrix table of model structure variables

Component variable	Brand perception	Quality perception	Perception of convenience	Economic perception	Degree of vulnerability	Degree of warranty	Brand positioning mind	Willingness to adopt
Brand perception	(0.948)							
Quality perception	0.309	(0.957)						
Perception of convenience	0.276	0.311	(0.966)					
Economic perception	0.237	0.763	0.140	(0.951)				
Degree of vulnerability	0.708	0.602	0.755	0.341	(0.987)			
Degree of warranty	0.334	0.722	0.247	0.535	0.469	(0.918)		
Brand positioning mind	0.203	0.327	0.700	0.514	0.611	0.636	(0.962)	
Willingness to adopt	0.258	0.467	0.242	0.702	0.343	0.392	0.557	(0.965)

Finally, it can be seen from the scale validity of the model that all the combined validity values are greater than 0.70. As shown in Table 5, the minimum CR value is 0.957, and the combined validity values of all components are acceptable. Therefore, the confirmatory factor analysis of tomato stewed beef brisket and Huangpi balls model meets the requirements.

3. Combination reliability

The effectiveness of the scale is evaluated by combining reliability values (CR). According to the above criteria, CR values must all be greater than 0.7. As can be seen from Table 4, the minimum value of CR is 0.911, and CR values of all variables are acceptable. Therefore, the validation analysis of this type meets the requirements.

Through the above exploratory factor analysis and confirmatory factor analysis, it is verified that the measurement model in this study has good reliability and validity.

Structural equation analysis

In this paper, we use WarpPLS 3.0 to calculate the structural equation model, explore consumers' perception of the value attribute of prepared dishes, and through the intermediate conduction of brand positioning mind, how to indirectly affect consumers' willingness to adopt under the dual adjustment of cold chain damage degree and quality warranty degree. In the construction of PLS model, due to the cross-processing of data, the average value importance and the average perceived value are multiplied to obtain a final data value, that is, the data value of value evaluation. The data on brand positioning mindsets and adoption intentions came directly from the questionnaire samples. Results The equation model was calculated and verified according to three different prepared vegetable products.

1. Structural equation model of Sauerkraut fish

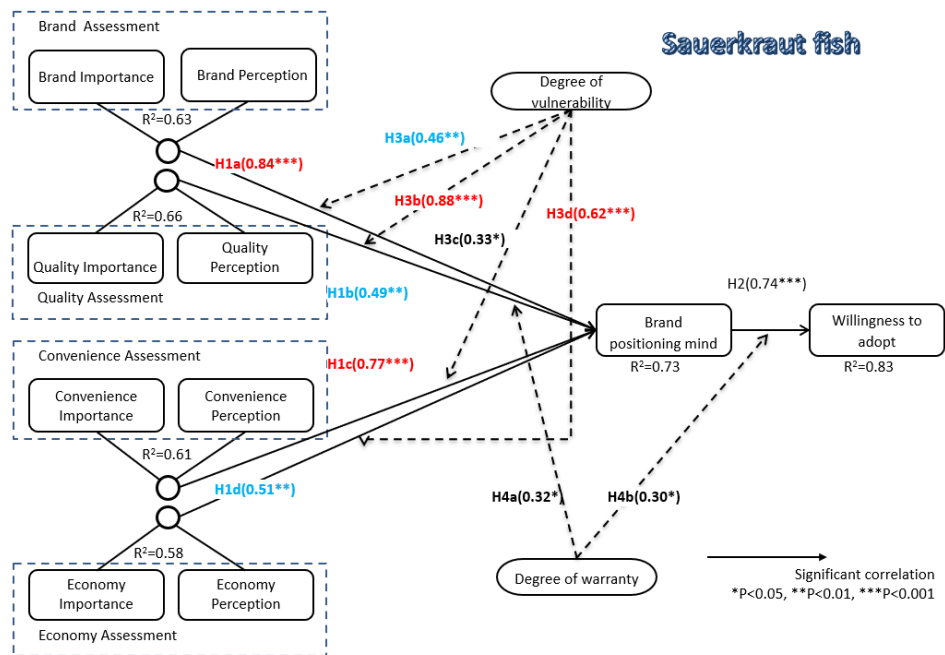


Figure 3. Structural equation model analysis results of "Sauerkraut Fish" prepared dish.

