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Study on visibility promotion for regional high-end hotels based on the value co-creation theory

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Citation

STUDY ON VISIBILITY PROMOTION FOR REGIONAL HIGH-END HOTELS BASED ON THE VALUE CO-CREATION THEORY

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SINGAPORE MANAGEMENT UNIVERSITY

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Study on Visibility Promotion for Regional High-End Hotels Based

on the Value Co-creation Theory

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2023

I hereby declare that this DBA dissertation is my original work and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in this DBA dissertation.

This DBA dissertation has also not been submitted for any degree in any university previously.

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Luo Pingan

23 Mar 2023

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Luo Pingan

Abstract

Regional high-end hotels play a great leading role in industry communication, tourism, and consumer culture in the area where they are located. However, regional high-end hotels rely on the area's industry background and economic development for their survival and operations. Hence, their brand influence seldom spread outside the area. As a result, the limitations of brand awareness have been challenging the rapid development of regional high-end hotels. The existing research has not come to a clear theoretical response to this challenge. To enhance research in this field, this paper grounded on value co-creation theory posed one core question and three subquestions, with an aim to address the visibility plight of regional high-end hotels. The core question: What should regional high-end hotels do to promote their visibility through a reasonable value co-creation strategy?

To answer the above questions, this paper first selected Ming Du Lakeside Hotel in Guangxi's capital city Nanning as the research object, analyzed and ratiocinated its value co-creation, customer value, culture, and hotel marketing theory, conceived a model of visibility promotion for regional high-end hotels, and put forward corresponding hypotheses. Second, a questionnaire survey was applied and a total of 702 valid questionnaires were collected from the hotel guests to verify the visibility promotion model.

The findings showed that: (1) Through customer value, value co-creation exerts a positive impact on the visibility promotion of regional high-end hotels. (2) Power distance regulates the positive correlation between value co-creation and customer

value. (3) Collectivism and individualism regulate the relationship between value co-creation and the social value to the customer. (4) Masculinity regulate the positive correlation between value co-creation and customer value. (5) Uncertainty avoidance regulates the positive correlation between value co-creation and customer value, showing a negative impact on the relations between value co-creation and the hedonic and social value to the customer and no significant impact on the relationship between value co-creation and the economic value to the customer. (6) Gender regulates the positive correlation between value co-creation and customer value. (7) Customer industry background regulates the positive correlation between value co-creation and customer value. (8) Co-creation channel has a positive regulating effect on the positive correlation between value co-creation and the economic value to the customer and a negative regulating effect on the positive correlation between value co-creation and the hedonic and social value to the customer. (9) Co-creation carrier has a negative regulating effect on the positive correlation between value co-creation and the economic value to the customer and a positive regulating effect on the positive correlation between value co-creation and the social value to the customer.

This paper provides practical enlightenment for regional high-end hotels in four aspects: (1) Give value co-creation and customer value their due importance. (2) The research results indicate that regional high-end hotels should adopt three value co-creation strategies to promote their visibility according to customer characteristics. (3)Emphasize co-creation channels in the encounter process. The research results indicate that regional high-end hotels should discover customers' value preferences before carrying out value co-creation activities.

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Chapter I Introduction

1.1 Background and Questions of the Research

Different from national chain hotels, regional high-end hotels have three important characteristics: (1) They mainly serve business customers. (2) Their customers are usually professionals of some sectors. (3) Their development relies on the regional economy. These characteristics demonstrate that regional high-end hotels have a special status, strong cohesion, and influence in the localities. However, the characteristics also make it difficult for these hotels to exert their brand influence outside the localities, which is the limitation of the hotels (as shown in Figure 1.1):
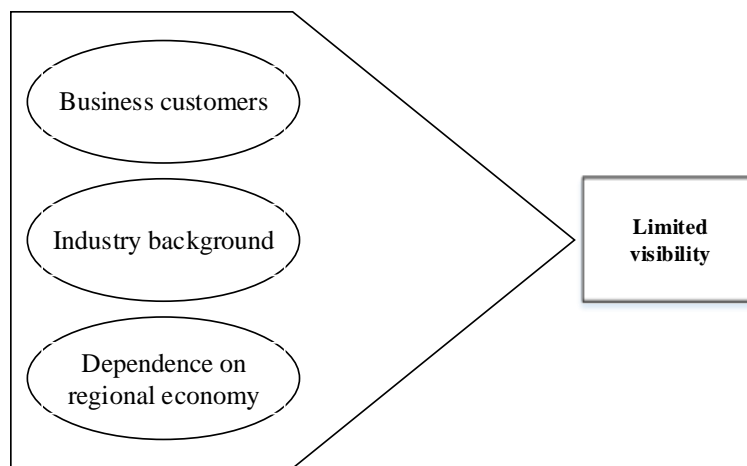
Figure 1.1 Visibility of Regional High-end Hotels

First, regional high-end hotels mainly serve business customers who are far less likely to share their hotel experience or information about the hotel with others than ordinary customers. The reasons are as follows: (1) The purpose of business customers living in a hotel is to attend business activities on the behalf of their enterprises. Therefore, they are often not allowed to share their great experience at a regional high-end hotel due to the nature of their work or enterprises, or the confidentiality of the business activities. Staying in a hotel is regarded as part of their work. (2) The hotel they stay at is chosen not by

themselves but by their enterprises based on long-term cooperation, so the business customers will think their stay is just for work. Gaining no hedonic value in staying at such a hotel, they will not share their experience. (3) Most business customers live in such a hotel in order to fulfill an important task or mission, such as delivering speeches at business or academic conferences and receiving a heavyweight from a partner enterprise. They are absorbed in their own tasks or missions so they have little time to enjoy the scenery around them and will not share their hotel experience.

Second, customers of regional high-end hotels are usually professionals of some sectors. Thus, communication among these customers often revolves around their sectors instead of their life. However, through such communication, customers cannot have deep interaction, which can be achieved only by talking about their life, especially something trivial. Communication revolving around their sectors is often reactive and conducted out of politeness or rules. Through deep interaction, which features proactive communication, customers will probably share their wonderful experience in a hotel and its information with other people around them. Besides, as the customers of a regional high-end hotel are usually professionals of some sectors, it is difficult for the hotel to be known outside these sectors.

Last, the development of regional high-end hotels relies on the regional economy. On the one hand, these hotels can enjoy regional advantages so that they can cooperate with the regional market entities to pool resources. On the other hand, these hotels are also affected by regional limitations as every region has its own high-end hotels. Competition and business barriers are bound to exist among different regions. It is difficult for these hotels to develop into

strong cross-regional brands.

The above analysis may lead to the conclusion that most regional high-end hotels may be rarely known outside their own regions, which is an obvious regional limitation. How to break through this limitation and seek development throughout the country or even the world is a pressing marketing problem to be addressed for regional high-end hotels. This study focuses on the core question: How should regional high-end hotels promote their visibility through a scientific value co-creation strategy? Specifically, this study will answer three subquestions as follows: (1) What is the value co-creation connotation of regional high-end hotels? (2) What should regional high-end hotels do to promote their visibility from the perspective of value co-creation? (3) What and how boundary conditions will affect the hotels' progress in visibility promotion?

1.2 Significance of Research

In view of the above-mentioned features and limitations of regional high-end hotels, the study tries to find ways to promote these hotels' visibility from the perspective of value co-creation theory. It attempts to make the following contributions:

(1)   The study provides regional high-end hotels with ways theoretically to raise their visibility and break regional limitations. In recent years, brands with international renown in emerging markets led by China have been in the ascendant, attracting world attention. In terms of some transnational companies of China, such as Huawei Technologies Co., Ltd. and Xiaomi Corporation, their overseas turnover as exceeded their turnover in China. Brand globalization is the senior stage of brand strategies and international visibility could bring additional value to products (Yoo and Donthu, 2001). This study, based on the

value co-creation theory, builds a theoretical model of the visibility promotion mechanism for regional high-end hotels from the perspective of customers, which is value co-creation → customer value → publicity promotion behavior. The study provides new solutions to the problem of visibility limitations for regional high-end hotels and makes value co-creation a new tool for these hotels to expand their brand influence.

(2) The study enriches the research on value co-creation in the hotel industry. The academic circles have already deeply explored the hotel industry and achieved fruitful results with the value co-creation theory. However, most studies have not yet classified the hotels when analyzing the value co-creation mechanism. In fact, the environment and purpose of value co-creation vary greatly among different types of hotels. For example, there is a big difference in visibility between chain hotels and regional hotels in different regional markets. There are also major differences in influencing the value perception of customers between budget hotels and high-end star-rated hotels. Although some studies have analyzed high-end hotels or regional hotels, there is no in-depth research on regional high-end hotels.

(3) The study clarifies the value co-creation mechanism and boundary conditions of regional high-end hotels. Based on the DART model, this study describes the value co-creation process of regional high-end hotels. By virtue of the typology of customer value (Holbrook, 2006), this study provides a new interpretation of customer value in the context of regional high-end hotels. Based on the three sub-processes of the value co-creation process model and the characteristics of regional high-end hotels, the study examines the boundary conditions for value co-creation to generate customer value from such aspects

as the customer cultural background (power distance, individualism and collectivism, masculinity and femininity, and uncertainty avoidance), customer gender, customer industry background, co-creation channel, and co-creation carrier.

1.3 Research Content and Structure

This paper consists of six chapters.

Chapter I: Introduction. This chapter introduces the reality of the development and plight of regional high-end hotels in China, raises problems based on relevant theories, and clarifies the significance of the study. Further, the research idea, content, methods, technical roadmap, and thesis structure are clarified according to the study objectives.

Chapter II: Literature Review. First, this chapter reviews previous research on regional high-end hotels, from which the definition and characteristics of such hotels have been summarized, and concludes deficiencies of the research on regional high-end hotels based on the present research status. Second, this chapter reviews the previous research on value co-creation, summarizes its definition, dimension, and value, and puts forward deficiencies of the research on value co-creation based on the research status in this regard. Third, it reviews previous research on customer value and refines the definition and dimension of customer value. This chapter lays a theoretical foundation for Chapter III.

Chapter III: Modeling and Hypotheses. From the analysis and ratiocination of value co-creation, customer value, culture, and relevant hotel marketing theories, this chapter explores constructs relevant to this study and identifies seven variables to study regional high-end hotels, including value co-creation

(dialog, access, risk assessment, and transparency), customer value (economic, hedonic, and social value), publicity promotion behavior (business recommendation and life recommendation), customer cultural background (power distance, individualism/collectivism, masculinity/femininity, and uncertainty avoidance), customer industry background, co-creation channel, and co-creation carrier. In addition, this chapter defines the variables, conceives a model of visibility promotion for regional high-end hotels with a critical path of "value co-creation → customer value → publicity promotion behavior", and puts forward corresponding hypotheses, in combination with corresponding qualitative analysis results and theories.

Chapter IV: Research Design and Pre-survey. First, an initial scale has been formed based on the normative design of the questionnaire as well as the deductive and inductive methods. On the one hand, previous scales have been referred to; on the other hand, the authoritative scale has been further modified to fit the scenario of regional high-end hotels in combination with open-ended survey results. Second, after the pre-survey, the items of the initial scale were selected, discussed, and modified to finalize the formal questionnaire.

Chapter V: Empirical Analysis and Hypothesis Testing. In this paper, Ming Du Lakeside Hotel was selected as the object of study, and the questionnaire was distributed to its customers. In total, 702 valid questionnaires were obtained, based on which empirical analysis and hypothesis testing were conducted. For valid questionnaires, SPSS 28.0 was used to conduct sample characteristics analysis, descriptive statistical analysis, reliability and validity testing, descriptive analysis, and control and testing of common method bias. On this basis, 30 hypotheses were further verified through hierarchical regression

analysis and Process analysis. The hypotheses were analyzed and discussed according to data analysis results.

Chapter VI: Conclusion and Implications. Based on the above theoretical analysis and empirical testing, this chapter summarizes relevant research conclusions and the paper's theoretical contributions in combination with existing literature. Meanwhile, it puts forward practical implications, echoing the development demand of regional high-end hotels discussed in Chapter I. In addition, it analyzes the research deficiencies and limitations and further comes up with the future research direction.

1.4 Research Means and Idea

1.4.1 Methodology

Based on the value co-creation theory, customer value theory, culture, and relevant research findings of hotel marketing, this paper discusses how regional high-end hotels encourage customers' publicity promotion behavior through customer value. In light of relevant literature and theories as well as in-depth interviews, it introduced qualitative analysis, put forward a theoretical model and hypotheses, and developed a scale covering value co-creation, customer value, customer culture, and publicity promotion behavior for regional high-end hotels. Furthermore, data were collected through the questionnaire survey to test and analyze the critical path of "value co-creation → customer value → publicity promotion behavior" as well as the role of boundary conditions, including customer cultural background, gender, industry background, co-creation channel, and co-creation carrier. Main research methods are as follows:

(1) Literature analysis. The writer collected the recent-year paper and electronic literature concerning value co-creation, customer value, culture, and

hotel marketing from the school library and academic websites (e.g. EBSCO, Elsevier, Web of Science, Baidu Scholar, and CNKI). The writer mainly refers to the journals in relevant fields, such as the *Journal of Business Research*, *Journal of Service Research*, *Journal of Service Marketing*, *Journal of Service Management*, *Journal of Marketing Research*, *Journal of the Academy of Marketing Science*, *Journal of Marketing Theory and Practice*, *Journal of Marketing*, *Computers in Human Behavior*, *Management World*, *Nankai Business Review*, *Management Review*, *Economic Management Journal*, and *Foreign Economies and Management*. A systematic analysis of the relevant literature was conducted to clarify the present research progress, major theoretical views, and research gaps, so as to provide theoretical support for this study's qualitative analysis, theoretical model building, hypotheses, theoretical argumentation, research design, scale adaptive development, and research finding discussion.

(2) Interview and open-ended questionnaire survey. Interviews, including individual and group interviews, were conducted with scholars in the hotel marketing field as well as managers and customers of regional high-end hotels to collect qualitative data required for building a theoretical model and developing a scale. For interviews, the following topics were highlighted, such as "What are the characteristics of the regional high-end hotel, and how does it differ from international and national ones?", "What kind of value you can obtain from your stay in the regional high-end hotel? Anything unique?", and "Under what circumstance will you recommend the regional high-end hotel to your family?". On this basis, an open-ended questionnaire was prepared and distributed to collect relevant information.

(3) Structured questionnaire survey. The questionnaire survey is the most widely-used method to collect data in quantitative research of management because it is cost-effective. A questionnaire usually provides a form with questions. In this way, researchers can measure the questions they study in a controllable manner to achieve data collection. Properly implemented, the questionnaire survey is a fast and effective data collection method with strong operability. There are two forms of the questionnaire. First, an existing scale is adopted. In many fields, such as consumer behavior, work diagnosis, and consumer satisfaction, many researchers have conducted lots of empirical research and worked out so many scales which have been finalized after being questioned, tested, and discussed. As a result, authoritative scales can be directly cited in many studies. Scales with a significant position in existing literature are highly reliable, effective, and greatly recognized by academic circles. Second, a self-developed scale can be adopted. For management research, new scales are required if existing ones cannot meet research needs due to limitations in culture, time, and language. This paper integrates the above two forms. First, authoritative scales that are widely used and recognized were collected as many as possible. Second, those scales were further modified to fit the scenario of regional high-end hotels.

(4) Statistical analysis of data. This study used SPSS 28.0 to analyze the returned questionnaires and introduced methods such as descriptive statistical analysis, exploratory factor analysis, confirmatory factor analysis, and correlation analysis to test the data. Meanwhile, it verified whether the hypotheses of the theoretical model were tenable through hierarchical regression.

1.4.2   Technical roadmap

This study has set three research objectives: (1) To construct an effective path for regional high-end hotels to promote their visibility and help them develop related marketing strategies. (2) To analyze the respective connotations of value co-creation and customer value in regional high-end hotels. (3) To identify situational factors that will affect the hotels' progress in visibility promotion and test their moderating effect. This study follows the basic idea: data collection, raising questions, mechanism analysis, scale development, empirical analysis, and conclusion. It aims at major research objectives and offers solutions to questions raised. The research idea is shown in the figure below:
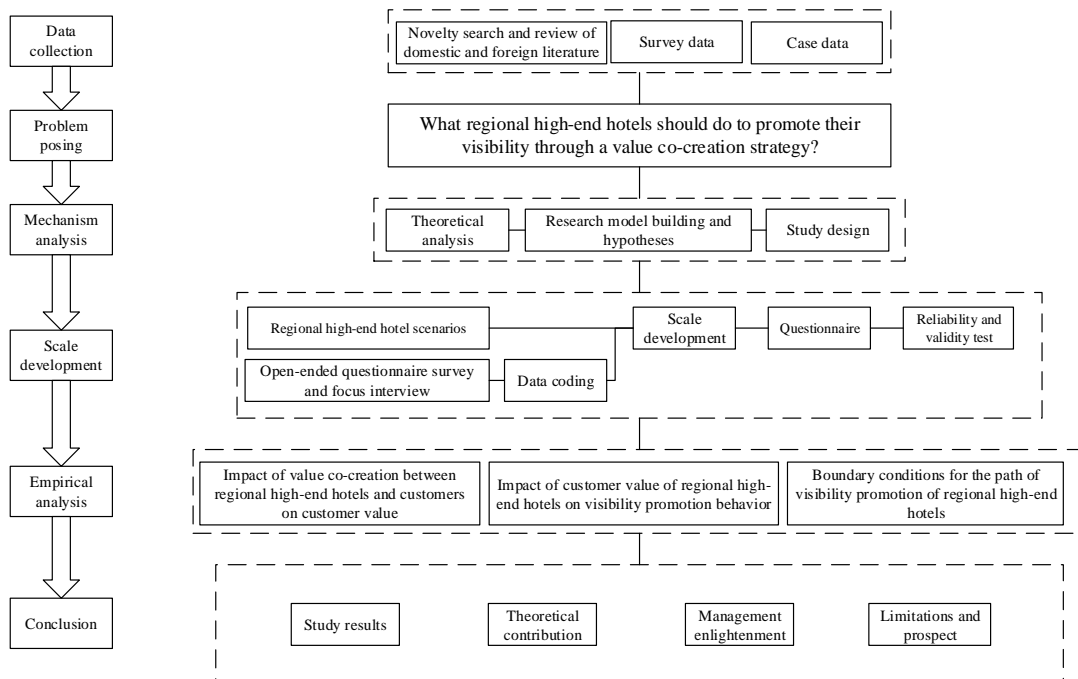
Figure 1.4 Technical Roadmap

Chapter II Literature Review

2.1. Research on Regional High-end Hotels

2.1.1. Definition of regional high-end hotels

As early as 1988, China began to develop standards for star-rated hotels. After a period of time, the national technical supervision department rolled out the *Standards for Rating Foreign-related Hotels*, which filled in the blanks in China's sector of star-rated hotels and greatly promoted the development of these hotels in the country. From 1997 to 2003, China National Tourism Administration made several revisions to the standards for rating hotels, putting forward clear requirements for the software and hardware of hotels. Only hotels that met these requirements were qualified to apply for the title of a star-rated hotel. In 2010, the standards were optimized again by China National Tourism Administration, adding hotels' facilities and operation quality into the assessment of hotel rating. Star-rated hotels were required to serve consumers in strict accordance with the standards. Besides, local tourism bureaus and relevant departments were not allowed to formulate standards for rating super star-rated hotels or prospective star-rated hotels. The standards for rating star-rated hotels had been administered by China National Tourism Administration since then, greatly improving standardization. In 2015, China National Tourism Administration revised the standards again based on the development of China's hotel industry. The standards have become widely recognized by all sectors of society, which give consumers a clear guide to the service quality and level of a hotel. The more stars a hotel is rated, the higher the hotel's level will be. Certain differences remain in the services of five-star hotels, but they are acceptable, reflecting the standardization role of the rating standards.

With the highest level among star-rated hotels, five-star hotels have reached the highest level in the industry in terms of both decoration and services (Zhan Lin, 2016). They can provide consumers with more comprehensive services and more luxurious facilities (Cai Xiaomei et al., 2019). In addition, five-star hotels can offer customers more diversified catering services as well as larger-scale banquet services and meeting services (Yao Yanbo et al., 2018). Customers can enjoy delicacies prepared by top chefs and hold large-scale meetings, banquets, wedding feasts, or receptions (Li Muchun and Ma Suyun, 2016). Five-star hotels have developed into centers for large events, integrating such functions as social contact, meetings, entertainment, shopping, recreation, and health care (Xiao Meng and Ma Qinhai, 2018). Therefore, this study defines a regional high-end hotel as a hotel that enjoys the brand influence restricted in a certain region but can provide star-rated services or the same services as starred hotels and even above.

2.1.2. Characteristics of regional high-end hotels

The core product provided by a hotel for customers is living space, which is fundamentally different from the products provided by other industries. A hotel cannot be moved once it is built because of the physical characteristics of the hotel building. As most of the hotel's commodities and services cannot be transferred, related commodities used in hotel rooms can only be produced and consumed locally. This difference between the hotel industry and other industries not only affects the operation mechanism of the entire hotel industry market, but also affects the process of customers' value acquisition. Compared with services of other products, services of living space (hotel rooms) are characterized by immovability, non-storability, synchronization of production

and consumption, and subjectivity of value rating. In other words, customers can enjoy hotel services only in a specific area, and their perception of service value is subject to the local economy, society and culture, regional customs, natural environmental resources, etc. Therefore, regionalism is an inherent characteristic of hotels.

Especially for regional high-end hotels that have developed locally for a long time, regionalism is a remarkable characteristic of their survival and development.

(1) Business customers

The first feature of regional high-end hotels is that they mainly serve business customers. For all hotels, the guests they receive mainly comprise ordinary customers for travel or leisure purposes and business customers for commercial purposes. Most customers stay in national hotels for their travel or vacation plans. For regional high-end hotels, except for those located in typical scenic areas or tourist cities, most of their customers stay for commercial purposes (Zhang Hongli, 2016). In Guangxi Province, for example, representative regional high-end hotels mainly concentrate in the four cities of Nanning, Guilin, Beihai and Liuzhou. High-end hotels in Nanning mainly serve guests from the provincial capital. Most of these guests come from the financial and medical industries and live in the hotels to attend conferences held by large state-owned enterprises or handle business affairs. High-end hotels in Guilin mainly receive tourists from other parts of China or foreign countries and some stay at the hotels to attend conferences related to photography, painting, and other cultural and artistic fields. Customers of high-end hotels in Beihai mainly stay there to enjoy the beaches, seas, and sunshine, for leisure and recreation

purposes. Most guests of high-end hotels in Liuzhou are representatives from some enterprises. They stay there to consult and interact with their counterparts from other enterprises in the industrial chain.

In a word, most regional high-end hotels, except for those situated in typical scenic areas or tourist cities, mainly serve business customers who stay there to attend commercial activities instead of tourism and leisure activities.

(2) Industry background

The second feature of regional high-end hotels is that their customers are usually professionals of some industries. Unlike hotels serving ordinary customers for travel or vacation purposes, regional high-end hotels serving business customers have to take into account the enterprise and industry background of customers when creating value for them. Customers of regional high-end hotels are often representatives of their enterprises. Their mindset, psychology, and behavior are influenced by the culture of their enterprises as well as the norms of the industry.

For example, industries can be divided into high-tech industries and low-tech industries based on the level of technology (Wang and Rafiq, 2014). Enterprises in high-tech industries tend to invest a large number of resources in research and development and their employees have mastered plenty of knowledge and technologies (Feng Taiwen et al., 2020). Most customers from these enterprises show curiosity about new technologies and new products and have great capacities to adapt themselves to the changing environment and to integrate resources. They tend to interact with other organizations to obtain heterogeneous information (Zhang et al., 2018). On the contrary, low-tech industries mainly feature the manufacturing and processing of labor-intensive

products, the demand for which is pretty rigid. People engaging in these industries tend to pay more attention to the functions of products, reduce costs in actions, and avoid risks caused by uncertainty and core technology interruption (Pan Zhen and Hu Chaoying, 2017). For another example, business customers from industries with higher-level digitization may be more receptive to digital products and services from regional high-end hotels while business customers from industries with lower-level digitization may prefer visible products and tangible services.

Therefore, different business customers, as enterprise representatives from different industries, often have different experiences in regional high-end hotels, and the value-in-experience obtained may be affected by their industry background. In other words, customers of regional high-end hotels are usually professionals of some industries.

(3) Dependence on regional economy

The third feature of regional high-end hotels is that their development relies on the regional economy. As most customers stay in regional high-end hotels for business activities, the hotels' business volume depends on the frequency and scale of those activities, and their frequency and scale hinge on the economic level of the localities. The higher the local economic level is, the more frequent business exchanges and the larger business activities will be. They will bring about a rising demand for high-end accommodation, thus facilitating the expansion of the regional hotel market by virtue of the continuous growth of the local economy (Zhang Hongli, 2016).

In fact, research in the field of economics has tested the difference in input-output ratios of tourist hotels in different regions through the data envelopment

analysis (DEA) model: First, Chinese scholars Lu Xiaobo and Guo Di (2014) conducted a comprehensive analysis of China's regional tourism efficiency and its changing trends between 2001 and 2010, with the number of tourist hotels, the number of travel agencies, the number of tourist hotel employees and the number of travel agency employees as tourism input factors, and with the total tourism revenue as the output variable. Based on analyses by region, they found that the average efficiency of tourism was highest in the eastern region, followed by the northeastern region, then the central region, and finally the western region. Later, Zhang Hong and Cheng Zhendong (2014) also adopted the DEA method to analyze the relative efficiency gap of inter-provincial star-rated hotels in the eastern, central, western, and northeastern regions between 2010 and 2012, using the provincial-level administrative regions of China as the research objects. They found significant gaps in integrated technical efficiency and pure technical efficiency and a smaller gap in scale efficiency among star-rated hotels in all provinces of China. This shows that the level of regional economic development plays a decisive role in the development of regional high-end hotels.

2.2. Research on Value Co-creation

2.2.1   Definition of value co-creation

Since Prahalad and Ramaswamy first put forward value co-creation in 2004, many scholars have begun to explore the concept of value co-creation and define it based different perspectives and understandings. Table 2-4 lists representative definitions of value co-creation.

Table 2-4 Representative Definitions of Value Co-creation

Literature Sources	Definition of Value Co-creation
Prahalad and	Value co-creation means that regional high-end hotels create value together with customers, that is, the joint creation of value by the

Literature Sources	Definition of Value Co-creation
Ramaswamy (2004)	suppliers and the customers.
Ballantyne and Varey (2006)	Value co-creation refers to spontaneous, collaborative, and dialogical interactions, which bring together elements that are deemed to be separated by others so as to be innovative and unique and achieve competitive advantages.
Payne et al. (2008)	Value co-creation is a dynamic interactive process jointly completed by suppliers and customers. It involves the customer value-creating processes, the supplier value-creating processes, and encounter processes that indicate interactions between the first two.
Füller et al. (2009)	Virtual value co-creation can be interpreted as an enabling activity, strengthening a person's experience of self-determination and self-efficacy.
Gebauer et al. (2010)	Value co-creation enables customers and suppliers to define and solve problems together in the "experiential environment". Consumers engage in active dialogue with suppliers in the "experiential environment" to jointly create a personalized experience.
Grönroos and Ravald (2011)	Value co-creation is defined as the joint activities of stakeholders who interact directly in a binary relationship. Direct interactions contribute to the value that emerges from one or both parties and even all parties in a large network.
Aarikka-Stenroos and Jaakkola (2012)	Value co-creation is conceptualized as joint problem solving, which involves supplier and customer integrating resources in a collaborative interaction process. Suppliers apply their specialized professional skills, methods, and judgment, while customers contribute resources such as knowledge, in order to create the optimal value-in-use, i.e. the best possible balance between the value-in-use to be achieved and the required sacrifices.
Grönroos and Voima (2013)	Value co-creation is a function of interaction. Value co-creation and value creation are strictly distinguished. Both regional high-end hotels' and customers' actions can be categorized by spheres (provider, joint, customer), and their interactions are either direct or indirect. This conceptualization emphasizes the pivotal role of direct interactions for value co-creation.
Yi and Gong (2013)	From the perspective of customer behavior, the authors suggested measurement scales for value co-creation and posited two dimensions in customer value co-creation behavior: customer participation behavior (information seeking, information sharing, responsible behavior, personal interaction), and customer citizenship behavior (feedback, advocacy, helping, tolerance).
Ramaswamy and Chopra (2014)	The scholars put forward the paradigm of value co-creation, assuming that: (1) Interaction is where value is produced. (2) Individual stakeholders create and transform value together. (3) Individuals' social resources and regional high-end hotels' network resources are leveraged at the same time. (4) Innovative participation platform is a tool to connect co-creation opportunities with joint resources. (5) New value creation capability is fostered by making use of the capability ecosystem based on society, commerce, citizen, nature, and community networks. (6) Individual experience is the basis of value output. (7) Wealth, welfare, and happiness are the common aspirations of the individuals who participate in co-creation. (8) Regional high-end

Literature Sources	Definition of Value Co-creation
	hotels must make stakeholders active creators of value.
Barrett et al. (2015)	Value co-creation is realized and driven by the service ecosystem, which provides common institutional logic and structure for resource integration and service exchange of value co-creation. The service platform provides modular rules and protocols for the exchange of tangible and intangible resources in value co-creation.
Ranjan and Read (2016)	The scholars found two dimensions in value co-creation: co-production and value-in-use. The former includes knowledge, equity, and interaction, whereas the latter includes experience, personalization, and relationship.
Hajlia et al. (2017)	Value co-creation is a process in which customers participate in value creation, which turns negative customers into positive ones. Value co-creation reflects a culture of participation in which customers seek opportunities to make a contribution to their world, and regional high-end hotels seek customers' insights on their products.
Ramaswamy and Ozcan (2018)	Value co-creation is an interactional value-creation process realized in interactive system-environments, including agencing engagements and structuring organizations. Interactive system-environments are supported by interactive platforms consisting of artifacts, persons, processes, and interfaces, and the value generated is value-in-interaction.

As can be seen from Table 2-4, the definition of value co-creation in academic circles has evolved along two paths. First, "binary relationship → multiple-party relationship → network relationship". That is, the relationship involved in the definition of value co-creation changes from the initial "binary relationship between customers and regional high-end hotels" to the "multi-stakeholder relationship" to the "network relationship in the service ecosystem". Second, "traditional value co-creation → digital value co-creation → interactive system co-creation". That is, the environment involved in the definition of value co-creation changes from the initial "offline environment" to the "digital environment" in the network era to the "interactive system" integrating the offline and digital environments.

Although scholars have different definitions and understandings of value co-creation, they have basically reached the following consensus on the connotation of value co-creation: First, it is a process in which customers and

regional high-end hotels create value together through interaction. Some scholars believe that participants in value co-creation include multiple stakeholders, but customers and regional high-end hotels are still the core participants in value co-creation. Second, direct interaction is the basis of value co-creation. Some scholars categorize the interaction in value co-creation into direct and indirect interaction. However, indirect interaction is essentially composed of direct interaction. Third, the value co-created is ultimately determined by customers. **Based on the above analysis, the study defines value co-creation as a process of joint value creation by regional high-end hotels and customers through direct interaction.**

2.2.2. Dimensions in value co-creation

The study collects the empirical research on value co-creation since the concept was initiated (2004), and sorts out the representative dimensions of value co-creation, as shown in Table 2.

Table 2 Dimensions of Value Co-creation

Literature Sources	General Dimensions	Sub-dimensions
Literature in English		
Prahalad and Ramaswamy(2004)	value co-creation	Dialog, Access, Risk assessment, Transparency
Chan et al. (2010)	Customer Participation	
Zhuang（2010）	Customer participation	information resource dimension，codeveloper dimension
Luo et al. (2015)	value co-creation practices	Social networking, Community engagement, Impression management, Brand use
Shamim and Ghazali (2016)	Value co-creation behaviour	Information Seeking, Information Sharing, Personal Interaction
Cambra-Fierro et al. (2017)	Co-creation	Information Sharing, Personal Interaction, Responsible Behavior，Advocacy，Helping ，Feedback，Tolerance
Hau et al. (2017)	Customer Participation	Information seeking，

Literature Sources	General Dimensions	Sub-dimensions
		Information sharing，Responsible behavior
Laud and Karpen (2017)	Value co-creation behaviour	Customer participation behavior:（Information seeking，Information sharing，Responsible behavior，Personal interaction）Customer citizenship behavior:（Feedback，Advocacy，Helping，Tolerance）
Lee et al. (2017)	customer value co-creation	Information seeking，Information sharing，Responsible behavior，Personal interaction，Feedback，Advocacy，Helping，Tolerance
Busser and Shulga (2018)	Co-Created Value	Meaningfulness，Collaboration Contribution，Recognition，Affective response
Zaborek and Jolanta (2019)	Value Co-creation	Dialog, Access, Risk Assessment, Transparency
Literature in Chinese		
Wu Xiaoying (2015)	Value co-creation	Spontaneous value co-creation Initiated value co-creation
Jiang Tianlin (2016)	Behavior in value co-creation	Brand-consumer interaction
Li Qiong (2016)	Value co-creation behavior	Proactive participation, reactive participation
Jiang Yitong (2017)	Customer participation behavior in value co-creation	Customer participation behavior in value co-creation, customer citizenship behavior in value co-creation
Wang Jiuhe and Liu Lin (2017)	Value co-creation behavior	Preparation, information exchange, relationship building, intervention
Wang Xin (2017)	Brand community value co-creation behavior	Interaction among community members, impression management community participation behavior, product quality
Zhu Liye et al. (2018)	Brand co-creation with customer participation in a virtual brand community	Brand co-creation initiated by enterprises Spontaneous brand co-creation

The understandings of value co-creation dimensions in existing studies show the following characteristics: First, scholars have not formed a unified categorization of value co-creation dimensions, which leads to views on a single dimension or multiple dimensions. Second, "interaction", "participation" and

"behavior" are the three core dimensions highlighted by most research. Third, value co-creation dimensions are proposed in different contexts. Through analysis and examination, the study believes that the DART model proposed by Prahalad and Ramaswamy (2004) is the most frequently and widely used value co-creation dimension. Dialog, Access, **Risk Assessment, and Transparency are the core dimensions of value co-creation, while other different value co-creation dimensions are their specific manifestations in different contexts.**

2.2.3.   Value co-creation in the hotel industry

The study of value co-creation in the hotel industry has three stages.

First, clarify the process and structure of value co-creation in the hotel industry. Navarro et al. (2014) studied the value co-creation process of special customer groups and identified the value co-creation factors and dynamic process in the context of interaction between disabled customers and hotel services through service-dominant logic thinking. Based on the value co-creation process model and the analytic hierarchy process method, Navarro et al. (2015) further found that the success factors of value co-creation by hotels and disabled customers are related to different stages of value co-creation. Xie et al. (2019) argued that the key to successful value co-creation lies in the capacity of frontline staff at high-star hotels to accurately identify customer demand (knowledge of customer demand). They used qualitative and quantitative research methods to investigate the customers and frontline service staff of high-star hotels, and explored the antecedents of the knowledge of frontline staff at high-star hotels in customer demand.

Second, explore the impact of technology and equipment on value co-creation in the hotel industry. Based on the sample data of American hotel

customers, Morosan and DeFranco (2016) developed and validated a conceptual model in which hotels use mobile devices to co-create value with customers. The model recognizes the central role of the degree of value co-creation by consumers when hotels try to create valuable service experiences by using mobile devices. Morosan and DeFranco (2019) conducted research on hotel interactive technologies for value co-creation and found that when a hotel adopts interactive technologies, consumers' information system habits and hedonic motivation will affect customer participation in value co-creation, and then customer participation and innovation in value co-creation will impact conversion behavior, and innovation and perceived benefits of hotel interactive technologies will influence the customers' intentions to use interactive technologies. Based on the theory of social information processing, Chinese scholars explored how the personification of service robots in the hotel industry influences customers' intentions in value co-creation (Liu Xin et al., 2021).