The results of structural equation model analysis of "pickled cabbage fish" showed that ① brand value evaluation ($\beta=0.84$, $P<0.001$) and convenience value evaluation ($\beta=0.77$, $P<0.001$) had significant correlation with brand positioning mind. Quality value evaluation ($\beta=0.49$, $P<0.01$) and economic value evaluation ($\beta=0.51$, $P<0.01$) had significant correlation with brand positioning mentality. ② Brand positioning mind ($\beta=0.74$, $P<0.001$) was significantly correlated with adoption intention. ③ The degree of vulnerability significantly adjusted the strength relationship between quality value evaluation ($\beta=0.88$, $P<0.001$) and economic value evaluation ($\beta=0.62$, $P<0.001$) and brand positioning mentality, and significantly adjusted brand value evaluation ($\beta=0.76$, $P<0.001$). In general, the relationship between convenience value evaluation ($\beta=0.66$, $P<0.001$) and brand positioning mind was significantly moderated. ④ The degree of quality assurance period significantly moderated the relationship between quality value evaluation ($\beta=0.32$, $P<0.05$) and brand positioning mind, and the degree of quality assurance period significantly moderated the relationship between brand positioning mind ($\beta=0.30$, $P<0.05$) and adoption intention. For the structural equation model represented by "Sauerkraut Fish", the explanatory degree of adoption intention reached 83%. This model well explains consumers' adoption behavior of cold-chain prepared dishes "Sauerkraut fish".

2. Structural Equation model of "Tomato beef Brisket"

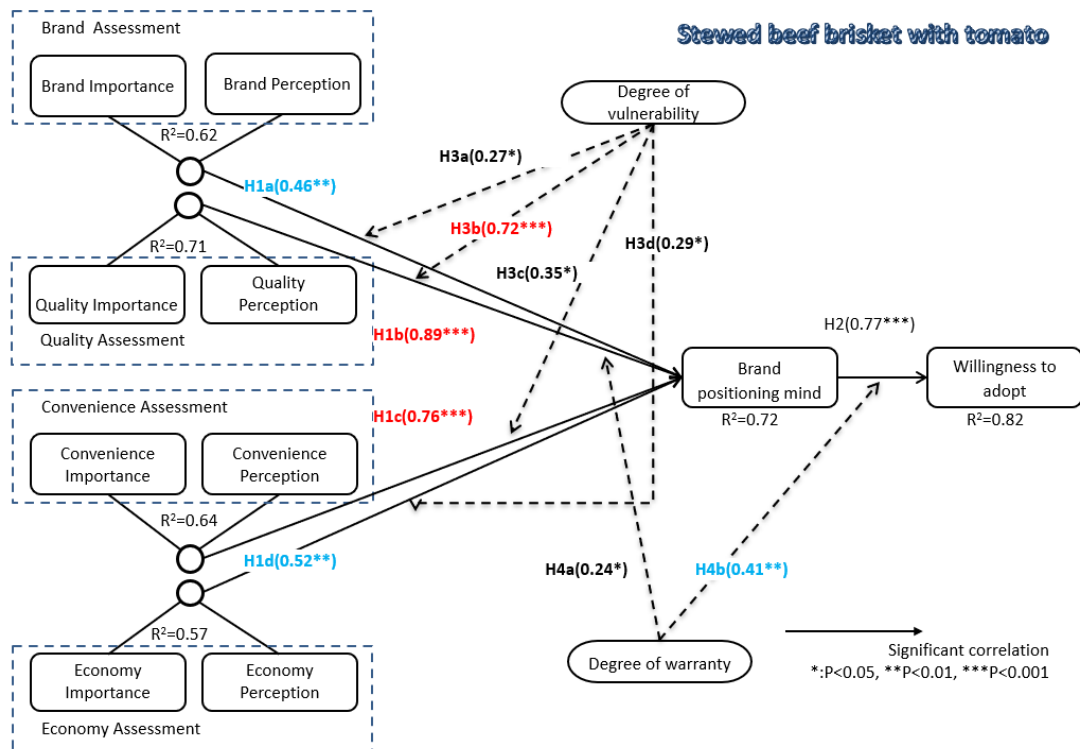


Figure 4. Structural equation model analysis results of "tomato beef brisket" prepared dish.

The results of structural equation model analysis of "tomato stewed beef brisket" showed that ① quality value evaluation ($\beta=0.89$, $P<0.001$) and convenience value evaluation ($\beta=0.76$, $P<0.001$) were significantly correlated with brand positioning mind. Brand value evaluation ($\beta=0.46$, $P<0.01$) and economic value evaluation ($\beta=0.52$, $P<0.01$) had significant correlation with brand positioning mentality. ② Brand positioning mind ($\beta=0.77$, $P<0.001$) was significantly correlated with adoption intention. ③ The degree of vulnerability significantly moderated the relationship between quality value evaluation ($\beta=0.72$, $P<0.001$) and brand positioning mind. Generally, the relationship between brand value evaluation ($\beta=0.27$, $P<0.05$), convenience value evaluation ($\beta=0.35$, $P<0.05$), economic value evaluation ($\beta=0.29$, $P<0.05$) and brand positioning mentality was significantly moderated. (4) The degree of quality assurance significantly moderated the strength relationship between quality value assessment ($\beta=0.24$, $P<0.05$) and brand positioning mind, and the degree of quality assurance significantly moderated the strength relationship between brand positioning mind ($\beta=0.41$, $P<0.01$) and brand positioning mind. For the structural equation model represented by "tomato braised beef brisket", the adoption intention was 82% explained, which well explained the consumer's adoption behavior of cold chain prepared dish "tomato braised beef brisket".