Third, examine the results of value co-creation in the hotel industry. Harkison (2018) interviewed 81 participants from six New Zealand's luxury hotels in a case study and found that managers, employees, and customers agreed that the luxury accommodation experience is co-created by managers, employees, and customers, and that encouraging co-creation can facilitate the generation of luxury accommodation experience. Santos-Vijande et al. (2018) discussed the influence of new service co-creation on the performance of new services in the hotel industry. The research findings showed that co-creation will directly affect the market results and development speed of new services, and thus affect the quality of new services. Based on 252 questionnaires, Chinese scholars verified the coordination complexity brought by customer

participation in value co-creation in the development of new services in the hotel industry and concluded that the heterogeneity of the hotel's internal and external services will intensify or weaken the impact of customer participation (Ma Shuang et al., 2019). Liu and Jo (2020) constructed a conceptual model consisting of value co-creation behavior, member satisfaction, customer involvement, and customer engagement. Their empirical survey of hotels in North America showed that value co-creation behavior plays a significant role in influencing customer satisfaction. González-Mansilla et al. (2019) explored the management process of value co-creation in a hotel and noted that the degree of customer participation largely depends on their perception of how the hotel supports the value co-creation process. The perception will yield a direct positive impact on the brand equity of the hotel and also on the perceived value through customer participation. Meanwhile, brand equity and perceived value are positively correlated with customer satisfaction.

2.3. Definition and Classification of Customer Value

2.3.1. Definition of Customer Value

By reviewing the literature on customer value in the field of co-creation value, it is concluded that there are the following three main definitions of customer value in the existing research on co-creation value: (1) Customer value, stemming from value co-creation experience, is value-in-experience. From the aesthetic perspective, Chinese scholars put forward that customer value co-created in the consumption field is manifested as customers' sensory pleasure, the meaning of life, and reconstructing experience (Wang Xinxin and Wan Wenhai, 2012). (2) Customer value is a kind of value emerging from the interactive experience process in a socio-technical context. From the

phenomenological viewpoint, it can be interpreted as value-in-experience, value-in-use, and value-in-context. Based on virtual world scenarios, Kohler et al. (2011) validated this framework. Service-dominant logic and service logic emphasize that value is always perceived and determined by customers based on personal experience and social context, and emerges in the dynamic experience process of customers using products/services. Therefore, customer co-creation value-in-experience is defined as the value-in-use of products/services (Grönroos and Voima, 2013; Vargo and Lusch, 2008) or value-in-context (Edvardsson et al., 2011) in a broader sense. (3) Customer value refers to customers' perception of expected returns.

The above three viewpoints show that the ultimate purpose of value co-creation is to create value for customers, and the essence of customer value is the unique experience that customers enjoy over the course of co-creation. Therefore, this study, following the view of Holbrook (2006), a representative scholar of customer value, defines customer value as an interaction-based experience with relative preferences.

2.3.2. Classification of Customer Value

Holbrook (2006), a representative scholar in the research field of customer value, proposed that customer value includes economic, social, hedonic, and altruistic value categories, and constructed a typology framework of customer value based on two dimensions of experience level (intrinsic or extrinsic) and experience effect object (self- or other-oriented), providing references for the research on customer co-creation value-in-experience. Nambisan (2008), a representative scholar in the field of value co-creation, constructed for the first time a four-dimensional experience framework in a virtual co-creation

environment, namely pragmatic, empathic, sociability, and usability dimensions.

In the contemporary intelligent connected environment, Novak and Hoffman (2017, 2019), leading scholars in the field of consumer experience research, innovatively regarded smart products as independent ontologies, and classified consumer experience into self-extension, self-expansion, self-restriction, and self-reduction according to the two types of roles (agency and communion) represented by consumers and smart products. The classical documents have laid a theoretical foundation for the studies on customer co-creation value-in-experience. However, they only elaborate on the connotation or dimensions, without further building a measurement model of value-in-experience co-created by customers.

Some empirical research uses the theory of customer value/brand experience for reference and refines the dimensions of customer co-created experience/value. As a virtual brand community is the best context for customers to interact with enterprises and with each other and then create value together, scholars proposed, after using the classic framework of brand experience for reference, that customer co-creation experience based on the virtual brand community includes five dimensions: sensory experience, emotional experience, thinking experience, behavioral experience, and relational experience. Based on the early two-dimension typology of customer value: utilitarian value and hedonic value (Holbrook and Hirschman, 1982), some scholars summarized value-in-experience co-created by customers as functional/practical value and hedonic/emotional value and extended it to three-dimension and four-dimension values. Other empirical research constructs the dimensions of customer co-creation value-in-experience based on a specific co-

creation context. For a virtual customer environment, Nambisan and Baron (2007) operationalized the perceived value of customers in participating in product support activities into learning benefits, social integrative benefits, personal integrative benefits, and hedonic benefits. On this basis, Verleye (2015), from the perspective of customer participation in new product/service development, classified customer co-creation experience into four dimensions: cognitive, social/personal, hedonic, and pragmatic/economic. For specific consumption fields, scholars shed light on the dimensions of customer co-creation value-in-experience based on consumption interaction.

Given that emerging information technologies such as artificial intelligence, big data, and the Internet of Things (IoT) have brought about significant changes to the value co-creation model in recent years, some studies have examined customer co-creation experience/value based on different technological scenarios, such as new retail in the IoT environment (Balaji and Roy, 2017), tourism platforms (Zhang et al., 2017a) and intelligent service scenario (Roy et al., 2019).

Holbrook's typology framework is adopted because it is applicable to most dimensions.

There are different approaches to define customer value (Carlson et al., 2018; Chan, Yim, & Lam, 2010;Dennis et al., 2017; Laud & Karpen, 2017), but the framework of Holbrook (2006) can provide a useful practical taxonomy to classify all existent definitions(Baumann & Le Meunier-FitzHugh, 2015). Customer value is defined as a preferred experience from some interaction and has two dimensions, i.e., the extrinsic versus intrinsic value and the self-oriented versus other-oriented value (Holbrook, 2006). The combination of these two

dimensions can generate four types of customer values (Holbrook, 2006):

(i) Economic value, which is both external and self-oriented, is embodied when products or services act as a tool to help customers to achieve their goals (such as, high efficiency and high quality);

(ii) Hedonic value, which is both internal and self-oriented, is an intrinsic value deriving from consumption experience and is mainly reflected in deriving pleasure from various entertainment activities, or aesthetic enjoyment from art, entertainment activities, and scenery;

(iii) Social value, which is both external and other-oriented, is represented when a product or service is used as a means to influence others' reactions. It stems from two purposeful situations: one is good impression consumption to promote one's identity and social position, and the other is to gain respect by taking possession of material goods;

(iv) Altruistic value, which is both internal and other-oriented, not only requires customers to regard shopping experience as the ultimate consumption goal, but also needs customers to care about the influences of their own consumptive behaviours on others.

What should be noted is that only economic, hedonic, and social- values are included in the primary studies.

2.4. Research on Hotel Visibility

Promotion of visibility is of great significance to brand building, operations, and the development of a hotel. Through the review of relevant literature in the field of hotel marketing, this study finds that the current academic exploration in promoting hotel visibility focuses on the following two themes:

First, increase hotel brand equity through interaction. González-Mansilla et al. (2019) conducted a survey of 860 customers of two 4-star seaside chain hotels in Spain and the findings showed that: the level of customer participation depends largely on their perception of how the hotel supports the value co-creation process; customers' perception of the hotel value co-creation process helps increase the brand equity of the hotel; customer participation exerts a positive impact on perceived value; brand equity and perceived value are positively correlated with customer satisfaction. Lin et al. (2018) used a generalized linear mixed model to comprehensively analyze the display advertising data of two chain hotels in China and the engagement data on Sina Weibo. The research found that both consumer- and enterprise-initiated brand interaction on social media can positively affect the display advertising effect. For a reputed brand, consumer-initiated brand interactions exert a greater impact on increasing the effectiveness of display ads, whereas for a small brand, company-initiated brand interactions can attract more visitors and monetize website traffic from ads.

Second, increase customers' loyalty and recommendation behaviors with technologies and strategies. Based on service-dominant logic, technology adoption, social psychology, and marketing theory, Morosan and DeFranco (2019) used a structural equation to conduct a survey on 841 American travelers and found: when hotels adopted interactive technologies, the information system habits and hedonic motivation of customers can motivate them to participate in the interaction with enterprises and thus drive their conversion behavior (be willing to change their travel plans in order to participate in hotel activities; be willing to attend hotels' loyalty program; change their previous

plans and be willing to review a hotel). Fu Hui et al. (2012) surveyed 380 guests of several five-star hotels and found: Switching barriers can be divided into procedural switching barriers, financial switching barriers, and relational switching barriers. Specifically, relational switching barriers have a remarkably direct positive effect on customers' repurchase intention and can indirectly influence customers' repurchase intention through affective commitment; procedural switching barriers and financial switching barriers had no remarkably direct effect on customers' repurchase intention, but both can indirectly influence customers' repurchase intention through customer commitment. By selecting different tourism service scenarios (hotels and airports) and using the experimental method based on the theory of social information processing, Liu Xin et al. (2021) explored how the personification of service robots influences customers' intentions of value co-creation and examined the two-fold intermediation role of perceived service competence and cuteness as well as the adjustment role of perceived control in the process.

2.5 Literature Review

(1) The role and status of customers have changed, but regional high-end hotels fail to attach sufficient importance to it.

With breakthroughs in such technologies as mobile internet and IoT, peer-to-peer (P2P) networking has fundamentally transformed the way people consume services and products. This special change is posing a threat to the traditional businesses of many industries, especially to the hotel industry, which has taken a hard hit from P2P accommodation. According to its 2020 annual report, Airbnb had over seven million listings worldwide. Despite the outbreak of Covid-19 in 2019, Airbnb demonstrated remarkable resilience. Since its

establishment in 2008, Airbnb, as a representative P2P accommodation provider, has been growing exponentially. This undoubtedly posed a challenge to the traditional hospitality industry. In a meta-analysis of 33 studies, Yang et al. (2021) found that the negative impact of Airbnb supply on the performance of traditional hotels was medium. While high-end hotels took a smaller hit than low-end hotels, the gap narrowed over time. Hotels in Asia were more vulnerable than those in Europe. The main reason why the traditional hospitality industry is taking a hit from P2P accommodation is that the digital economy boom is technically empowering customers, who begin to have more diversified needs. P2P accommodation can more flexibly and resiliently meet the accommodation needs of all types of customers compared with traditional hotels. In the meanwhile, burgeoning P2P accommodation businesses substantially undermined the dominance of traditional hotels in the accommodation industry, putting the interaction between customers and hotels, especially regional high-end hotels, on a more equal footing.

(2) Regional high-end hotels have become aware of the limitations on their publicity, but they lack specific solutions.

Unlike chain hotels that serve the whole country, regional high-end hotels have three characteristics. First, most of their customers are on business trips. Second, most of their customers are industry hotshots. Third, they rely on the regional economy for development. On the one hand, these characteristics have helped regional high-end hotels build up a cohesive force and reputation in the local region. On the other hand, these characteristics have made it difficult for regional high-end hotel brands to reach out to customers beyond the regions where they are located. Since 2000, China's high-end hotels have embarked on

rapid and excessive expansions, increasing the stock of hotel rooms across the country to such an extent that it far exceeded market demand. This oversupply issue lurked at a time when there was a surge in business exchanges brought about by accelerated economic growth and steady industrial expansion and when transactions were mainly conducted offline. However, as Covid-19 and fast-growing P2P accommodation deal a double whammy, regional high-end hotels have to face the market problem of oversupply head-on. This will not only make it hard for regional high-end hotels to keep going, but also cause a huge waste of social resources. Therefore, regional high-end hotels must act quickly to explore ways of gaining national and global reputation. Their efforts in this regard will both make themselves sustainable and boost the rate of social resource utilization in China. However, there is a lack of in-depth discussions in this regard in both industries and academia.

(3) Though the theory of value co-creation has been applied to the hospitality industry, there is a lack of in-depth research on how regional high-end hotels can use the concept in practice.

In literature on business development innovation for the real estate industry, scholars have only scratched the surface of the application of the value co-creation theory to business development in the real estate sector. Overall, most of the research is focused on the introduction of the concept to the real estate industry and lacks in efforts to study how to apply the theory to specific business development innovation practices. In fact, some real estate enterprises have used the theory of value co-creation in business development innovation and achieved good results. It therefore can be concluded that academia is lagging behind actual practices in the industry. Currently, the study on the application

of the theory of value co-creation in real estate enterprises' business development innovation, product design and customer experience improvement is inadequate, and the effect of the application of the value co-creation theory in business development innovation practices is not measured. Therefore, it is necessary for academia to carry out systematic theoretical research on this phenomenon and then provide a better frame of reference for real estate enterprises.

Chapter III Modeling and Hypotheses

3.1. Research Model Construction

The theory of value co-creation processes believes that value co-creation has three main components (Payne et al. 2009; Payne, Storbacka, and Frow, 2008): (1) Customer value creation processes which consist of customer learning and relationship experience, the latter of which is subject to the impact of emotion, cognition, and behavior; (2) Enterprise value creation processes which consist of organizational learning and relationship experience design in which co-creation opportunities, plans, implementation and indicators are the core elements; (3) Encounter processes which work as a bridge of interaction between customers and enterprises. The theory also points out that the value co-creation process can have a positive effect on customers and the effect depends on specific situational factors (Buonincontri et al., 2017; Frow et al., 2015; Navarro, Andreu, and Cervera, 2014). In regional high-end hotels, the value co-creation process is completed during the interaction between hotels and customers. **Hence, this study, following the logic of the theory of the value co-creation process, divides the value co-creation of regional high-end hotels into three processes: customer value creation, encounter between regional high-end hotels and customers, and value creation of regional high-end hotels.**

In light of the above theory, **we draw the following conclusions about the relationships between the value co-creation of regional high-end hotels and customer (economic, hedonic, and social) values**. First, the value co-creation of regional high-end hotels significantly raises customer (total, economic, hedonic, and social) values. Second, situational factors have an effect

3

on how significant a role can this contributing factor play. Specifically: (1) During the customer value creation process of regional high-end hotels, the role played by the value co-creation of regional high-end hotels in raising customer value is influenced by customer cultural background, gender, and industry background. This is mainly because the core participants in the customer value creation process during the value co-creation of regional high-end hotels are customers, and the main elements include customer learning and relationship experience (emotion, cognition and behavior). Cultural background has a significant effect on the learning process (Chang and Taylor, 2016), emotion, cognition (Arnould and Thompson, 2005), and behavior (Yi and Gong, 2013) of customers; gender also has a significant effect on the cognition and behavior of customers (Putrevu, 2004; Wolfa and Zhangb, 2016). Customers of regional high-end hotels are mostly representatives of enterprises, so their industry background can have a remarkable impact on how they perceive and process information. (2) During the encounter process between regional high-end hotels and customers, the role played by the value co-creation of regional high-end hotels in customer value creation is influenced by co-creation channels. This is mainly because as customers and regional high-end hotels interact with each other in the encounter process of value co-creation, co-creation channels have a remarkable effect on the extent (Füller, 2010) and efficiency (Katrien, 2015) of the interaction between customers and regional high-end hotels. (3) During the value creation process of regional high-end hotels, the role played by the value co-creation of regional high-end hotels in customer value creation is influenced by the co-creation supporter. This is mainly because the core participants in the enterprise value creation process of value co-creation are enterprises, and the

main elements include organizational learning and relationship experience design (co-creation opportunities, plans, implementation and indicators). Co-creation supporter (services, products) have an obvious effect on the learning process (Bierly and Daly, 2007), co-creation opportunities (Wang and Rafiq, 2014), plans, implementation and indicators (Dellaert and Stremersch, 2005a) of enterprises.

According to the social exchange theory, interaction takes place in an exchange of resources (Homans, 1958). This theory attempts to gain an insight into social interaction and the relationships built upon human interaction from the exchange of interests perspective. According to the principle of reciprocity under the social exchange theory, how an individual responds to others depends on the value others created for him or her (Blau, 1964). Thus customers' acquisition of value is the foundation of customer recommendation behavior. **As such, we come to the following conclusion about the relationship between customer (economic, hedonic, and social) values and the promotion of publicity on the part of regional high-end hotels: increasing the economic, hedonic and social values that customers acquire can motivate them to promote the publicity of regional high-end hotels.**

In view of the above theoretical analysis and reasoning as well as the research on value co-creation in the field of consumption which believes that customer value is the key pathway towards value co-creation influencing customer behavior, i.e. "co-creation →value →behavior" (Wang and Wan, 2012), we put forward a model for regional high-end hotels to promote their publicity in value co-creation through the "value co-creation →customer value →publicity promotion behavior" pathway (See Figure 1).
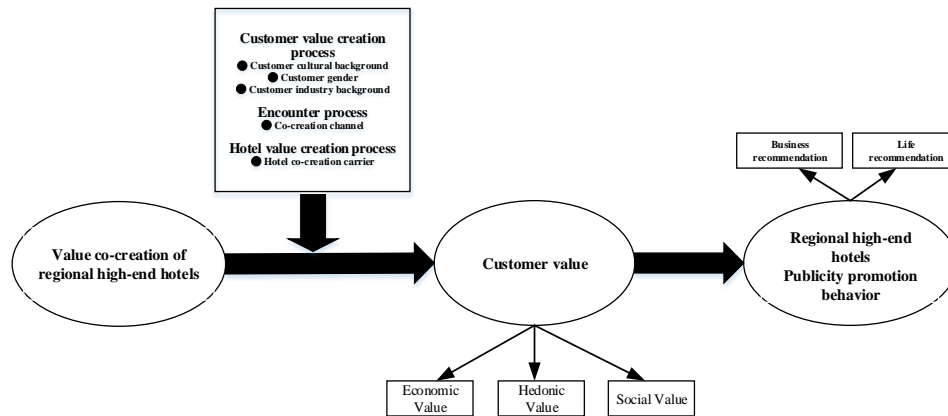
Figure 1. Model for Promoting the Publicity of Regional High-end Hotels

The focus of this study is on how regional high-end hotels can increase their brand equity through a rational value co-creation strategy. Specifically, this study will answer three subquestions as follows: (1) What is the value co-creation connotation of regional high-end hotels? (2) What should regional high-end hotels do to enhance their publicity through value co-creation? (3) What and how situational factors will affect the hotels' progress in visibility promotion?

3.2　Research Hypothesis Construction

3.2.1.　Impact of the value co-creation between regional high-end hotels and customers on customer value

The theory of value co-creation processes believes that value co-creation can help customers make value appeals to enterprises either in business activities or in everyday life (Chang and Taylor, 2016), share their feedback like joy and dissatisfaction on the services provided for them and enjoy the value creation process (Etgar, 2008), establish good relationships with service providers or other participants (Grönroos and Voima, 2013) and even improve their image and status in the service ecosystem. Therefore, we conclude that there is a significant positive correlation between the value co-creation of

regional high-end hotels and customer value, namely:

H1:Value co-creation has an obvious positive effect on customer value (economic [H1a], hedonic [H1b], and social [H1c] value), and more specifically, it has a stronger positive effect on hedonic and social value than economic value.

3.2.2. Impact of customer value of regional high-end hotels on publicity promotion behavior

According to the principle of reciprocity under the social exchange theory, individuals should reciprocate the benefits and values they obtain in order to continuously obtain relationship benefits. And this need is the driving force behind continuous social exchanges. Some studies based on the social exchange theory in the hospitality industry have explained the mechanism for generating citizenship behavior in tourists and achieved certain results (Liue et al., 2021; Al Halbusi et al., 2020). Specifically, regional high-end hotels can provide tourists with superb tangible and intangible physical and mental experiences by creating economic, hedonic and social values for customers through value co-creation activities. This acquisition of value motivates customers to reciprocate regional hotels by raising their publicity. In addition, related studies have confirmed that in tourism and hospitality industries, experience value is an important predictive variable of tourists' recommendation and re-visit behaviors (Chen et al., 2020; Zhang Hongmei et al., 2019). The services of regional high-end hotels are mainly targeted at businessmen. Therefore, they will first recommend the regional high-end hotel to the enterprises or organizations they are affiliated with or related to (business recommendation). Moreover, these customers are also ordinary consumers and members of their respective families. They will recommend the hotel to their families or friends in their daily life (life

recommendation). The above analysis leads to the following hypothesis:

H2: Customer value (economic [H1a], hedonic [H1b], and social [H1c] value) has a significant positive impact on the visibility promotion of regional high-end hotels (business recommendation and life recommendation).

3.2.3 Boundary conditions for the path of visibility promotion of regional high-end hotels

(1) Customer cultural background

Cultural values reflect a set of important indicators of beliefs and values of people in a specific organization and are the result of long-term socialization. Over the past years, academic circles have been working to develop a generally applicable conceptual model to describe the different dimensions of cultural values (Clark, 1990; Steenkamp, 2001). Among the models, Hofstede's Cultural Dimensions Theory which proposes four dimensions is the most representative one and has been widely used in tourism and hospitality industries (Huang and Crotts, 2019; Ivanov and Ivanova, 2016; Matzler et al., 2016; Pavluković et al., 2017; Radojevic et al., 2019; Reisinger and Crotts, 2010). Taking people's basic value appeals as the entry point and based on value surveys in 40 countries, the theory identifies four key dimensions to value: power distance, individualism and collectivism, masculinity and femininity, and uncertainty avoidance (Hofstede, 1991). These four dimensions are widely recognized as the most representative value dimensions for portraying the cultural differences across countries and organizations (Hofstede, 1983). Since cultural values are a set of values and codes of conduct established by members of a group and are widely shared and circulated among the members, they are usually stable within an organization.

In 2010, Reisinger and Crotts (2010) found in a survey of 608 visitors with different nationalities that Hofstede's cultural dimensions model (i.e. power distance, individualism and collectivism, masculinity and femininity, and uncertainty avoidance) was still valid and proved to be a reliable tool for measuring the collective inclination of visitors from different countries. By extension, it backs up the applicability of Hofstede's cultural dimensions model in hospitality and tourism industries. As is the case with countries, cultural values can also have a significant effect on the psychology, cognition, and behavior of members of a particular industry or organization. Therefore, this study holds that the cultural values of the organizations that customers belong to also play an important role in how customers on business trips obtain value.

(a)　Power distance

Power distance is defined as the extent to which members of a country or organization accept unequal power distribution (Hofstede, 1983). In a culture where power distance is big, people are likely to accept drastically different hierarchical structures. In contrast, in a culture where power distance is small, the majority of people tend to expect maximally equal power distribution (Hofstede, 1991). In social relations, people tend to compare their own power with that of others and consequently form a perception of whether the distribution of power is equal, namely power distance. The concept of power distance at the individual level is called power distance orientation (Hofstede, 2003). Individuals with a high power distance orientation tend to think that the existence of a power difference between superiors and subordinates is legitimate. In other words, they think subordinates should preserve this organizational hierarchy and show respect and obedience to more powerful superiors.

Individuals with a low power distance orientation, however, are not willing to accept these hierarchical differences and hope that they can also participate in the decision-making process.

In this connection, we conclude that in the value co-creation of regional high-end hotels and customers, equal and democratic ways of interaction can make customers with a high power distance orientation feel more pressure and at a loss; while for customers with a low power distance orientation, open and independent ways of interaction are more consistent with their inherent needs. Accordingly, this study proposes the following hypotheses:

H3:Power distance has a regulating effect on the relationship between value co-creation and customer value (economic [H3a], hedonic [H3b], and social [H3c] value) of regional high-end hotels.

(b) Collectivism and individualism

Collectivism and individualism are an important dimension for scholars to study the impact of cultural background on cooperation (Chan, Yim, and Lam, 2010). As value co-creation is essentially a type of interaction and cooperation between customers and regional high-end hotels (Payne, Storbacka, and Frow, 2008), differences in cultural background will no doubt have an effect on the value co-creation of customers and regional high-end hotels. This is largely because different cultural backgrounds lead to a systematic difference in customers' understanding of and attitude toward cooperation (Casper, Allen, and Poelmans, 2014).

First, customers from an individualist cultural background have higher expectations for return than those from a collectivist cultural background. Individualists are more calculative and more sensitive to the time and effort they

invest in cooperation (Winsted, 1997), and they often have higher expectations for what they can get in return (Chen, Chen, and Meindl, 1998). Individuals perceive economic value based on their calculation of the difference between actual return and expected return, i.e. perceived economic value equals to actual return minus expected return. Therefore, because individualist customers have higher expectations for return than collectivist customers, they may perceive a lower economic value though they get the same actual return as collectivist customers in the value co-creation process.

Second, customers from a collectivist cultural background have a stronger sense of cooperation than those from an individualist cultural background. Customers from a collectivist cultural background tend more to consider themselves as members of a cooperative group (Triandis, 1995). Thus they value not only their own interests, but also other members' interests and harmonious cooperation within the group (Chen, Chen, and Meindl, 1998). Therefore, collectivist customers may attach more importance to opportunities of value co-creation with regional high-end hotels and tend more to see regional high-end hotels as partners in the value co-creation process. Meanwhile, they are more willing to take active actions to strengthen their partnership with regional high-end hotels and interpersonal relationship with staff of regional high-end hotels (Chan, Yim, and Lam, 2010), and may make concessions to maintain harmonious relationships when a conflict occurs (Pattersona and Prasongsukarnc, 2006). A strong sense of cooperation can boost customers' social value (Chan, Yim, and Lam, 2010).

Third, customers of regional high-end hotels who come from a collectivist cultural background are more willing to share than those who come from an

individualist cultural background. Collectivist customers have a stronger motive to express themselves and establish social relationships (Tata 2005), and they are more willing to share during the value co-creation process (Hwang and Kim, 2007). The benefit of a great willingness to share is twofold. First, collectivist customers will be happy to share knowledge, skills and views with regional high-end hotels in value co-creation, which can improve co-creation efficiency. Second, the sharing process itself can bring collectivist customers happiness at being able to express themselves and being recognized, which can increase their hedonic value. Accordingly, this study proposes the following hypotheses:

H4: Collectivism and individualism have a regulating effect on the relationship between value co-creation and customer value (economic [H4a], hedonic [H4b], and social [H4c] value) of regional high-end hotels.

(c) Masculinity and femininity

Masculinity and femininity are a pair of relative concepts. Masculinity emphasizes the degree of the dominance of masculine values in a society or group. Groups with a high degree of masculinity prioritize such qualities as competition, assertiveness and heroism. On the other hand, groups with a low degree of masculinity or a high degree of femininity pay close attention to others and the quality of work and life, and value qualities such as modesty, cooperation and caring for others (Hofstede, 1991; Hofstede, 2003; Hofstede, 1983; Huang and Crotts, 2019). Therefore, we infer that in the value co-creation of regional high-end hotels and customers, customers with a high degree of femininity are more willing to participate in interaction and underline the impact they have on other customers and the hotel; they may gain more value in value co-creation. On the contrary, customers with a high degree of masculinity may

only care about their own feelings and goals and are reluctant to cooperate. Accordingly, this study proposes the following hypotheses:

H5: Masculinity and femininity have a regulating effect on the relationship between value co-creation and customer value (economic [H5a], hedonic [H5b], and social [H5c] value) of regional high-end hotels.

(d) Uncertainty avoidance

Uncertainty avoidance is defined as the way in which members of society deal with uncertainties and risks (Hofstede, 1983). High uncertainty avoidance means caution, unwillingness to take risks and obedience to social and cultural norms. Groups with low uncertainty avoidance are more likely to abide by decisions that entail certain risks (Hofstede, 1991). In the field of organizational behavior, existing domestic and foreign studies have shown that uncertainty avoidance has a significant impact on employees' innovative behavior (Afsar and Masood, 2018; Idris, 2011). Since value co-creation is an innovative behavior and the process of putting ideas into practice, this process is full of uncertainty. A high degree of uncertainty can stall customer innovations. When faced with uncertain situations, customers showing high uncertainty avoidance will feel anxious and uneasy, experience greater fear of innovation failure, and have a low sense of innovation self-efficacy, all of which can have a negative impact on putting innovative ideas into practice. In other words, the uncertainty avoidance tendency of customers determines whether value co-creation is effective. Accordingly, this study proposes the following hypotheses:

H6: Uncertainty avoidance has a regulating effect on the relationship between value co-creation and customer value (economic [H6a], hedonic [H6b], and social [H6c] value) of regional high-end hotels.

4

(2) Customer gender

Norms and expectations with regard to playing different gender roles will be instilled in biological individuals when the latter transform into social beings (Fagot, Rodgers, and M. D. Leinbach 2000). Individuals develop their own concepts of gender roles through learning and abiding by these norms, and these concepts significantly affect individuals' participation in market work (Fortin 2015).

First, information processing orientation varies among customers of different genders. Men are more likely to engage in rational practice with clear goals, while women tend to engage in relationship-building activities that develop emotional connections (Putrevu 2004). Compared with male customers, female customers are more likely to be disturbed by external factors such as harmonious relationship and interactive environment in the process of value creation, which can weaken the connection between their value co-creation and value perception.

Second, customers of different genders respond differently to negative experiences. Value co-creation is based on the sharing of information and resources, but this sharing is not always constructive. When individuals repeatedly discuss their own pressures or difficulties with others and both sides let their emotions and difficulties overwhelm them instead of seeking to solve difficulties, their negative experiences will only intensify rather than receding. This is what we call co-rumination (Davidson et al. 2014). Women have more self-disclosures (Horne and Johnson 2018) and tend to make more ruminative responses in interpersonal interactions than men (Johnson and Whisman 2013). It can be speculated that co-rumination occurs more easily among females than

among males during value co-creation (Chowa, Homabc, and Amersdorfera 2017; Murdock, Gorman, and Robbins 2015).

The above analysis leads us to conclude that women are more likely to have negative experiences in customer value creation than men. Accordingly, this study proposes the following hypotheses:

H7: Customer gender has a regulating effect on the relationship between value co-creation and customer value (economic [H7a], hedonic [H7b], and social [H7c] value) of regional high-end hotels.

(3)　Customer industry background

Regional high-end hotels are mainly targeted at businessmen, whose industry background has a key influence on their value evaluation. Depending on technical merit, industry backgrounds can be divided into high-tech and low-tech industry backgrounds. High-tech industries refer to industries that produce products with a high scientific and technical content (Chang and Taylor 2016; Rubera and Kirca 2012). Compared with low-tech industries, high-tech industries create better conditions for value co-creation. First, high-tech industries place more emphasis on the transformation of value. High-tech industries undergo rapid technological iterations. In order to respond to rapid technological innovations, high-tech industries underscore the importance of the rapid transformation of intellectual capital into value (Bierly and Daly 2007). This can facilitate the formation of customer value. Second, high-tech industries offer more opportunities for value co-creation. High-tech industries must face more uncertain environmental factors (Heidenreich 2009). In order to cope with environmental uncertainty, high-tech industries must fully understand the external environment through frequent and in-depth interactions with customers.

This affords more opportunities for customers to realize their value. Third, high-tech industries have more operational resources. Due to fierce competition and rapid flow of talent and knowledge (Wang and Rafiq 2014) in high-tech industries, these industries have more diverse talent and heterogeneous knowledge, which can contribute to holding efficient value co-creation activities. Accordingly, this study proposes the following hypotheses:

H8: Customer industry background has a regulating effect on the relationship between value co-creation and customer value (economic [H8a], hedonic [H8b], and social [H8c] value) of regional high-end hotels.

(4) Co-creation channels

The encounter process is the channel of co-creation, where customers conduct two-way interactions with regional high-end hotels and build platforms for resource exchanges and cooperation (Payne, Storbacka, and Frow 2008). Traditional co-creation and digital co-creation are two main channels of co-creation (DELLAERT and STREMERSCH 2005b; Piller and Ihl 2012). Traditional co-creation is based on face-to-face human interaction, while digital co-creation is based on virtual network platforms.

Compared with traditional co-creation, digital value co-creation has many advantages. First, digital co-creation provides greater cognitive support for customers and regional high-end hotels. On the one hand, digital platforms provide customers with a wealth of information on products, services, and brands of regional high-end hotels. On the other hand, they provide a wider range of information sources for regional high-end hotels to fully understand consumers and competitors (Erdem et al., 2016). Second, digital co-creation provides customers with greater emotional support. The emergence of internet-

based social media and virtual communities in droves provides more opportunities and platforms for customers to share their views and express their feelings. Third, digital co-creation provides stronger action support for customers and regional high-end hotels. The digital environment opens up low-cost and multi-dimensional interaction opportunities for customers and regional high-end hotels (Füller 2010), making value co-creation behaviors such as technical exchanges, product trials and experiments more convenient and extensive. Cognitive support, emotional support, and action support are all important dimensions that affect customer value in the encounter process of value co-creation (Payne, Storbacka, and Frow 2008). The following hypothesis is thus made:

H9: Co-creation channel has a regulating effect on the relationship between value co-creation and customer value (economic [H9a], hedonic [H9b], and social [H9c] value) of regional high-end hotels.

(5) Co-creation supporter

Regional high-end hotels must rely on a specific theme or medium to carry out value co-creation activities with customers. Regional high-end hotels provide customers with intangible services and tangible products. Both intangible services and tangible products can be used as the theme of value co-creation activities with customers. Therefore, the theme of value co-creation activities carried out by regional high-end hotels can be divided into services and products by the tangibility or intangibility of hotel offerings. Service- and product-targeted value co-creation may have different contributions to customer value.

First, services can better meet customer preferences than products. In

service-centered value co-creation activities, regional high-end hotels must maintain long-term and high-level interactions with customers in order to keep abreast of changes in customers' preferences and usage habits, thus providing them with satisfactory personalized services. Therefore, in service-centered value co-creation activities, regional high-end hotels and their service personnel have more opportunities to create value for customers and experience in successful value co-creation. As a result, they are more capable of meeting customers' preferences.

Second, services place more emphasis on customer relationships than products. In service-centered value co-creation activities, regional high-end hotels usually use customer relationship as an important monitoring and evaluation indicator (Dellaert and Stremersch 2005a). Therefore, customer relationship is highly integrated into the development and operation strategy of regional high-end hotels, and has an important impact on the overall value customers receive in value co-creation (Ravald and Grönroos 1996).

Finally, organizations empower customers more strongly in service-centered value co-creation activities than in product-centered value co-creation activities. Adequate empowerment can help customers obtain higher-level process experience and gain a sense of pride in co-creation (Franke and Piller 2004), which catalyzes the improvement of their value perception. Accordingly, this study proposes the following hypotheses:

H10: Co-creation carrier has a regulating effect on the relationship between value co-creation and customer value (economic [H10a], hedonic [H10b], and social [H10c] value) of regional high-end hotels.

Chapter IV Research Design and Pre-survey

4.1. Development of the Initial Scale

Considering the content validity and face validity, this study had to develop construct measuring tools suitable for the regional high-end hotel scenario, mainly covering four constructs, namely value co-creation, customer value, publicity promotion behavior, and customer cultural background. The development is based on deductive methods and supplemented by inductive methods. To be specific, we collect measurement questions under the theoretical framework of related constructs from two sources: (1) Previous measurement scales. This study builds on a review of the literature on hotels and value co-creation and collects measurement questions that can reflect these two dimensions from existing scales. (2) Open-ended questionnaire survey. In this study, hotel customers in Guangxi Zhuang Autonomous Region will act as the subjects and complete an open-ended questionnaire. In the questionnaire, the researchers give the common definition of value co-creation, customer value, publicity promotion behavior, and customer cultural background, and ask the respondents to list more than five of their feelings about these four dimensions when receiving the service of regional high-end hotels. The above two sources constitute the question database of the scales for this study's four constructs, from which some questions should be selected to form the initial questionnaire of the value co-creation behavior scale. The selection principles are as follows: ① Expressions consistent with dimension content; ② Expressions that appear more frequently in the open-ended questionnaire; ③ All expressions under each dimension in the open-ended questionnaire; ④ If the expression in the open-ended questionnaire is similar to a question in a related previous scale, the

latter should be selected.

With respect to the number of questions in the initial questionnaire, Wu Minglong (2010) suggested that the number should best be three to four times that of the formal test. Relevant previous studies have shown that to ensure great internal consistency without doing detailed research, the number of pre-test questions should best be about 1.5 times that of formal scale questions. Considering that this study adopts deductive methods, we refer to previous studies by Guo Xiaowei and Fan Wei (2018), and plan to select a number of pre-test questions that is two to four times that of the formal test under each dimension.

This dissertation follows the method of Guo Xiaowei and Fan Wei (2018) to test the validity of the scale content. A group of subjects is asked to read the definition of the construct and the test questions and tell if they match each other one by one. The proportion of correct matches determines the degree of the validity of the test questions. If a question is matched with the dimension it belongs to with an accuracy rate of over 60%, it will be considered to have great content validity. This study will invite 10 scholars in hotel marketing and 6 regional high-end hotel managers to act as the subjects, who will match the test questions with the dimensions under test under the above procedures. Questions with a matching accuracy rate of less than 60% will be eliminated. In the end, initial scales measuring value co-creation, customer value, publicity promotion behavior, and customer cultural background were formed.