3. Structural Equation model of "Huangpi Fishball"

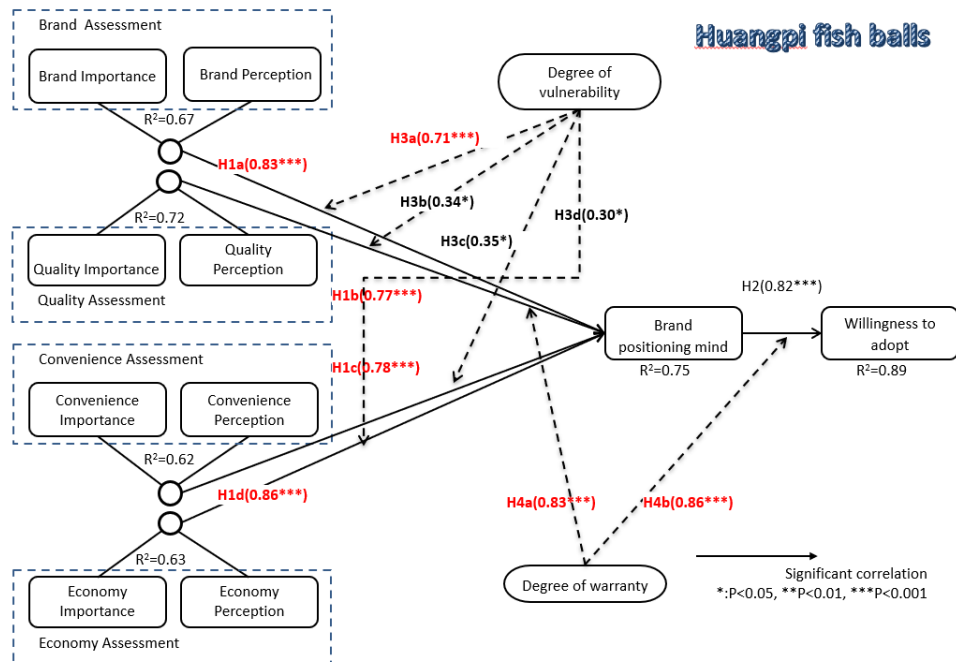


Figure 5. Structural equation model analysis results of "Huangpi Fishball" prepared dish.

The structural equation model analysis results of "Huangpi Fishball" show that ① Brand value evaluation ($\beta=0.83$, $P<0.001$), quality value evaluation ($\beta=0.77$, $P<0.001$), convenience value evaluation ($\beta=0.78$, $P<0.001$) and economic value evaluation ($\beta=0.86$, $P<0.001$) have very significant correlation with brand positioning mind. ② Brand positioning mind ($\beta=0.82$, $P<0.001$) was significantly correlated with adoption intention. ③ The degree of vulnerability generally significantly moderated the relationship between quality value evaluation ($\beta=0.34$, $P<0.05$), convenience value evaluation ($\beta=0.35$, $P<0.05$), economic value evaluation ($\beta=0.30$, $P<0.05$) and brand positioning mentality. The degree of vulnerability significantly moderated the relationship between brand value assessment ($\beta=0.71$, $P<0.001$) and brand positioning mind. ④ The degree of quality assurance significantly moderated the relationship between quality value evaluation ($\beta=0.83$, $P<0.001$) and brand positioning mind, and the degree of quality assurance significantly moderated the relationship between brand positioning mind ($\beta=0.86$, $P<0.001$) and brand positioning mind. With regard to the structural equation model represented by "Huangpi fishball", the explanatory degree of adoption intention reached 89%, which well explains consumers' adoption behavior of cold-chain prepared dish "Huangpi fishball".

Analysis of model results

1. Model suitability analysis

In this paper, the mean path coefficient (APC), the mean R-squared (ARS) and the mean variance diffusion factor (AVIF) were observed and the model fit was examined. The coefficients of average path coefficient (APC) and average R-squared (ARS) in the model were significant ($P<0.001$), and the values of average variance diffusion factor (AVIF) were both lower than 5, indicating that the models of three different cold-chain prepared vegetable products had good compatibility (see Table 6).

Table 6. Model fit and significance

Model	Sauerkraut fish	Stewed beef brisket with tomato	Huangpi fish balls
APC	APC=0.246, P<0.001	APC=0.245, P<0.001	APC=0.233, P<0.001
ARS	ARS=0.694, P<0.001	ARS=0.635, P<0.001	ARS=0.627, P<0.001
AVIF	AVIF=2.602	AVIF=2.594	AVIF=2.553

After observing the significance between the variables and the variance values of R, we found that the R explanatory degree of adoption intention of the three different models was above 65%, exceeding the standard value of structural equation model by 60% (Falk and Miller 1992), suggesting that all three models had satisfactory explanatory ability.

2. Analysis of model results

The research results verify a total of 11 research hypotheses, as shown in Table 7.