4.2 Definition of Constructs and Initial Scale Design

4.2.1 Definition and measurement of value co-creation

The theory of value co-creation holds that companies can learn from

customers about product innovation, processes, and manufacturing by engaging in value co-creation activities with customers. At the same time, companies can have a more comprehensive and profound understanding of customer needs, motivations and consumer behaviors. Companies can have a clearer understanding of customer needs and fewer blunders in investment. The interaction between companies and customers is the cornerstone of value co-creation, so it is necessary to identify the key elements that exist in the interaction. Prahalad and Ramaswamy (2004) used the DART model to make value co-creation tangible, arguing that value co-creation consists of four basic modules: (1) Dialog is an unrestricted, content-rich and equal interaction between a company and its customers. (2) Access includes tools and procedures. It is mainly related to communication and can increase the freedom of customer choice and promote co-creation. (3) Risk assessment means enabling customers to fully assess the risks involved in accepting a value proposition for themselves. (4) Transparency refers to the extent to which a company reduces the information asymmetry between itself and its customers. Based on the research results of the DART model (Albinsson et al., 2016; Zaborek and Mazur, 2019; Zhang Jie et al., 2015; Schiavone et al., 2014; Zaborek, 2014) and considering the service scenarios of regional high-end hotels, the value co-creation scale is designed as follows:

Measurement Dimension	Question Number	Item
Dialog	VD1	We hold dialogs with our hotel guests in a systematic way.
	VD2	We use special ways to encourage our customers to talk to us.
	VD3	The goal of our dialogs with customers is to provide perspectives on improving existing products/services or generating new services/products.

Measurement Dimension	Question Number	Item
	VD4	Talking to our customers allows us to understand their experience with our products/services.
	VD5	We encourage our hotel staff to communicate with customers about any and all aspects of the service/product experience.
Access	VA1	Customers can determine certain elements of our products/services that affect product utility and/or appearance.
	VA2	Customers can choose their preferred payment methods.
	VA3	Customers can always choose the ways they prefer to communicate with us.
	VA4	Customers can easily receive the service/product at the time, in the place and in the way they prefer.
	VA5	Customers have many opportunities to choose how they experience a service or enjoy a product.
Risk assessment	VR1	Customers can consciously make purchase decisions because we inform them of the benefits of our products/services in detail.
	VR2	Customers can consciously make purchase decisions because we inform them of the risk in using our products/services in detail.
	VR3	The products/services offered by a hotel are completely safe for everyone, so there is no need to inform customers about the risk. (Reverse - item)
	VR4	We encourage consumers to fully learn about the products/services we offer.
	VR5	We advise our customers on ways of using our products/services that can avoid various risks.
Transparency	VT1	All the information we release is reliable.
	VT2	The information posted on our website is up-to-date.
	VT3	We follow a policy of open information because we have nothing to hide.
	VT4	We respond immediately to questions from customers who have checked in or plan to check in our hotel.
	VT5	The hotel fully discloses to customers details of the costs and pricing associated with the design and delivery of the service/product experience.

4.2.2 Definition and measurement of customer value

Holbrook (2006) defines customer value as an interaction-based experience with relative preferences. Holbrook (2006) argues that customer

value has two dimensions. (1) Extrinsic-intrinsic value—extrinsic value is the value embodied in a product or service when it serves as an intermediate tool to achieve further customer goals; intrinsic value is the value that is embodied when consumer experience itself is the ultimate goal of the customer. (2) Self-oriented-Others-oriented Value—Self-oriented value refers to the value customers place on a product or service based on their own interests; others-oriented value refers to the value customers place on a product or service based on the interests of others. Based on these two dimensions, Holbrook (2006) classifies customer value into four categories. (1) Economic value is the value embodied in a product or service when it is used as a tool for customers to achieve their goals; (2) hedonic value stems from customers' own pleasure in the consumption experience itself (3) social value is the value generated when a product or service is used as a tool to influence others. (4) Altruistic value not only requires customers to regard consumption experience as their ultimate goal but also care about their influence on others.

Among them, altruistic value stems from customers' care about how their consumption behavior affects others and their pursuit of moral ideals. That is, virtue is its own reward. It is found from in-depth interviews that in regional high-end hotel scenarios, customers rarely experience altruistic value. Therefore, based on the customer value framework proposed by Holbrook (2006), this dissertation divides customer value in regional high-end hotel scenarios into economic value, hedonic value and social value. Meanwhile, based on the findings of existing quantitative and qualitative studies on customer value (Hau et al., 2017; Verleye, 2015; Zhang, Hong et al., 2022; Edvardsson et al., 2011; Holbrook, 2006; Nambisan and Baron, 2009), the customer value scale in the

regional high-end hotel context is designed as follows:

Measurement Dimension	Question Number	Item
Economic Value	CE1	I get the information or knowledge I need from the hotel and its staff.
	CE2	My interaction with the hotel's service staff allowed me to gain important information about the services and products.
	CE3	I learned new ways of solving problems from the hotel management or service staff.
	CE4	I have discovered new ways of experiencing services or using products from the hotel management or service staff.
	CE5	I have received excellent value for money experience from the hotel.
Hedonic Value	CH1	I'm relaxed in this hotel.
	CH2	Staying in this hotel frees me from a sense of great stress and responsibility.
	CH3	I'm excited staying in this hotel.
	CH4	I feel happy staying at this hotel.
	CH5	Staying in this hotel brings me visual and auditory enjoyment.
Social Value	CS1	I have made valuable new friends during my stay at this hotel.
	CS2	By staying at this hotel, I gained a sense of accomplishment.
	CS3	By staying at this hotel, I have improved my self-image.
	CS4	By staying at this hotel, I am more identified with the service and brand of this hotel.
	CS5	By staying at this hotel, I have earned respect and recognition.

4.2.3 Definition and measurement of publicity promotion behavior

From the perspective of customers, this research defines the behavior of promoting the publicity of regional high-end hotels as that of customers recommending their experience of the brand and services of regional high-end hotels to others. Since regional high-end hotels mainly serve customers on business trips, this dissertation classifies regional high-end hotel customers' behavior of promoting the publicity of regional high-end hotels into business recommendation and life recommendation. The former is mainly for colleagues or stakeholders with whom customers have business relationships; the latter is mainly for friends and family members with whom customers have life relationships. Based on the findings of existing quantitative and qualitative

studies on customer recommendation behavior (Liu and Jo, 2020; Chen Xin and Cheng Zhenfeng, 2021; Yi and Gong, 2013), the following scale is designed to measure customers' behavior of promoting the publicity of regional high-end hotels:

Measurement Dimension	Question Number	Item
Business Recommendation	BR1	I will recommend this hotel to my colleagues working in my department of my company.
	BR2	I will recommend this hotel to my colleagues in other departments of my company.
	BR3	If I have the opportunity, I will recommend this hotel to partner companies in other regions of China that operate in the same sector.
	BR4	If I have the opportunity, I will recommend this hotel to partner companies in other regions of China that operate in different sectors.
	BR5	If I have the opportunity, I will recommend this hotel to overseas partner companies.
Life Recommendation	LR1	I will share this hotel brand with my family.
	LR2	I will share this hotel brand with my friends.
	LR3	My family and I will check in this hotel next time if I have the opportunity to tour this region.
	LR4	My friends and I will check in this hotel next time if I have the opportunity to tour this region.
	LR5	I will recommend this hotel to those around me who want to visit this region.

4.2.4   Definition and measurement of customer cultural background

Measurement Dimension	Question Number	Item
Power Distance Orientation	PD1	While making decisions, superiors should not ask their subordinates for opinions.
	PD2	High-ranking people should not consult low-ranking people too often.
	PD3	Higher-ranking people should keep their distance from lower-ranking people in social contact.
	PD4	Lower-ranking people should not oppose the decision made by higher-ranking people.
	PD5	High-ranking people should not delegate core tasks to low-ranking people.
Collectivism and Individualism	CI1	Individuals should sacrifice their own interests for the collective.
	CI2	Individuals should stick together with their collective even if they are in difficulties.
	CI3	Collective interests always take precedence over rewards

Measurement Dimension	Question Number	Item
		for individuals.
	CI4	The success of a collective always weighs more than that of an individual.
	CI5	Collective interests should be taken into consideration when individuals work towards their own goals.
Masculinity and Femininity	MF1	It's more vital for men than women to have a job.
	MF2	Men often solve problems using logic while women by intuition.
	MF3	For men, solving tough problems usually requires proactive and coercive measures.
	MF4	Men always do better than women in some roles.
	MF5	Men are more decisive than women in making decisions.
Uncertainty Avoidance	UA1	Safety is essential for my life.
	UA2	Life is surrounded by uncertainty so we must always be on guard against mishaps.
	UA3	It is necessary to hear from all sides before making a decision.
	UA4	Instability is the norm in life, and it takes adventurism to make a breakthrough. (Reverse – item)
	UA5	Things change. However, progress is possible only amid change. (Reverse – item)

4.3　Pre-survey

4.3.1　Pre-survey process

Prior to questionnaire distribution, a pre-survey was conducted to verify the reliability and validity of the initial scale, so as to ensure the questionnaire is suitable for the research on regional high-end hotels. This study followed previous research practices and introduced a pre-survey for the questionnaire (Wu Minglong, 2010). Analysis was conducted in two steps. First, data collected from the pre-survey were subject to validity testing through exploratory factor analysis (EFA); following that, the KMO value and Bartlett's Test of Sphericity were used to judge if a factor analysis was suitable; and then the common factor analysis was conducted to extract common factors and determine items that may be deleted. Second, Cronbach's α coefficient was used for the reliability test of the scale. Following that, the corrected item-total correlation (CITC) value was

adopted to judge whether the internal consistency check was passed so as to determine the items that would be deleted at last.

Referring to previous research, this paper adopted the following steps to filter and determine the questionnaire items: (1) Calculate the corrected item-to-total correlation (CITC), and delete the questions whose CITC value is less than 0.4. (2) Calculate the KMO value and perform Bartlett's Test of Sphericity. Judgement as to whether it is suitable to do a factor analysis should be based on if the KMO value approaches 1 and if the results of the Bartlett's Test of Sphericity are significant. (3) Adopt principal component analysis. In view of the possible correlation of potential factors, perform oblique rotation rather than orthogonal rotation on the factors (Hair et al., 1998). (4) Delete items with cross loading exceeding 0.35 and index loading less than 0.5. (5) Based on the convenience of applying the scale, select items from the top five with the largest factor loading in each dimension. (6) Judge the convergent validity of the scale by observing whether the CR is greater than 0.7 and whether the AVE is greater than 0.5. (7) According to Fornell and Larcker (1981), test the discriminant validity of the scale by observing whether the AVE is greater than the square of the CITC between latent variables.

To fulfill the research objectives, customers of regional high-end hotels were taken as pre-survey objects. From September 1 to 15, 2022, a total of 400 questionnaires were distributed to regional high-end hotels in Guangxi through the social relations of the research team and the snowball sampling method, and 353 questionnaires were returned. After the incomplete ones and those with clear regularity were excluded, 266 valid questionnaires were obtained in the end. The return rate was 88.25% and the valid rate was 66.5%. Following that,

the 266 questionnaires were subject to pretest analysis to check whether the initial questionnaire was applicable and whether items were to be deleted or modified.

4.3.2 Exploratory factor analysis of the pre-survey questionnaire

The pre-survey questionnaire covers value co-creation, customer value, publicity promotion behavior, and customer cultural background. Prior to the analysis of data reliability, the exploratory factor analysis was carried out to test the construct validity of the scale to further determine the retention of items or not.

(1) Exploratory factor analysis of value co-creation scale

Table 4.3-1 EFA of VCC

Item	Factor 1	Factor 2	Factor 3	Factor 4
VD1	0.832	0.128	0.073	0.162
VD2	0.882	0.031	0.035	0.185
VD3	0.732	0.039	0.152	0.032
VD4	**0.483**	0.135	0.183	0.143
VD5	0.785	0.353	0.056	0.199
VA1	0.261	0.798	0.097	0.332
VA2	0.441	**0.489**	0.235	0.227
VA3	0.245	0.801	0.221	0.246
VA4	0.257	0.693	0..326	0.122
VA5	0.213	0.821	0.266	0.208
VR1	0.115	0.388	0.887	0.201
VR2	0.036	0.283	0.753	0.059
VR3	0.213	0.362	**0.459**	0.136
VR4	0.167	0.233	0.782	0.168
VR5	0.189	0.321	0.833	0.229
VT1	0.283	0.289	0.135	**0.366**
VT2	0.155	0.163	0.187	0.802
VT3	0.209	0.122	0.118	0.789
VT4	0.133	0.211	0.021	0.766
VT5	0.098	0.086	0.136	0.693
KMO		0.813		
Bartlett's Test of Sphericity	Approx. Chi-Square		1548.689	
	df		190	
	Sig.		0.000	
Eigenvalue in factor analysis	3.295	2.916	2.632	2.319

| Total explained variance ratio (%) | 31.703 | 47.134 | 53.069 | 65.645 |

Based on previous research and qualitative analysis, Table 4.3-1 for the value co-creation scale includes four dimensions, namely Dialog, Access, Risk assessment, and Transparency, and 20 items. The results of the exploratory factor analysis of value co-creation are shown in Table 4.3-1. The results show that the KMO value of the value co-creation scale is 0.813 > 0.8 and that Bartlett's test of Sphericity has an approximate Chi-Square distribution of 1548.689 with 190 degrees of freedom, and the significance probability value is significant below 0.001, indicating that common factors exist among variables, and the scale has good construct validity, so it is suitable for exploratory factor analysis. This paper also conducts an exploratory factor analysis of value co-creation, with specific settings including selecting four common factors according to the four dimensions established, selecting principle component analysis (PCA) as the method for factor extraction, and using varimax rotation (VR) for common factor rotation. The analysis results show that the interpretation eigenvalues after the rotation of the five common factors are 3.295, 2.916, 2.632, and 2.319 respectively, which can explain 65.645% of all the measurement items. Then, the component matrix after rotation was consulted to determine which items in the scale may be deleted, and the maximum variance method was used for rotation. In general, an item can be deleted in the following situations: (1) When only one item becomes a factor; (2) When the absolute value of the factor loading of the item is less than 0.5-- there is no convergence validity; (3) When the load of the same item on two or more factors is greater than 0.5. Table 4.3-1 suggests that four common factors were extracted from 20 items of value co-creation. The load of 16 out of these items is greater than 0.6, which is higher than the minimum standard of

0.5. But the factor load of items VD4, VA2, VR3, and VT1 is 0.483, 0.489, 0.459, and 0.366 respectively, which are lower than the minimum standard of 0.5, so these items are deleted. After deletion, additional factor analysis was conducted, and the result shows that the factor load of each remaining measurement item of value co-creation is higher than the minimum standard of 0.5. Therefore, 16 measurement items are tentatively reserved for value co-creation.

(2) Exploratory factor analysis of customer value scale

Table 4.3-2 EFA of CV

Item	Factor 1	Factor 2	Factor 3
CE1	0.829	0.429	0.079
CE2	0.856	0.299	0.285
CE3	0.801	**0.553**	0.352
CE4	0.776	0.021	0.222
CE5	0.619	0.157	0.039
CH1	0.311	0.679	0.388
CH2	0.403	0.688	0.405
CH3	0.308	0.728	0.333
CH4	0.142	0.832	**0.509**
CH5	0.154	0.825	0.288
CS1	0.138	0.516	0.752
CS2	0.229	0.585	0.869
CS3	0.056	0.053	0.666
CS4	0..316	0.516	**0.463**
CS5	0.403	0.673	0.798
KMO		0.792	
Bartlett's Test of Sphericity	Approx. Chi-Square		1049.125
	df		105
	Sig.		0.000
Eigenvalue in factor analysis	4.132	2.882	2.738
Total explained variance ratio (%)	30.965	46.793	61.032

According to previous research and qualitative analyses, Table 4.3-2 lists 15 items by three dimensions of the customer value scale: economic value, hedonic value, and social value. The results of the exploratory factor analysis of value co-creation are shown in Table 4.3-2. Specifically, the KMO value of

customer value measurement items is 0.792 >0.7, and the fitness is middling. In addition, Bartlett's test of Sphericity has an approximate Chi-Square distribution of 1049.125 with 105 degrees of freedom, and the significance probability value is significant below 0.001, indicating that common factors exist among variables, and the scale has good construct validity, so it is suitable for exploratory factor analysis. Then, this paper conducts an exploratory factor analysis of customer value, with specific settings including selecting three common factors according to the three dimensions established, selecting PCA as the method for factor extraction, and using VR for common factor rotation. The analysis results show that the interpretation eigenvalues of the three common factors are 4.132, 2.882, and 2.738 respectively, which can explain 61.032% of all the measurement items. In Table 4.3-2, three common factors are extracted from the 15 items of customer value. The load of 14 out of these items is greater than 0.6, which is higher than the minimum standard of 0.5. But the factor load of Item CS4 is 0.463, which is lower than the minimum standard of 0.5. At the same time, the loads of items CE3 and CH4 on two factors are both greater than 0.5. Therefore, these items are deleted. After deletion, additional factor analysis was conducted, and the result shows that the factor load of each remaining measurement item of customer value is higher than the minimum standard of 0.5 and the case that the loads on two factors are greater than 0.5 at the same time no longer existed. Therefore, 12 measurement items are tentatively reserved for customer value.

(3)　Exploratory factor analysis of visibility promotion behavior

Table 4.3-3 EFA of Visibility Promotion Behavior

Item	Factor 1	Factor 2
ER1	0.841	0.046
ER2	0.815	0.153

Item	Factor 1	Factor 2
ER3	0.786	0.055
ER4	0.832	0.226
ER5	0.812	0.113
LR1	0.162	0.781
LR2	0.054	0.865
LR3	0.138	0.871
LR4	0.234	0.835
LR5	0.328	0.819
KMO	0.785	
Bartlett's Test of Sphericity	Approx. Chi-Square	1320.096
	df	45
	Sig.	0.000
Eigenvalue in factor analysis	4.953	3.872
Total explained variance ratio (%)	49.792	70.497

According to previous research and qualitative analyses, Table 4.3-3 lists 10 items by two dimensions of visibility promotion behavior of customers of regional high-end hotels: business recommendation and life recommendation. The results of the exploratory factor analysis of value co-creation are shown in Table 4.3-3. Specifically, the KMO value of visibility promotion behavior items is 0.785 >0.7, and the fitness is middling. In addition, Bartlett's test of Sphericity generates an approximate Chi-Square distribution of 1320.096 with 45 degrees of freedom, and the significance probability value is significant below 0.001, indicating that common factors exist among variables, and the scale has good construct validity, so it is suitable for exploratory factor analysis. Then, this paper conducts an exploratory factor analysis of visibility promotion behavior, with specific settings including selecting two common factors according to the two dimensions established, selecting PCA as the method for factor extraction, and using VR for common factor rotation. The analysis results show that the interpretation eigenvalues of the two common factors after rotation are 4.953 and 3.872 respectively, which can explain 70.497% of all the measurement items. Table 4.3-3 indicates that two common factors are extracted

from 10 items of visibility promotion behavior, each of which has a load greater than 0.6, above the minimum standard of 0.5, and the case that the loads on two factors are greater than 0.5 at the same time no longer exists. Therefore, 10 measurement items are tentatively reserved for visibility promotion behavior.

(4) Exploratory factor analysis of customer cultural background

Table 4.3-4 EFA of Customer Cultural Background

Item	Factor 1	Factor 2	Factor 3	Factor 4
PD1	**0.488**	0.032	0.122	0.162
PD2	0.731	0.143	0.211	0.185
PD3	0.758	0.199	0.086	0.032
PD4	0.72	0.135	0.183	0.143
PD5	0.695	0.353	0.056	0.199
CI1	0.224	0.802	0.097	0.332
CI2	0.02	**0.496**	0.235	0.227
CI3	0.241	0.813	0.221	0.035
CI4	0.162	0.601	0..326	0.152
CI5	0.047	0.662	0.266	0.031
MF1	0.017	0.312	0.826	0.039
MF2	0.179	0.283	0.849	0.031
MF3	0.188	0.039	0.752	0.039
MF4	0.218	0.168	**0.366**	0.168
MF5	0.053	0.321	0.755	0.229
UA1	0.103	0.289	0.135	0.677
UA2	0.139	0.163	0.289	0.783
UA3	0.211	0.122	0.163	**0.359**
UA4	0.098	0.211	0.039	0.727
UA5	0.101	0.086	0.168	0.819
KMO		0.773		
Bartlett's Test of Sphericity	Approx. Chi-Square		1548.689	
	df		190	
	Sig.		0.000	
Eigenvalue in factor analysis	4.533	3.619	3.359	2.011
Total explained variance ratio (%)	31.703	49.725	63.552	72.609

According to previous research and qualitative analyses, Table 4.3-4 lists 20 items by four dimensions of customer cultural background: power distance orientation, collectivism and individualism, Masculine, and uncertainty avoidance. The results of the exploratory factor analysis of value co-creation are shown in Table 4.3-4. Specifically, the KMO value of customer cultural

background items is 0.773 >0.7, and the fitness is middling. In addition, Bartlett's test of Sphericity generates an approximate Chi-Square distribution of 1548.689 with 190 degrees of freedom, and the significance probability value is significant below 0.001, indicating that common factors exist among variables, and the scale has good construct validity, so it is suitable for exploratory factor analysis. Then, this paper conducts an exploratory factor analysis of customer cultural background, with specific settings including selecting four common factors according to the four dimensions established, selecting PCA as the method for factor extraction, and using VR for common factor rotation. The analysis results show that the interpretation eigenvalues of the four common factors after rotation are 4.533, 3.619, 3.359, and 2.011 respectively, which can explain 72.609% of all the measurement items. It can be seen from Table 4.3-4 that four common factors were extracted from the 20 items of customer cultural background, and the loads of 16 items are greater than 0.6, higher than the minimum standard of 0.5, and there is no case that the loads on two factors are greater than 0.5 at the same time, but the factor loads of items PD1, CI2, MF4, and UA3 are 0.488, 0.496, 0.366, and 0.359 respectively, below the minimum standard of 0.5, so these items are deleted. Therefore, 16 measurement items are tentatively reserved for customer cultural background.

4.3.3   Reliability analysis of pre-survey questionnaire

Some problematic items were deleted through the EFA test of the pre-survey questionnaire. Next, reliability analysis was conducted on the selected items to finalize formal questionnaire items. The analysis results are as follows:

The value of Cronbach's α at the VCC general scale is 0.865. At the

subscale level, the values of Cronbach's α of Dialog, Access, Risk, and Transparency are 0.826, 0.812, 0.785, and 0.796 respectively. The value of Cronbach's α of the customer value general scale is 0.845. At the subscale level, the values of Cronbach's α of economic value, hedonic value, and social value are 0.809, 0.812, and 0.783 respectively. The value of Cronbach's α of the general scale of visibility promotion behavior is 0.854. At the subscale level, the values of Cronbach's α of Business Recommendation and Life Recommendation are 0.821 and 0.826 respectively. The value of Cronbach's α of the general scale of customer cultural background is 0.862. At the subscale level, the values of Cronbach's α of power distance, collectivism and individualism, Masculine, and uncertainty avoidance are 0.809, 0.832, 0.836, and 0.852, respectively. All the values of Cronbach's α at both the general scale and subscale levels of VCC, customer value, visibility promotion behavior, and customer cultural background are greater than 0.8, reaching the appropriate standards. The corrected item total correlation of each variable is greater than 0.5. After deleting the item, the values of Cronbach's α did not exceed those at the general scale and subscale levels before deletion. Therefore, all items pass the reliability test, indicating that the scale has good internal consistency reliability.

4.4. Formation of Formal Scale

Items were deleted according to the results of the pre-survey. The research team modified and optimized the linguistic expression of questionnaire items and formed a scientific scale as shown in Table 4.3-1. Finally, 16 measurement items were reserved for value co-creation and divided into four independent variables named Dialog (VD1-VD4), Access (VA1-VA4), Risk assessment

(VR1-VR4), and Transparency (VT1- VT4). Regarding customer value, 12 items were kept and divided into three independent variables named economic value (CE1-CE4), hedonic value (CH1-CH4), and social value (CS1-CS4). In terms of visibility promotion behavior, 10 items were kept and divided into two independent variables named business recommendation (BR1-BR4) and life recommendation (LR1-LR4). As for customer cultural background, 16 items were kept and divided into four independent variables named power distance orientation, collectivism and individualism, Masculine, and uncertainty avoidance. In this study, a 7-point Likert scale was used to measure all these 54 items in 13 dimensions.

Table 4.3-1 EFA of Customer Cultural Background

Construct	Measurement Dimension	Question Number	Item
Value co-creation	Dialog	VD1	We hold dialogs with our hotel guests in a systematic way.
		VD2	We use special ways to encourage our customers to talk to us.
		VD3	The goal of our dialogs with customers is to provide perspectives on improving existing products/services or generating new services/products.
		VD4	We encourage our hotel staff to communicate with customers about any and all aspects of the service/product experience.
	Access	VA1	Customers can determine certain elements of our products/services that affect product utility and/or appearance.
		VA2	Customers can always choose the ways they prefer to communicate with us.
		VA3	Customers can easily receive the service/product at the time, in the place and in the way they prefer.
		VA4	Customers have many opportunities to choose how they experience a service or enjoy a product.
	Risk assessment	VR1	Customers can consciously make purchase decisions because we inform them of the benefits of our products/services in detail.
		VR2	Customers can consciously make purchase decisions because we inform them of the

Construct	Measurement Dimension	Question Number	Item
			risk in using our products/services in detail.
		VR3	We encourage consumers to fully learn about the products/services we offer.
		VR4	We advise our customers on ways of using our products/services that can avoid various risks.
	Transparency	VT1	The information posted on our website is up-to-date.
		VT2	We follow a policy of open information because we have nothing to hide.
		VT3	We respond immediately to questions from customers who have checked in or plan to check in our hotel.
		VT4	The hotel fully discloses to customers details of the costs and pricing associated with the design and delivery of the service/product experience.
Customer value	Economic Value	CE1	I get the information or knowledge I need from the hotel and its staff.
		CE2	My interaction with the hotel's service staff allowed me to gain important information about the services and products.
		CE3	I have discovered new ways of experiencing services or using products from the hotel management or service staff.
		CE4	I have received excellent value for money experience from the hotel.
	Hedonic Value	CH1	I'm relaxed in this hotel.
		CH2	Staying in this hotel frees me from a sense of great stress and responsibility.
		CH3	I'm excited staying in this hotel.
		CH4	Staying in this hotel brings me visual and auditory enjoyment.
	Social Value	CS1	I have made valuable new friends during my stay at this hotel.
		CS2	By staying at this hotel, I gained a sense of accomplishment.
		CS3	By staying at this hotel, I have improved my self-image.
		CS4	By staying at this hotel, I have earned respect and recognition.
Publicity Promotion Behavior	Business Recommendation	BR1	I will recommend this hotel to my colleagues working in my department of my company.
		BR2	I will recommend this hotel to my colleagues in other departments of my company.
		BR3	If I have the opportunity, I will recommend this hotel to partner companies in other

Construct	Measurement Dimension	Question Number	Item
			regions of China that operate in the same sector.
		BR4	If I have the opportunity, I will recommend this hotel to partner companies in other regions of China that operate in different sectors.
		BR5	If I have the opportunity, I will recommend this hotel to overseas partner companies.
	Life Recommendation	LR1	I will share this hotel brand with my family.
		LR2	I will share this hotel brand with my friends.
		LR3	My family and I will check in this hotel next time if I have the opportunity to tour this region.
		LR4	My friends and I will check in this hotel next time if I have the opportunity to tour this region.
		LR5	I will recommend this hotel to those around me who want to visit this region.
Customer cultural background	Power Distance Orientation	PD1	High-ranking people should not consult low-ranking people too often.
		PD2	Higher-ranking people should keep their distance from lower-ranking people in social contact.
		PD3	Lower-ranking people should not oppose the decision made by higher-ranking people.
		PD4	High-ranking people should not delegate core tasks to low-ranking people.
	Collectivism and Individualism	CI1	Individuals should sacrifice their own interests for the collective.
		CI2	Collective interests always take precedence over rewards for individuals.
		CI3	The success of a collective always weighs more than that of an individual.
		CI4	Collective interests should be taken into consideration when individuals work towards their own goals.
	Masculinity and Femininity	MF1	It's more vital for men than women to have a job.
		MF2	Men often solve problems using logic while women by intuition.
		MF3	For men, solving tough problems usually requires proactive and coercive measures.
		MF4	Men are more decisive than women in making decisions.
	Uncertainty Avoidance	UA1	Safety is essential for my life.
		UA2	Life is surrounded by uncertainty so we

Construct	Measurement Dimension	Question Number	Item
			must always be on guard against mishaps.
		UA3	Instability is the norm in life, and it takes adventurism to make a breakthrough. (Reverse – item)
		UA4	Things change. However, progress is possible only amid change. (Reverse – item)

Chapter V Empirical Analysis and Hypothesis Testing

5.1 Implementation of Formal Survey and Basic Statistical Characteristics

5.1.1 Sample selection

The object was determined before the survey started. In this study, Ming Du Lakeside Hotel was selected as the object of survey. The selection is rational for four reasons:

First, Ming Du Lakeside Hotel is an iconic high-end hotel. It is located in Langdong Wuxiang Business District, Nanning City—Capital of Guangxi Province, surrounded by landmark building facilities such as Nanhu Park, Diwang Mansion, International Convention and Exhibition Center, MixC Mall, Hangyang International City, Wal-Mart, and Vanguard. The hotel has been operating for 7 years since its trial operation in September 2015. It is subordinate to Nanning Gangchang Real Estate Corp Ltd and has been designed and decorated as a luxury hotel beyond five-star standard. The hotel has a large scale: 52 floors aboveground and 3 floors underground, and 215 meters in height. It offers 433 guest rooms with different landscapes. At present, it is the hotel with the largest number of guest rooms in Nanning.

Second, the hotel is a typical business hotel, specially serving business customers. The hotel has about 2,000 square meters of space for banquet activities, including the largest pillar-free banquet hall of 650 square meters that can accommodate 800 people for meeting and dining at the same time. The hotel also provides a wide range of business meeting rooms and can hold five or more banquets simultaneously. It has a full-time seafood buffet, a Chinese restaurant, a Japanese restaurant, a lakeside cafe, SKY52 Bar, and other catering facilities,

providing customers with various types and forms of catering services encompassing business, leisure, and private banquets. According to statistics, it received 550,000 catering consumers throughout 2019, which made it the only non-chain catering business with a revenue of more than 100 million yuan in the hotel and catering industry of Nanning.

Third, the hotel relies on regional economy and has remarkable regional influence. After years of operation and accumulation, the hotel has attained big brand influence in Nanning, the capital of Guangxi. It was rated as the most luxurious and popular hotel in Nanning from 2016 to 2019 and won the award for the most reputable hotel. In 2019, it was rated as a popular luxury hotel of Nanning. In 2019-2020, it was granted the titles of "Top Ten Quality Service Hotels in China under the China Hospitality Golden Ray Award" and "Most Popular City Landmark Hotel in China". In 2021, it won the "Best Partner" award, the "Excellent Service Hotel" award from Meituan, and the award of "Gold Restaurant of Ctrip".

Fourth, the research team found that despite considerable brand influence in Nanning and Guangxi at large, the hotel does not have considerable brand influence in the other provinces. Following the methods of previous scholars The question is: "Do you think Ming Du Lakeside Hotel is a well-known hotel?" (1=little-known, 9=well-known). A total of 2,000 questionnaires were randomly distributed in 27 regions including Guangxi, Hebei, and Shanxi provinces, and 1745 valid ones were collected (as shown in Table 5.1-1). The result shows that the score of Guangxi (7.8) is significantly higher than that of the other regions (< 5). The total average score of all the regions is only 2.83. The result of this survey is consistent with the current situation that the hotel mainly serves

Nanning and Guangxi at large and has no branch in other parts of the country.

In conclusion, the hotel is a typical regional hotel with limited brand influence.

Table 5.1.1

Respondent Location	Valid Sample	Average Visibility Score
Guangxi	236	7.8
Hebei Province	55	3.2
Shanxi Province	60	3.3
Liaoning Province	61	1.7
Jilin Province	66	2.6
Heilongjiang Province	72	2.9
Jiangsu Province	54	3.1
Zhejiang Province	45	3.5
Anhui Province	46	3.3
Fujian Province	38	1.5
Jiangxi Province	59	2.1
Shandong Province	56	2.5
Henan Province	60	1.8
Hubei Province	66	1.9
Hunan Province	61	4.6
Guangdong Province	62	4.8
Hainan Province	63	3.7
Sichuan Province	45	1.5
Guizhou Province	42	2.5
Yunnan Province	39	2.2
Shaanxi Province	48	2.3
Gansu Province	35	2.6
Qinghai Province	39	1.1
Beijing	112	3.2
Tianjin	60	1.3
Shanghai	109	2.1
Chongqing	56	3.3
Master sample	1745	
Total average score	2.83	

Based on the above analysis, this study concludes that Ming Du Lakeside Hotel is a regional high-end hotel. So the research findings about it are representative and universal.

5.1.2   Implementation of formal survey

Through the questionnaire design and the pre-testing, we revised and improved the questionnaire and then distributed its copies to the target

respondents on a large scale (the formal questionnaire is shown in Appendix 2). The formal survey process is as follows: 15 researchers from this research team distributed paper questionnaires to customers at random time points every day (8:00–20:00) and at random locations in Ming Du Lakeside Hotel (lobby, restaurant, garden). Customers were asked to read background materials containing value co-creation, then fill out and return the questionnaire. To ensure the quality of the questionnaire, the following measures are taken in this study: (1) To guarantee a high enough rate of response from the subjects, the questionnaires are printed on paper, and completed questionnaires are collected on the spot. (2) The 15 investigators are trained, and during the training standardized requirements for and instructions on the time, place and procedures of questionnaire distribution are laid down clearly to the investigators. (3) To ensure the survey effect and avoid the fatigue of the researchers, the 15 researchers were divided into three groups, 5 per group, and each group worked for 1 hour per day. (4) 50 yuan was given to each respondent as a reward. (5) The subjects are told that they should remain anonymous when filling out the questionnaire and that the results are for academic research purposes only to allay their apprehension at filling out the questionnaire.

From September 1 to October 7, 2021, the research team altogether sent out 1,000 paper questionnaires, 72.28% or 728 of which were collected. The research team processed the collected questionnaires one by one and removed 11 with extreme data and 15 with incomplete answers. Finally, 702 valid questionnaires were obtained, with a valid rate of 70.2%. holds that the ratio of the number of respondents to the number of questionnaire items should be equal to or higher than 5:1. The ratio of valid questionnaires to items in this

study is 702:54=13:1, which is obviously higher than 5:1. Therefore, the study meets the basic requirement about the number of valid questionnaires in empirical research.

5.1.3   Analysis of sample characteristics

As shown in Table 5.3-1, out of the 702 respondents, 488 are males, accounting for 69.52%, and 214 are females, accounting for 30.48%. The proportion of males is significantly higher than that of females. Our survey was aimed at customers of regional high-end hotels. These figures show that males are the main customers of regional high-end hotels, for the possible reason that such hotels mainly serve business customers, while business activities have a large presence of males. This is consistent with the current situation of customers of regional high-end hotels.

By age, 60 respondents were aged below 20, accounting for 8.55%; 130 respondents aged 20–25, accounting for 18.52%; 100 respondents aged 26–30, accounting for 14.25%; 300 respondents aged 31–35, accounting for 42.74%; 112 respondents aged 36 above, accounting for 15.95%. This shows that most of the customers of regional high-end hotels are middle-aged, and that few of them are under 20. The reasons may be that middle-aged people can afford consumption in high-end hotels, and that those in charge of business activities are also middle-aged people. This is also in line with the current situation of regional high-end hotels.