Table 7. Summary of model results

Item	hypothesis	Sauerkraut fish	Stewed beef brisket with tomato	Huangpi fish balls
H1	There is significant correlation between value perception and brand positioning mentality			
H1a	Brand value and brand positioning mentality have significant correlation	Very significant	Relatively significant	Very significant
H1b	Quality value and brand positioning mentality have significant correlation	Relatively significant	Very significant	Very significant
H1c	There is a significant correlation between convenience value and brand positioning mentality	Very significant	Very significant	Very significant
H1d	Economic value and brand positioning mentality have significant correlation	Relatively significant	Relatively significant	Very significant
H2	There is a significant correlation between brand positioning mentality and adoption willingness	Very significant	Very significant	Very significant
H3	The degree of vulnerability moderates the influence of value perception and brand positioning mentality			
H3a	The degree of vulnerability moderates the correlation strength of brand perception and brand positioning mind	Relatively significant	Generally significant	Very significant
H3b	The degree of vulnerability moderates the correlation strength of quality perception and brand positioning mind	Very significant	Very significant	Generally significant
H3c	The degree of vulnerability moderates the correlation strength of convenience perception and brand positioning mind	Generally significant	Generally significant	Generally significant
H3d	The degree of vulnerability moderates the correlation strength of economic perception and brand positioning mind	Very significant	Generally significant	Generally significant
H4	The degree of warranty period adjusted the correlation strength of independent variable, intermediate variable and dependent variable			
H4a	The degree of warranty period moderates the correlation strength of quality perception and brand positioning mind	Generally significant	Generally significant	Very significant
H4b	The degree of warranty period moderates the correlation intensity of brand positioning mind and adoption intention	Generally significant	Relatively significant	Very significant

CONCLUSION

This paper constructs an adoption model of cold chain prepared dishes based on Chinese consumers' brand positioning mentality, verifies the perceived value scale of cold chain prepared dishes, and reveals how Chinese consumers' value perception of cold chain prepared dishes influences their adoption behavior and willingness through brand positioning mentality. Based on structural equation model analysis of three prepared vegetables, the following findings were made. The analysis results show that the relevant attributes of cold chain prepared dishes, such as brand value, quality value, convenience value and economic value, have a significant impact on consumers' brand positioning mentality.

This paper innovatively determines the perceived value measurement scale of cold chain prepared dishes. The previous technology adoption theory is often used to focus on products and technical factors, but this paper for the first time extensively links the perceived value of food with the adoption behavior, and constructs and analyzes the adoption model of cold chain prepared dishes from the perspective of consumers' brand positioning mentality. This further deepens the adaptive scope of the adoption behavior model. At the same time, this paper excavates and determines two very valuable moderating variables between the value perception and brand positioning mind, namely, the degree of vulnerability and the degree of quality assurance, which further expands the control field of the adoption model.

Based on the whole life cycle of cold chain prefabricated dishes, manufacturers can better design influence strategies. On the one hand, the perceived value of cold chain prefabricated dishes can be comprehensively improved, and on the other hand, the control effect of cold chain adjustment variables (degree of vulnerability to damage and degree of warranty period) on consumers' brand positioning mentality can be realized. With the influence mechanism of internal factors of products and external factors of environment, both cold chain industry and cold chain prepared dish enterprises can better prepare for enterprise transformation and market development.

Limitation of this study are the area of empirical research is not extensive enough, only focusing on the southwest region; The types of prepared dishes are not rich enough, and only two representative food categories are focused, which limits the category and coverage of samples, and also limits the research results to some extent. Future studies will cover a larger geographic range area and add more sample sizes. Secondly, the research scene in this paper is still limited to the physical entrance and telephone entrance, and the Internet entrance has not been fully taken into account, which is not enough to grasp the trend of the Internet era. Future research will comprehensively consider the entrance of all kinds of cold chain prepared dishes, further adjust the perceived value, consumer mentality and model parameters, and obtain a more ideal adoption model.

Acknowledgement

This work was supported by the National Social Science Foundation project: Research on the Optimization and Safe Operation of the Logistics System of Infectious Medical Waste under Sudden Major epidemic (Approval number: 20XGL024), Sichuan E-commerce and Modern Logistics Research Center (Approval No. Dsw-1), Sichuan National Mountain Economic Development Research Center (Approval No. SDJJ202216), Cold Chain Logistics Research and Innovation Team Construction Project of Sichuan Tourism University (Approval No. 21SCTUTY08), Sichuan Cuisine Development Research Center (Approval number CC22G02).