In terms of education level, five respondents received education from junior high schools or below, accounting for 0.71%; 16 respondents received education from senior high schools, accounting for 2.28%; 50 respondents received education from junior colleges, accounting for 7.12%; 356 respondents

received education from colleges, accounting for 50.71%; 275 respondents had a master's degree or above, accounting for 39.17%. Obviously, the majority of customers have bachelor's degrees or above, which suggests that customers of regional high-end hotels largely have a high education level.

Regarding the employer types of the respondents, 159 respondents worked in state-owned enterprises (SOEs), accounting for 22.65%; 78 respondents worked in foreign enterprises, accounting for 1.11%; 115 respondents worked in public institutions, accounting for 16.38%; 106 worked in governmental agencies, accounting for 15.10%; 109 respondents worked in sino-foreign joint ventures, accounting for 15.53%; 56 respondents worked in private enterprises, accounting for 7.98%; 73 respondents were self-employed, accounting for 10.40%; six respondents were exceptions, accounting for 0.85%. This suggests that SOE employees account for the largest proportion among the customers probably because SOEs have more demand for industry meetings, while the proportions of the other types of employees are basically balanced.

As for the industry types of respondents, 58 respondents were engaged in agriculture, accounting for 8.26%; 99 respondents engaged in the mining industry, accounting for 14.10%; 128 respondents engaged in manufacturing, accounting for 18.23%; 115 respondents engaged in the financial industry, accounting for 16.38%; 115 respondents engaged in the service industry, accounting for 16.38%; 69 respondents engaged in the Internet industry, accounting for 9.83%; 19 respondents engaged in the education industry, accounting for 2.71%; 63 respondents engaged in the medical industry, accounting for 8.97%; 37 respondents engaged in the art industry, accounting for 5.27%; six respondents engaged in other industries, accounting for 0.85%.

It can be seen that manufacturing, financial, and service industries account for higher proportions, probably because these industries have more connections with the place where the hotel is located. In contrast, the proportions of the other industries are basically balanced.

About the respondents' monthly personal incomes, no respondent had a monthly income below 3,000 yuan, accounting for 0%; 45 respondents had a monthly income of 3,000-4,999 yuan, accounting for 6.41%; 159 respondents had a monthly income of 5,000-6,999 yuan, accounting for 22.65%; 137 respondents had a monthly income of 7,000-8,999 yuan, accounting for 19.52%; 156 respondents had a monthly income of 9,000-11,999 yuan, accounting for 22.22%; 66 respondents had a monthly income of 12,000-13,999 yuan, accounting for 9.40%; 59 respondents had a monthly income of 14,000-15,999 yuan, accounting for 8.40%; 47 respondents had a monthly income of 16,000-17,999 yuan, accounting for 6.70%; 22 respondents had a monthly income of 18,000-19,999 yuan, accounting for 3.13%; 11 respondents had a monthly income of more than 20,000 yuan, accounting for 1.57%. Obviously, most customers have medium and high incomes, which is in line with the consumption environment of high-end hotels and the fact that middle-aged customers have relatively high incomes.

Table 5.1.3

Sample Attribute	Feature Classification	Sample Size	Proportion (%)
gender	Male	488	69.52
	Female	214	30.48
age	Under 20 years old	60	8.55
	20-25 years old	130	18.52
	26-30	100	14.25
	31-35 years old	300	42.74
	36 years old and above	112	15.95
education background	Junior high school and below	5	0.71
	Senior high school	16	2.28

Sample Attribute	Feature Classification	Sample Size	Proportion (%)
	Junior college	50	7.12
	Bachelor's degree	356	50.71
	Master's degree or above	275	39.17
Enterprise Attribute	SOEs	159	22.65
	Foreign enterprises	78	11.11
	Public institutions	115	16.38
	Government agencies	106	15.10
	Sino-foreign joint ventures	109	15.53
	Private enterprises	56	7.98
	Self-employed	73	10.40
	Other employers	6	0.85
industry	agriculture	58	8.26
	mining	99	14.10
	manufacturing	128	18.23
	finance	115	16.38
	service	108	15.38
	internet	69	9.83
	teacher	19	2.71
	doctor	63	8.97
	art	37	5.27
	others	6	0.85
earnings	Less than 3,000 yuan	0	0.00
	3,000-4,999 yuan	45	6.41
	5,000-6,999 yuan	159	22.65
	7,000-8,999 yuan	137	19.52
	9,000-11,999 yuan	156	22.22
	12,000-13,999 yuan	66	9.40
	14,000-15,999 yuan	59	8.40
	16,000-17,999 yuan	47	6.70
	18,000-19,999 yuan	22	3.13
	20,000 yuan and above	11	1.57

5.1.4 Descriptive statistical analysis

In this study, SPSS28.0 was used for descriptive statistical analysis of 702 valid questionnaires collected. The descriptive statistical analysis of the results of each item involved in this study is shown in Table 5.4. The minimum values of all items are 1, the maximum values are 7, the absolute values of kurtosis are <10, and the absolute values of skewness are <3. It can be seen that the collected data basically accord with normal distribution, so the statistical analysis method

can be used for subsequent data analysis.

Table 5.1.4 Descriptive Statistical Analysis of Items

Variable	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis
VD1	3	6	4.77	0.696	-0.465	1.033
VD2	3	6	4.68	0.696	-0.408	-0.072
VD3	2	6	4.98	0.75	-0.071	-0.075
VD4	3	7	5.19	0.711	-0.559	-0.153
VA1	3	7	4.74	0.669	-0.59	0.855
VA2	2	6	5.02	0.727	-0.42	0.277
VA3	3	6	5.16	0.822	-0.473	-0.428
VA4	3	6	4.73	0.682	-0.416	0.224
VR1	3	7	5.07	0.685	-0.079	0.435
VR2	3	6	5.13	0.697	-0.567	-0.286
VR3	3	6	5.1	0.755	-0.598	0.061
VR4	2	7	4.81	0.812	-0.428	0.229
VT1	3	6	5.08	0.688	-0.487	-0.228
VT2	3	6	5.49	0.833	-0.563	-0.595
VT3	1	7	5.02	0.805	-0.391	-0.04
VT4	3	6	5.09	0.724	-0.268	-0.457
CE1	3	6	5.09	0.791	-0.32	0.304
CE2	3	7	5.27	0.657	-0.339	-0.189
CE3	3	6	5.32	0.736	-0.178	0.148
CE4	1	6	5.04	0.763	-0.197	0.178
CH1	3	6	4.91	0.817	-0.108	0.223
CH2	3	7	4.99	0.821	-0.154	0.154
CH3	2	6	4.85	0.787	-0.414	0.262
CH4	2	7	4.67	0.715	-0.284	0.192
CS1	3	6	5.09	0.789	-0.186	-0.143
CS2	3	6	5.72	0.807	-0.591	-0.676
CS3	3	7	5.84	0.728	-0.34	0.015
CS4	3	6	5.13	0.835	-0.293	-0.204
BR1	1	7	4.76	0.827	-0.288	-0.938
BR2	3	6	5.13	0.781	-0.486	0.171
BR3	3	7	5.26	0.749	-0.724	0.343
BR4	1	6	4.89	0.767	-0.348	-0.382
BR5	3	6	5.57	0.675	-0.68	-0.469
LR1	3	7	5.34	0.724	-0.151	-0.602
LR2	3	6	4.97	0.834	-0.371	-0.27
LR3	1	7	4.87	0.699	-0.382	1.023
LR4	3	6	5.22	0.685	-0.193	-0.052
LR5	3	6	5.07	0.779	-0.345	-0.073
PD1	3	7	5.24	0.708	-0.248	-0.253
PD2	2	6	4.81	0.825	-0.263	0.555
PD3	3	7	4.82	0.725	-0.512	0.233
PD4	3	7	5.23	0.836	-0.341	-0.328

Variable	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis
CI1	2	6	5.04	0.784	-0.295	-0.495
CI2	3	6	4.97	0.762	-0.218	-0.104
CI3	1	6	4.78	0.778	-0.386	-0.157
CI4	3	6	4.52	0.798	-0.724	0.204
MF1	3	7	5.15	0.834	-0.348	-0.183
MF2	3	6	5.31	0.776	-0.68	0.142
MF3	3	6	4.55	0.804	-0.151	0.171
MF4	1	6	5.08	0.684	-0.371	0.213
UA1	3	6	5.06	0.735	-0.079	0.156
UA2	3	6	5.46	0.81	-0.367	0.261
UA3	1	6	5.48	0.663	-0.298	0.152
UA4	3	7	5.22	0.803	-0.128	-0.321

5.2 reliability and reliability test

5.2.1 Reliability test

A reliability test is for analyzing the reliability and stability of a scale to judge the consistency between measurement indicators. Internal consistency reflects whether a scale measures the same construct, so it is particularly important for a multi-item scale. In the field of social science, the Cronbach's α coefficient is widely used to test internal consistency. Therefore, this study tested the reliability of the scale by Cronbach's α and CITC values. The reliability test results of each scale are shown in Table 5.6.

Table 5.6 Reliability Test of Formal Test Questionnaire

Construct & Cronbach's α Value		Item	CITC	Value of α after Item Deletion
VCC α=0.885	Dialog α=0.855	VD1	0.702	0.841
		VD2	0.698	0.836
		VD3	0.679	0.846
		VD4	0.723	0.841
	Access α=0.849	VA1	0.653	0.803
		VA2	0.705	0.815
		VA3	0.685	0.819
		VA4	0.702	0.831
	Risk assessment α=0.876	VR1	0.669	0.845
		VR2	0.661	0.856
		VR3	0.711	0.863
		VR4	0.697	0.853
	Transparency	VT1	0.757	0.753

Construct & Cronbach's α Value		Item	CITC	Value of α after Item Deletion
	α=0.825	VT2	0.647	0.812
		VT3	0.679	0.803
		VT4	0.667	0.787
CV α=0.932	economic value α=0.889	CE1	0.654	0.802
		CE2	0.665	0.801
		CE3	0.751	0.799
		CE4	0.754	0.789
	hedonic value α=0.837	CH1	0.651	0.811
		CH2	0.703	0.804
		CH3	0.673	0.808
		CH4	0.631	0.821
	social value α=0.828	CS1	0.657	0.783
		CS2	0.648	0.732
		CS3	0.743	0.711
		CS4	0.662	0.786
PB α=0.915	Business recommendation α=0.833	ER1	0.652	0.812
		ER2	0.669	0.821
		ER3	0.753	0.802
		ER4	0.712	0.785
		ER5	0.799	0.719
	Life Recommendation α=0.872	LR1	0.704	0.832
		LR2	0.706	0.822
		LR3	0.712	0.829
		LR4	0.712	0.838
		LR5	0.655	0.823
CB α=0.922	Power distance α=0.817	PD1	0.655	0.803
		PD2	0.675	0.804
		PD3	0.761	0.795
		PD4	0.761	0.806
		PD5	0.755	0.731
	Collectivism and individualism α=0.861	CI1	0.751	0.711
		CI2	0.703	0.784
		CI3	0.705	0.794
		CI4	0.773	0.702
		CI5	0.631	0.826
	Masculine α=0.866	MF1	0.642	0.832
		MF2	0.688	0.774
		MF3	0.699	0.755
		MF4	0.763	0.749
		MF5	0.752	0.786
	uncertainty avoidance α=0.898	UA1	0.681	0.836
		UA2	0.689	0.822
		UA3	0.693	0.842

Construct & Cronbach's α Value	Item	CITC	Value of α after Item Deletion
	UA4	0.706	0.836
	UA5	0.668	0.827

According to the explanation of Wu Minglong (2010), first of all, the Cronbach's α coefficient represents the reliability test result. In general, the threshold that reaches the reliability standard is 0.7. Specifically, if the coefficient ranges from 0.7 to 0.8, the reliability is good. If the coefficient ranges from 0.8 to 0.9, the reliability is very good. If the scale has more than one dimension, considering the reliability of each dimension and the scale as a whole is necessary. As can be seen from Table 5.6, the reliability of each scale and each dimension is greater than 0.8. For each item, the higher the CITC value is, the higher the internal consistency between the item and other items is; on the contrary, the lower the CITC value is, the lower the internal consistency between the item and other items is. At the same time, the value of Cronbach's α after item deletion is observed. If the Cronbach's α value after item deletion is lower than the Cronbach's α value of the subscale, it suggests that the internal consistency among items is good. Table 5.6 shows that the CITC values of all items are greater than 0.3, and Cronbach's α after item deletion is lower than that of the subscale. This suggests good reliability of the formal scale.

5.2.2   Validity test

Validity refers to the degree to which a measurement reaches the effect it is expected to reach, and the degree to which the measured results reflect the content you want to examine. The more consistent the measurement results are with the content examined, the higher the validity; otherwise, the lower the validity. With reference to previous practices in the field of management research

(1) Content validity test

Content validity, also known as logical validity, reflects whether the measurement content is suitable for the measurement target, or whether it reflects the measured characteristic or attitude. To ensure the content validity of the scale, this study completed the design of the scale via three steps: (1) Existing sophisticated scales in the literature of domestic and foreign core journals (CSSCI or SSCI) were used since these scales have been applied and verified by a large number of scholars. (2) According to the regional high-end hotel situation concerned in this study, the research team asked for and adopted the opinions of scholars and practical experts in the research fields of hotel management, customer value, and value co-creation. They then made three amendments to the problematic items of the scale and optimized the accuracy and refinement of the items. (3) Items were further deleted and modified through the pre-test results and feedback, so as to form a formal questionnaire with good content validity. (4) On this basis, two researchers in this research team assessed the content validity of 54 items under 13 variables (Dialog, Access, Risk Assessment, Transparency, Economic Value, Hedonic Value, Social Value, Business Recommendation, Life Recommendation, Power Distance Tendency, Collectivism and Individualism, Masculinity and Femininity, and Uncertainty Avoidance) through two-stage Q-sorting. The results show that the average accuracy of the items and corresponding constructs reaches 97.5%, indicating that the scale used in this study has great content validity.

(2) Construct validity test

Construct validity explains the degree of agreement between the actual results obtained from the scale and the theory assumed at the time of scale

design. In this study, a hypothesis was formed in advance about the structure (dimension) of the scale according to relevant theories when designing the scale. It is thus necessary to verify whether this structure is consistent with the measurement data. In this study, a confirmatory factor analysis was carried out on the items of the scale using software AMOS26.0 and SPSS28.0 to judge the construct validity of the scale. Construct validity includes convergent validity and discrimination validity. Convergent validity reflects the degree of consistency in the same construct index. It can be judged comprehensively by referring to the index of the degree of fitting of the measurement model and the standardized factor loading value, AVE value, and CR of the model. According to Fornell and Larcker (1981), if the standardized factor loading value is greater than 0.5, the AVE value is greater than 0.5, and the CR is greater than 0.7, then the variable has fairly great convergent validity. As shown in Table 5.7, the standardized factor loading values of all variables are greater than 0.5, the AVE values are all greater than 0.5, and the CR values are all greater than 0.7. This indicates that the scale has fairly great convergent validity.

Table 5.7-1 Results of the Standardized Factor Loading, AVE and CR Test

Variable	Item	Standardized Factor Loading	AVE	Square Root of AVE	CR
Dialog	VD1	0.654	0.632	0.795	0.838
	VD2	0.697			
	VD3	0.836			
	VD4	0.720			
Access	VA1	0.726	0.666	0.816	0.861
	VA2	0.836			
	VA3	0.724			
	VA4	0.722			
Risk	VR1	0.784	0.655	0.809	0.882
	VR2	0.704			
	VR3	0.773			
	VR4	0.757			
Transparency	VT1	0.776	0.673	0.820	0.875

Variable	Item	Standardized Factor Loading	AVE	Square Root of AVE	CR
	VT2	0.836			
	VT3	0.844			
	VT4	0.783			
economic value	CE1	0.757	0.662	0.814	0.889
	CE2	0.799			
	CE3	0.799			
	CE4	0.776			
hedonic value	CH1	0.802	0.753	0.868	0.852
	CH2	0.829			
	CH3	0.813			
	CH4	0.824			
social value	CS1	0.811	0.723	0.850	0.862
	CS2	0.831			
	CS3	0.839			
	CS4	0.824			
Business recommendation	BR1	0.812	0.709	0.842	0.901
	BR2	0.822			
	BR3	0.827			
	BR4	0.808			
	BR5	0.829			
Life Recommendation	LR1	0.808	0.702	0.838	0.832
	LR2	0.827			
	LR3	0.824			
	LR4	0.815			
	LR5	0.828			
Power distance	PD1	0.651	0.612	0.782	0.867
	PD2	0.671			
	PD3	0.757			
	PD4	0.757			
	PD5	0.751			
Collectivism and individualism	CI1	0.747	0.625	0.791	0.903
	CI2	0.699			
	CI3	0.701			
	CI4	0.769			
	CI5	0.627			
masculine and feminine	MF1	0.638	0.646	0.804	0.892
	MF2	0.684			
	MF3	0.695			
	MF4	0.759			
	MF5	0.748			
uncertainty avoidance	UA1	0.677	0.661	0.813	0.869
	UA2	0.685			

Variable	Item	Standardized Factor Loading	AVE	Square Root of AVE	CR
	UA3	0.689			
	UA4	0.702			
	UA5	0.664			

At the same time, referring to the statistical indicators and standards of the test of goodness for fit put forward by Wu Minglong (2010), this study conducted a model fitting analysis on four constructs: value co-creation, customer value, publicity promotion behavior, and customer cultural background. As is shown in Table 5.7-2, compared with the index fitting test's evaluation criteria, the fitting indexes of these four variables all meet the minimum requirements, indicating that all the measurement models have great fitting validity.

Table 5.7-2 Results of Construct Fitting Index Analysis

Variable	X^2/df	RMSEA	IFI	TLI	CFI	NFI
Value co-creation	1.342	0.035	0.980	0.969	0.972	0.973
Customer value	1.852	0.034	0.982	0.972	0.983	0.970
Publicity Promotion Behavior	1.031	0.028	0.986	0.977	0..983	0.972
Customer cultural background	2.891	0.067	0.912	0.923	0.932	0.908
Fitting Testing Criteria	Good: 1-3 Acceptable: 3-5	Good:<0.05 Acceptable:<0.08	>0.90	>0.90	>0.90	>0.90

Discrimination validity reflects the degree of the discriminability between constructs, and it is generally evaluated by comparing the CITC between the square root of AVE and the latent variable. According to Fornell and Larcker (1981), if the square root of AVE is greater than the CITC between the latent variable and other latent variables, then the measurement model has great discrimination validity. The diagonal number between the variables in Table 5.7-3 is the square root of the AVE value, and the other values are the CITC between the variables. It can be seen that the square root of AVE is greater than the CITC of any pair of variables. Therefore, the discrimination validity of the

scale passed the test.