REFERENCES

- [1] Zeithaml, Valarie A. (1988). "Consumer perception of price, quality, and value: A means-end model and synthesis of evidence," *Journal of Marketing*, 52 (July), 2-22. 83.
- [2] Parasuraman, v. a. z, berry(1988). "servqual: a multiple-item scale for measuring consumer perceptions of service quality" *journal of retailing* volume 64: pp, 12-40.
- [3] Sheth, J. N., Newman, B. I. and Gross, B. L., 1991, "Why we buy what we buy: a theory of consumption values", *Journal of Business Research*, 22.
- [4] Sweeney C and Soutar, N. Geoffrey, 2001, *Consumer Perceived Value: The Development of a Multiple item scale*[J]. *Journal of Consumer Research* 2001. 77.
- [5] Sweeney J C, Soutar G N. *Consumer perceived value: the development of a multiple item scale*[J].*Journal of Retailing*, 2001,77:203-220.
- [6] Sproles, George B., Kendall, Elizabeth L. *A Methodology for Profiling Consumers' Decision - Marking Styles*[J]. *Journal of Consumer Affairs*, 1986, 20(2):267-279.
- [7] Gray, H. M., Gray, k., & Wegner, D. M.(2007). *Dimensions of mind perception*. *Science*, 315(5812), 619-620.
- [8] Haslam, N.(2006). *Dehumanization: An integrative review*. *Personality and social psychology review*, 10(3), 252-264.
- [9] Alicke, M. D., Dunning, D. A., & Krueger, J. (2013). *The self in social judgment*. Psychology Press.
- [10] Naylor, R. W., Lamberton, C. P., & Norton, D. A. (2011). *Seeing ourselves in others: Reviewer ambiguity, egocentric anchoring, and persuasion*. *Journal of Marketing Research*. 48(3), 617-631.
- [11] Epley, N., Waytz, A., & Cacioppo, J. T.(2007). *On seeing human: a three-factor theory of anthropomorphism*. *Psychological review*, 114(4), 864.
- [12] Bering, J.M. (2002). *The existential theory of mind*. *Review of General Psychology*, 6(1), 3-24.
- [13] Kim, H. Y., & McGill, A. L.(2018). *Minions for the Rich? Financial Status Changes How Consumers See Products with Anthropomorphic Features*. *Journal of Consumer Research*, 45(2), 429-450.
- [14] Ohtsubo, Y. (2007). *Perceived intentionality intensifies blameworthiness of negative behaviors: Blame-praise asymmetry in intensification effect*. *Japanese Psychological Research*, 49(2), 100-110.
- [15] Fishbein, M. and Ajzen, I.(1975), *Beliefs, Attitude, Intention and Behaviour: An Introduction to Theory and Research*, Addison-Wesley, Reading, MA, 101-112.
- [16] [Ajzen, I. (1985), "From Intentions to Actions: A Theory of Planned Behavior," in *Action Control: From Cognition to Behavior*, J. Kuhl and J. Beckmann, eds. New York: Springer Verlag, 11-39.
- [17] Giddens, Anthony, 1979 : *Central Problems in Social Theory*, University of California Press.57–68.
- [18] Lee Ming-Chi (2009), "Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit", *Electronic Commerce Research and Applications*, Volume 8, Issue 3, May–June, 130-141.
- [19] Davis, F.D. (1989). "Perceived usefulness, perceived ease of use and user acceptance of information technology", *Mis Quarterly*, Vol. 13, No. 3, 319–340.
- [20] Goodhue D L, Thompson R L. *Task-technology fit and individual performance*. *MIS Quarterly*. 1995.
- [21] Venkatesh, Hillol Bala. *Technology Acceptance Model 3 and a Research Agenda on*

- Interventions[J]. *Decision Sciences*, 2008, 39(2):273-315.
- [22] Venkatesh, V., Morris, M.G., Davis, G.B., and Davis, F.D. (2003), "User Acceptance of Information Technology: Toward a Unified View", *MIS Quarterly*, Vol.27, No.3, 425-478.
- [23] Wells. W., and Tigert. D. (1977), "Activities,interests,and opin-ions," *Journal of Advertising*, 17(8):126-144.
- [24] Mitchell, A., *The Nine American Lifestyles*, New York: Warner, 1983. 22(6):103-115.
- [25] Fernando R. Jimenez,Norma A. Mendoza.Too Popular to Ignore: The Influence of Online Reviews on Purchase Intentions of Search and Experience Products[J].*Journal of Interactive Marketing*.2013,27(3):203-225.
- [26] [26] Yuan, Y.F., (2012) Understanding User Behavior in Coping with Security Threats of Mobile Device Loss and Theft, *International Conference on Information Systems*.
- [27] Bai Changhong, Liao Wei. Research on Customer Satisfaction based on Customer Perceived Value [J]. *Nankai Journal (Philosophy and Social Sciences Edition)*,2001(6):14-20.
- [28] Fan Xiucheng, Luo Haicheng. Analysis on Competitiveness of Service Enterprises based on Customer Perceived Value [J]. *Nankai Management Review*,2003,6(6):41-45.
- [29] Han Rui, Tian Zhilong. Research on the Influence of Promotion types on Consumer perception and Behavioral Intention [J]. *Management Science*,2005,18(2):85-91.
- [30] Jin Liyin. The Influence of Value Dimension of Virtual Brand Community on members' community awareness, loyalty and behavior Tendency [J]. *Management Science*, 2007,20(2):36-45.
- [31] Bai Lin. A Review of the Relationship between Customer perceived Value, Customer Satisfaction and Behavioral Tendency [J]. *Management Review*,2009,21(1):87-93.
- [32] Jiang Lianxiong, Lu Taihong, Does Image Create Value? - The influence of service brand image on customer value-Satisfication-loyalty relationship, *Management Time*, 2006,4:106-114.
- [33] Dong Dahai, Yang Yi. Theoretical analysis of Consumer perceived Value in Network environment [J]. *Journal of Management*,2008,5(6):856-861.
- [34] Li Zongwei, Zhang Yanhui, Luan Dongqing. What factors influence consumers' online purchasing decisions? -- The driving role of customer perceived Value [J]. *Management Review*,2017,29(8):136-146.
- [35] Zhong Qi, Qu Guanqiao, Tang Jiafu. Research on the Influence of O2O take-out price Promotion Strategy on consumers' Purchase Intention [J]. *Chinese Journal of Management Science*, 202, 10.163.
- [36] Liang Ling, Yuan Luhua, Xie Jiaping. An empirical study on Purchasing Behavior Mechanism of Livestream delivery users based on ABC Attitude Theory [J]. *Soft Science*,202,8(18):29-33.
- [37] The Consumer Protection Commission of Jiangsu Province released a survey report on the consumption of prepared dishes. Five problems, such as quality, taste, labeling and logistics, need to be improved [J]. *Chinese Consumer*, 2022(3):50-51.
- [38] Xu Peng. Research on Brand Positioning Model based on Consumer Cognition [D]. *Nankai University*,2009(16):36-39.
- [39] Luo Wenjun. ZMET Technology and its Application in the Mental Model of smart phone consumers [D]. *Southwest Jiaotong University*,2011(10):15-24.
- [40] Lu Fucui, Hu Pingbo. Game analysis of Chinese firms' low-end lock-in under global value network [J]. *China Industrial Economics*,2008(10):23-32.
- [41] Yu Chunling, Wang Haizhong, Zhao Ping. Review of brand equity Theory and Empirical Research [J]. *Research on Financial Issues*,2005(7):14-18. (in Chinese)
- [42] Bian Yongdi. Research on consumption mentality Promoting Brand Cultivation [J].

- Shanghai Commerce,2012(17):53-55.
- [43] Zhao Chaofeng, Chen Miaomiao. How to occupy the mind of consumers -- Analysis of the Formation mechanism of children's book brand Positioning [J]. Publishing Wide Angle,2017(12):13-15.
- [44] Qian Minghui, Guo Jialu. From Community Identity to Brand Identity: How to Increase the consumer mind Share of a brand based on online Community? [J]. Journal of Management Science, 2002,30(5):263-274.
- [45] Zhao Weihong, Xie Shengcheng, Su Chenting. The Cultural Positioning Strategy of the home Country makes the brand walk into the consumer's mind of the Host country: From the perspective of Cultural Identity [J]. Management Review,20,32(10):194-205.
- [46] Guo Xiaoyan. Research on Shared mental model of consumer food safety risk perception [D]. Hubei: Wuhan University of Technology,2016(8):14-25.
- [47] Qin Bo. Research on Brand Marketing Strategy Modularization based on consumer mind [D]. Beijing: Beijing Jiaotong University,2012(16):33-46.
- [48] Yue Jianqiu, Chen Feilong, Wu Qun. Brand advantage Building based on the development of consumer mental resources [J]. China Industrial Economics,2007(3):88-95.
- [49] Zhang Li-na. Game immersion experience and "imagination consumption" in puzzle Movies [J]. Journal of Shanghai Normal University (Philosophy and Social Sciences Edition), 202,51(2):129-137.
- [50] Xue Hai-bo. Review and Prospect of Shopping Decision Style Scale of Consumers [J]. Consumer Economics,2007,23(5):92-96.
- [51] Yan Hongxiu. The ethical matrix of data empowerment. Social Sciences,2022(1):136-142.
- [52] Qi Wenhao, Li Mingjie, Li Jingbo. Digital rural empowerment and farmers' income Growth: Mechanism and Empirical Test: Based on the moderating effect of farmers' entrepreneurial activity [J]. Journal of Southeast University (Philosophy and Social Sciences Edition), 201,23(2):116-125.
- [53] Zhang Wenhui, Wang Hui. Long-term outcome Consideration, Self-sacrifice and Leadership Empowering Behavior: The Moderating Role of Environmental Uncertainty [J]. Management World, 2009(6):115-123.
- [54] Zhang Hui-ping, Ye Qing-lin. How can the Establishment of data management organizations improve the performance of government Governance? Based on the perspective of structure empowerment and resource empowerment [J]. Review of Public Administration,202,4(3):99-122.
- [55] Yi Jiabin, Xu Di, Wang Yuting, et al. Learning orientation, Big Data capability and Business model Innovation: the moderating Effect of industry Type [J]. Management Review, 201,33(12):137-151.
- [56] Wang Wanqiu, Gao Yan, Wang Fang. Research on the function mechanism of technology M&A in industry innovation value chain: the regulatory role of information technology enablement [J]. Science and Technology Management Research,202,42(3):195-205.
- [57] Wu Xianming, Zhang Yu. Does Overseas M&A improve the performance of industrial Technological Innovation -- The Dual Moderating Effect of Institutional Distance [J]. Nankai Management Review, 2019(1):4-16.
- [58] Lian Yanling, He Xiaogang, Gao Hao. Performance expectation Gap and Corporate Strategy Adjustment: An Empirical Study of Chinese Listed Companies [J]. Management World, 2014(11):119-132.
- [59] Su Huiwen, Yu Lihong. The Effect of Corporate structure Empowerment on Team Innovation Behavior: a Moderated mediation Model [J]. Science and Technology Management Research, 202,42(8):163-172.

- [60] Li Wei, Mei Jixia. Research on the Influence of Leadership Empowerment on Employee Innovation Behavior: a Moderated mediation Model [J]. *Soft Science*, 2018,32(12):75-79.
- [61] Zhou Jinbo, Song Zhanyang. The Influence Mechanism of Leadership Empowerment on Employee Innovation Behavior: The Moderating Effect of Uncertainty avoidance and error management Climate [J]. *Science and Technology Management Research*,20,40(14):140-148.
- [62] Li Zhihong, Li Minxia. Research on Success factors of mobile commerce based on Consumer Acceptance Theory [J]. *Business Research*,2009(08):199-201.
- [63] Li Mengxiang, Gu Rui, Shang Xiaowen, Wang Kangliang. Research on Influencing Factors of continuous use Intention of mobile instant messaging Service [J]. *Management Science*, 2010,23(05):72-83.
- [64] Pan Yu, Gao Li, Zhang Xing, Wan Yan. Research on Consumer Values in the context of Chinese culture -- Scale development and comparison [J]. *Management World*, 2014(04):90-106.
- [65] Yang Shuiqing, Lu Yaobin, Cao Yuzhi. Initial adoption model of mobile payment service and its empirical Research [J]. *Journal of Management*,2012,9(09):1365-1372.
- [66] Guo Xue-jun. Research on Luxury brand Equity [D]. Shanghai: Fudan University,2008,11(9):36-39.
- [67] Zheng Mingzheng. Customer Perception Mental Model of Software Service Quality [J]. *Technology Economics*,2012,31(1):34-46.
- [68] Gong Xiaodong. Research on design of technological living environment for the elderly [D]. Beijing Institute of Technology,2014,07(3):11-15.
- [69] Peng Haoxiang. Analysis on the socioeconomic value of psychological education [J]. *Social Science Forum*,2009(12):151-154.
- [70] Li Xuexin, Li Haipeng. A Review of Research on Brand Positioning Theory in China [J]. *Journal of Liaoning University (Philosophy and Social Sciences Edition)*,2012,40(03):100-106.
- [71] Du J, You J. Study on Consumers' willingness to adopt personalized push under the "Information cocoon" effect: from the perspective of psychological resistance. *Business Economics*, 2019(1):103-110.
- [72] Liu Bailing, Xia Huimin, Li Yanhui. The Impact of privacy Feedback on mobile Commerce users' behavioral Intention from the perspective of technical Characteristics: Mediated by Psychological Comfort [J]. *Management Review*,2018,30(12):109-121.
- [73] Yang Junfeng, Zhang Lianzhong. Food Quality and safety management from the perspective of food Cold chain [J]. *Food Safety Guide*,2021(15):53-54.
- [74] Chen Guanjun. Research on the Influencing Factors of Consumers' Purchase Intention of imminent food [D]. Jilin University,2020:31-41.
- [75] Wu Ying Wan. Problems and strategies of fresh food freshness control in supermarket [J]. *Science and Technology Innovation Review*,2009(29):184-185. (in Chinese)
- [76] Zhang Li. Study on the inventory of perishable commodities under Supply chain Environment [D]. Hebei: Hebei University,2008:35-42.
- [77] Deng Shijian, Guo Guoqing, Zhou Jianming. Research on Brand Association, Brand Cognition and Brand Attachment [J]. *Management Journal*, 2018, 31(01):44-53.
- [78] Zhang B, Lin W G. Traceability of subtropical fruit consumption behavior paradigms in the context of quality and safety: the moderating role of purchasing experience [J]. *Management Review*, 2015, 27(08):176-189+212.
- [79] Lu X H, Feng Y. The value of online word-of-mouth: An empirical study based on online restaurant reviews [J]. *Management World*,2009(07):126-132+171.
- [80] Zhang Yunbin, Jiang Juan. Research progress of edible film [J]. *China Food*

- Additive,2011(1):191-198. (in Chinese)
- [81] KE Y M. Teaching innovation path of Food Additives [J]. Food Safety Guide,2021(14):38-39. (in Chinese with English abstract)
- [82] Lu Yan. Research on consumers' risk perception of Temporary food safety. Southwest Jiaotong University,2015(1):15-17.
- [83] Li Wenshuai. Design and Research of Liquor product Traceability Management System [D]. Beijing: Beijing University of Posts and Telecommunications,2011.
- [84] Zhou Hongtao. Research on Marketing Strategy of High value-added prepared Food -- A case study of Huadu Food [D]. Beijing: Renmin University of China,2011.
- [85] [82][85] Cao Xiaobo. Traditional food outerwear [J]. Science and Technology of Food Industry,2009(9):22-24. (in Chinese)
- [86] [83][86] Yang Lili, Fan Weifeng. Tri-color Pigeon Dairy: Strict raw milk product quality control to build green food brand [J]. Henan Animal Husbandry and Veterinary (Market Edition),2013,34(7):32-33.
- [87] Zeng Guojun, Li Ling, Liu Bo, et al. Reconstruction of Authenticity in Trans-Local Food Culture Production -- A Case study of Xibei Xibei Cuisine in Guangzhou [J]. Acta Geographica Sinica,2014,69(12):1871-1886.
- [88] Xu Yan, Zheng Yulian, Lu Liqing, et al. Research on urban residents' value perception of gourmet tourism from the perspective of IPA [J]. Resource Development and Market, 20,36(3):315-319. (in Chinese)
- [89] Liu Hao. Current situation and development countermeasures of cold chain logistics of fresh agricultural products [J]. China Agricultural Resources and Regional Planning,2016,37(3):184-186,232. (in Chinese)
- [90] Liu Ying. Research on the existing problems and countermeasures of the development of edible mushroom industry in China [D]. Beijing: China Agricultural University,2005.
- [91] Shi Ya. Current Situation analysis and HACCP Strategy Research of Taiwan Fruit Cold Chain Logistics at Xiamen Port [D]. Fujian: Jimei University,2012. (in Chinese)
- [92] Wang Shuhua. Science and technology media symbol -- Interpretation of Food Cooking Culture Practice in Modern cities [J]. Journal of Zhejiang University of Media and Communications,2015(2):38-42.
- [93] (in Chinese with English abstract) Application and cost accounting of dairy products in bakery products [J]. Food Safety Guide,2021(3):178-179. (in Chinese)
- [94] Yang Huaiyu, Yang Zhengyong. System dynamics model of ecosystem service value in pond aquaculture (Prawn shrimp) [J]. Journal of Natural Resources,2012,27(7):1176-1185.
- [95] Dai Yong, Wang Wenqing. Traceability Hierarchy strategy of Food supply chain under Retailer dominance [J]. Logistics Technology,2021,40(10):69-75,115.
- [96] Sun Jinyuan, Sun Baoguo. Consideration on Food additives and Food safety in China [J]. Journal of Agricultural Science and Technology of China,2013,15(4):1-7. (in Chinese)
- [97] Xing Jianrong, Cheng Shaonan, Xia Qile, et al. Study on processing technology and shelf life of Hupomelo Whole fruit Drink [J]. Acta Agriculturae Zhejiangensis,2014(5):1331-1335. (in Chinese)
- [98] Yue Qiqi, Liu Wen, Kong Ping, et al. Effect of non-cold chain Transportation on storage quality of chilled pork refrigerator [J]. Modern Food Science and Technology, 2019,35(10):116-124. (in Chinese)
- [99] Xue Hai-bo. Review and Prospect of Shopping Decision Style Scale of Consumers [J]. Consumer Economics,2007,23(5):92-96.
- [100] Xiao Jie. Research on the Scale of Social Responsibility Consumption Behavior in the Context of China [J]. Theory and Practice of Finance and Economics,2012,33(2):89-93.

- [101] Wang Juan. Research on Retail Format Evolution based on Consumer Behavior [D]. Hunan Central South University,2012(12):35-42.
- [102] Wang Haiping. Research on Shopping life cycle Model under the background of SoLoMo [J]. Contemporary Finance and Economics,2015(1):77-86.
- [103] Yuan Lili. Study on the gel characteristics of *Penaeus vannamei* mince and development of shrimp sausage [D]. Guangdong: Guangdong Ocean University,2013.
- [104] Wu Nan. Safety and Quality control of frozen food [J]. Science & Technology Innovation and Application,2014(7):284-284. (in Chinese)
- [105] Qi Liyun, Zhang Bibo, Guo Yanan. Research Management,2016,37(5):112-121.
- [106] Yan Zichun, Huang Lei, Liu Xin. Supplier key capability, industrial brand value and buyer repurchase intention [J]. Management Science,2016,29(1):15-27.
- [107] Feng Jianying, Mu Weisong, Fu Zetian. A review of research on consumers' purchase Intention [J]. Modern Management Science,2006(11):7-9.