Table 5.7-3 The Mean Value, Variance, CITC, and AVE Square Root of the Formal Questionnaire[①]

	VD	VA	VR	VT	CE	CH	CS	BR	LR	PD	CI	MF	UA
VD	**0.780**												
VA	0.431	**0.818**											
VR	0.449	0.562	**0.798**										
VT	0.531	0.722	0.476	**0.811**									
CE	0.279	0.691	0.477	0.547	**0.818**								
CH	0.371	0.422	0.411	0.497	0.477	**0.838**							
CS	0.511	0.417	0.433	0.603	0.478	0.621	**0.840**						
BR	0.307	0.708	0.633	0.412	0.461	0.555	0.623	**0.842**					
LR	0.266	0.691	0.496	0.381	0.578	0.410	0.557	0.625	**0.627**				
PD	0.371	0.422	0.513	0.495	0.527	0.432	0.412	0.559	0.561	**0.695**			
CI	0.511	0.531	0.727	0.697	0.625	0.499	0.434	0.414	0.416	0.472	**0.821**		
MF	0.463	0.279	0.696	0.428	0.427	0.379	0.501	0.436	0.438	0.532	0.629	**0.832**	
UA	0.362	0.371	0.427	0.514	0.355	0.510	0.381	0.503	0.525	0.492	0.571	0.611	**0.829**
Mean	4.905	4.913	5.028	5.170	5.180	4.852	0.512	5.122	5.094	5.025	4.828	5.023	5.305
Standard Deviation	0.713	0.725	0.737	0.763	0.737	0.785	0.790	0.764	0.744	0.774	0.781	0.775	0.753

5.3 Control and Test of Common Method Bias

In order to reduce the influence of common method bias on the study, a series of control procedures was adopted in the investigation, including protecting anonymity, emphasizing that the answer is open, setting the items in

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[①] Notes: VD = Dialog, VA = Access, VR = Risk Assessment, VT = Transparency, CE = Economic Value, CH = Hedonic Value, CS = Social Value, BR = Business Recommendation, LR = Life Recommendation, PD = Power Distance Tendency, CI = Collectivism and Individualism, MF = Masculinity and Femininity, UA = Uncertainty Avoidance. The value on the diagonal is the square root of AVE.

order, improving the scale items, and so on. However, since the data collected from the questionnaire was provided by the same subject, common method bias was inevitable. Therefore, this dissertation adopted two methods to test the common method bias of data after referring to previous studies (Podsakoff et al., 2003). First, an exploratory factor analysis of all the items in the questionnaire using software SPSS 28.0 was conducted. The results show that the variance explained ratio of the first unrotated factor is 25.66% which is lower than 50%, indicating that there is no significant common method bias in the research data. Then, the test of the CITC of latent variables was done. The absolute value of the CITC between latent variables ranges from 0.266 to 0.725 which is smaller than 0.9, indicating that there is no significant common variance bias in the research data. We can see from the results of the above two test methods that the data of this study is only slightly affected by the common method bias and is acceptable.

5.4 Test of Research Hypothesis

This study examined the publicity promotion mechanism of regional high-end hotels by following the three pathways of "value co-creation → economic value → publicity promotion behavior", "value co-creation → hedonic value → publicity promotion behavior", and "value co-creation → social value →publicity promotion behavior". It used demographic variables (age, gender, education, and earnings) as the control variables, the value co-creation of regional high-end hotels as the antecedent variable, customer value (economic, hedonic, and social value) as the intervening variable, and publicity promotion behavior as the result variable. The test of each pathway covered the main effect, the mediating effect, and the moderating effect. In addition, the multicollinearity

was also tested to see whether there were multicollinearity issues among the different variables. Multicollinearity means that there is a linear correlation between explanatory variables, that is, multiple explanatory variables show a common variation tendency. It is usually judged by the value of the variance inflation factor (VIF) index. In general, when the value of the VIF is greater than 100, there is a serious multicollinearity issue among the explanatory variables; when it is greater than 10 but smaller than 100, there is a relatively serious multicollinearity issue among the explanatory variables; when it is greater than 0 and smaller than 10, no multicollinearity issues exist.

5.4.1 Test of regional high-end hotels' "value co-creation → economic value →publicity promotion behavior" pathway

5.4.1.1 Main effect test

The relationships between value co-creation, economic value, and publicity promotion behavior were tested in a hierarchy regression analysis. The results are shown in Table 5.4.1.1.

Table 5.4.1.1 Results of the Hierarchical Regression Model for Value Co-creation, Social Value, and Publicity Promotion Behavior[②]

variables		EV		PB （BR&LR）	
models		model 1	model 2	model 3	model 4
Control variables	Age	0.113*	0.092	0.007	0.062
	Education	0.112*	0.093	0.069	0.073
	Earnings	-0.003	-0.005	0.001	0.088
Variables	VCC		0.223***		
	EV				0.345***
Statistical parameters	R2	0.053	0.466	0.023	0.335
	adjusted R2	0.047	0.464	0.031	0.212
	adjusted ΔR2	——	0.417	——	0.181
	F 值	5.806***	53.309***	64.522***	63.203***

[②] *** means p< 0.001; ** means p< 0.01; * means p< 0.05; VCC = Value Co-creation; EV = Economic Value, PB = Publicity Promotion Behavior, BR = Business Recommendation, LR = Life Recommendation

VIF	1.212	1.223	2.326	3.245

The R2 adjusted by Model 1 and Model 2 increases progressively, and the values are 0.047 and 0.466, respectively, indicating that the explanatory power of Model 1 and Model 2 increases progressively. The F values of Model 1 and Model 2 are 5.806 and 53.309, respectively, which are significant on $p< 0.001$. The F values of both models passed the significance test. The VIF index values of all variables are greater than 0 and smaller than 10, indicating that there is no multicollinearity issue among the variables and that the models are effective. Model 1 is used to verify whether the three control variables directly affect economic value. The results show that age ($\beta = 0.113$, $p<0.05$) and educational background ($\beta = 0.112$, $p<0.05$) have significant positive correlation with economic value, which means that the older a user is and the higher his/her education level is, the greater economic value he/she will get. On the other hand, earnings ($\beta = -0.003$, $p = 0.632$) and economic value show no significant positive correlation. The results of Model 2 indicate that value co-creation has a significant positive impact on economic value, in which the coefficient β equals 0.223 ($p<0.001$), proving the Hypothesis H1a proposed in this study.

The R2 adjusted by Model 3 and Model 4 increases progressively, and the values are 0.035 and 0.335 respectively, indicating that the explanatory power of Model 3 and Model 4 increases progressively. The F values of Model 3 and Model 4 are 60.531 and 63.203, respectively, which are significant on $p<0.001$. The F values of the two models passed the significance test. The results of the VIF analysis show that the VIF index of each variable is greater than 0 and smaller than 10, and there is no multicollinearity issue among the variables, which proves the validity of the model. The function of Model 3 is to verify whether the four control variables directly affect publicity promotion behavior.

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The results show that age (β = 0.063, p = 0.302), educational background (β = 0.075, p = 0.481), and income (β = 0.097, p =0.635) have no significant relationship with publicity promotion behavior. The function of Model 4 is to test whether economic value directly affects publicity promotion behavior. The results of the analysis show that economic value has a significant positive impact on publicity promotion behavior, in which the coefficient β equals 0.345 (p<0.001). Thus Hypothesis H2a proposed in this study is verified.

5.4.1.2   Mediating effect test

From the results of the main effect analysis, we can see that there is a significant relationship between value co-creation and economic value, and there is also a significant relationship between economic value and publicity promotion behavior. This provides conditions for further testing the meditating role of economic value in the relationship between value co-creation and publicity promotion behavior.

This study followed the steps of the mediating effect test proposed by MacKinnon et al. (2004). Using SPSS28.0 Process and the Bootstrap Method, this study tested the meditating role of economic value between value co-creation and publicity promotion behavior. In order to obtain more stable and reliable results, this study set the resampling frequency of Bootstrap to 5,000, and judged whether the mediating effect and the difference between mediating effects were significant based on whether the 95% confidence interval of the path coefficient contained 0 or not, so as to tell whether the intermediary effect exists. See Table 6.4-2 for the results. It can be seen that the indirect effect of the "value co-creation → economic value →publicity promotion behavior" pathway is significant, the standard error is within an acceptable range, and the

95% confidence interval does not contain 0. This indicates that economic value

plays a significant meditating role. See Table 5.4.1.2 for specific analysis results.

Table 5.4.1.2 Results of the Test of the Mediating Effect of Social Value
(Bootstrap Method)[③]

Independent Variables	Mediating Variables	Dependent Variable	Indirect Effect	Standard Error	95% Confidence Interval	
					Lowest Value	Highest Value
VCC	EV	PB	0.2123**	0.0332	0.1326	0.2922

5.4.1.3   Moderating effect test

First, we centralized the control variables, independent variables, and

moderating variables to allay the multicollinearity issue between variables in

the regression equation. Next, we constructed a submodel to analyze data and

test the moderating effect as follows: (1) We explored the relationship between

control variables and economic value using Model 1; (2) We added value co-

creation to Model 1 to obtain Model 2, which was used to determine whether

value co-creation directly affects economic value. (3) We added eight

moderating variables (power distance, collectivism and individualism,

masculinity and femininity, uncertainty avoidance, customer gender, customer

industry background, co-creation channels, and co-creation media) on the basis

of Model 2 to get Model 5, which was used to determine whether value co-

creation and moderating variables directly affect economic value. (4) We added

the product terms of value co-creation and moderating variables to Model 5 to

get Model 6, which was used to determine the moderating effect of moderating

variables between value co-creation and economic value. See Table 5.4.1.3 for

the main results of the analysis of the above models.

Table 5.4.1.3 Results of the Test of the Moderating Effect of Economic Value[④]

[③] *** means p<0.001; ** means p<0.01; * means p <0.05; VCC = Value Co-creation, EV = Economic Value
[④] *** means p<0.001; ** means p<0.01; * means p<0.05; VCC = Value Co-creation, EV =

Variable		EV			
		model 1	model 2	model 5	model 6
Control Variables	Age	0.113*	0.092	0.065	0.057
	Educational Background	0.112*	0.093	0.016	0.011
	Income	-0.003	-0.005	0.069	0.039
Independent Variables	Value co-creation		0.223***	0.209***	0.202***
Moderating Variables	PD			-0.225***	-0.241***
	CI			0.182*	0.077
	MF			0.235***	0.245***
	UA			0.132*	0.048
	GD			0.382***	0.271***
	IB			0.210***	0.211***
	CC			0.426***	0.452***
	CS			-0.137***	-0.142***
Interaction Item	PD×VCC				-0.182***
	CI×VCC				0.023
	MF×VCC				0.222***
	UA×VCC				0.028
	GD×VCC				0.133***
	IB×VCC				0.131***
	CC×VCC				0.279***
	CS×VCC				-0.125***
Statistical Parameters	R2	0.053	0.466	0.534	0.581
	adjusted R2	0.047	0.464	0.621	0.645
	adjusted ΔR2	——	0.417	0.157	0.024
	F value	5.806***	53.309***	60.125***	78.211***
	VIF	1.212	1.427	1.568	2.221

As is shown in Table 5.4.1.3, the R2 adjusted by Model 1, Model 2, Model 5, and Model 6 all increases progressively, indicating that the explanatory power of the models increases progressively. The F values of Model 1, Model 2, Model 5, and Model 6 are significant on p<0.001 and passed the significance test. At

the same time, the results of the VIF analysis show that the VIF index values of each variable are all greater than 0 and smaller than 10, indicating that there is no multicollinearity issue among the variables and the models are effective. The calculation results of Model 1 and Model 2 have verified the significant impact of value co-creation on economic value, which laid a foundation for verifying the moderating effect. Model 5 shows that value co-creation (β = 0.209, $p<0.001$), power distance (β = -0.225, $p<0.001$), collectivism and Individualism (β = 0.182, $p <0.05$), masculinity and femininity (β = 0.235, $p<0.001$), uncertainty avoidance (β = 0.132, $p<0.05$), customer gender (β = 0.382, $p<0.001$), customer industry background (β = 0.210, $p<0.001$), co-creation channels (β = 0.426, $p<0.001$), and co-creation supporter (β = -0.137, $p<0.001$) have significant effects on economic value, indicating that it was feasible to further verify the moderating effect. The results of Model 6 show that the product term of value co-creation and power distance (β = -0.182, $p<0.001$) has a significant negative effect on economic value (supporting Hypothesis H3a); the product term of value co-creation and collectivism and individualism (β= 0.023, p = 0.079) has no significant effect on economic value (not supporting Hypothesis H4a); the product term of value co-creation and masculinity and femininity (β = 0.222, $p<0.001$) has a significant positive effect on economic value (supporting Hypothesis H5a); the product term of value co-creation and uncertainty avoidance (β = 0.028, p = 0.083) has no significant effect on economic value (not supporting Hypothesis H6a); the product term of value co-creation and customer gender (β= 0.133, $p<0.001$) has a significant positive impact on economic value (supporting Hypothesis H7a); the product term of value co-creation and customer industry background (β = 0.131, $p<0.001$) has a

significant positive impact on economic value (supporting Hypothesis H8a); the product term of value co-creation and co-creation channels (β= 0.279, p<0.001) has a significant positive impact on economic value (supporting Hypothesis H9a); the product term of value co-creation and co-creation supporter (β =-0.125, p<0.001) has a significant negative effect on economic value (supporting Hypothesis H10a).

5.4.2 Test of regional high-end hotels' "value co-creation → hedonic value →publicity promotion behavior" pathway

5.4.2.1 Main effect test

The relationships between value co-creation, hedonic value, and publicity promotion behavior was tested in a hierarchy regression analysis. The results are shown in Table 5.4.1.1.

Table 5.4.2.1 Results of the Hierarchical Regression Model for Value Co-creation, Hedonic Value, and Publicity Promotion Behavior[⑤]

variables		HV		PB（BR&LR)	
models		model 1	model 2	model 3	model 4
Control variables	Age	0.012	0.009	0.007	0.005
	Education	0.103*	0.082	0.069	0.065
	Earnings	0.003	0.002	0.001	-0.003
Variables	VCC		0.362***		
	HV				.436***
Statistical parameters	R2	0.065	0.511	0.023	0.427
	adjusted R2	0.059	0.502	0.031	0.322
	adjusted ΔR2	——	0.443	——	0.291
	F value	4.327***	52.118***	64.522***	52.335***
	VIF	1.934	1.982	2.326	2.632

The R2 adjusted by Model 1 and Model 2 increases progressively, and the values are 0.059 and 0.502, respectively, indicating that the explanatory power of Model 1 and Model 2 increases progressively. The F values of Model 1 and

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⑤ *** means p<0.001; ** means p<0.01; * means p<0.05; VCC = Value Co-creation; HV= Hedonic Value, PB = Publicity Promotion Behavior, BR = Business Recommendation, LR = Life Recommendation

Model 2 are 4.327 and 46.118, respectively, which are significant on p<0.001.

The F values of both models passed the significance test. The VIF index values

of all variables are greater than 0 and smaller than 10, indicating that there is no

multicollinearity issue among the variables and that the models are effective.

The results of the analysis of Model 1 show that there is a significant positive

correlation between education (β = 0.103, p<0.05) and hedonic value, which

means the higher a user's education level is, the greater hedonic value he/she

will get, while age's (β = 0.012, p = 0.539) and earnings' (β=0.003, p=0.682)

positive correlation with hedonic value is not significant. The results of Model

2 show that value co-creation has a significant positive impact on hedonic value,

in which the coefficient β equals 0.362 (p<0.001), thus verifying Hypothesis

H1b proposed in this study.

The R2 adjusted by Model 3 and Model 4 increases progressively, and the

values are 0.031 and 0.322, respectively, indicating that the explanatory power

of Model 3 and Model 4 increases progressively. The F values of Model 3 and

Model 4 are 6.452 and 52.335, respectively, which are significant on p<0.001,

and the F values of both models passed the significance test. The results of the

VIF analysis show that the VIF index values of all variables are greater than 0

and smaller than 10, and there is no multicollinearity issue among the variables.

This proves the validity of the model. The function of Model 3 is to verify

whether the four control variables directly affect publicity promotion behavior.

The results show that age (β = 0.007, p= 0.421), educational background (β =

0.069, p = 0.325), and income (β = 0.001, p= 0.882) have no significant

relationship with publicity promotion behavior. The function of Model 4 is to

test whether hedonic value directly affects publicity promotion behavior. The

analysis results show that hedonic value has a significant positive impact on publicity promotion behavior, in which the coefficient β equals 0.436 (p<0.001). Thus Hypothesis H2b proposed in this study is verified.

5.4.2.2　Mediating effect test

We can see from the results of the main effect analysis that there is a significant relationship between value co-creation and hedonic value and also between hedonic value and publicity promotion behavior. This provides conditions for further verifying the mediating effect of hedonic value in the relationship between value co-creation and publicity promotion behavior. Bootstrap Method was used to test the mediating effect of hedonic value in the relationship between value co-creation and publicity promotion behavior. See Table 6.4-2 for the results. It can be seen that the indirect effect of the "value co-creation → hedonic value → publicity promotion behavior" pathway is significant, the standard error is within an acceptable range, and the 95% confidence interval does not contain 0. This indicates that hedonic value plays a significant mediating role. See Table 5.4.2.2 for specific analysis results.

Table 5.4.2.2 Results of the Test of the Mediating Effect of Hedonic Value (Bootstrap Method)[6]

Independent Variables	Mediating Variables	Dependent Variable	Indirect Effect	Standard Error	95% Confidence Interval	
					Lowest Value	Highest Value
VCC	HV	PB	0.3102**	0.0246	0.2305	0.3931

5.4.2.3　Moderating effect test

As is shown in the above analysis, we tested the moderating effect in the "value co-creation → hedonic value → publicity promotion behavior" pathway

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[6] *** means p<0.001; ** means p<0.01; * means p <0.05; VCC = Value Co-creation, HV= Hedonic Value

through the centralization of the control variables, independent variables, and moderating variables and the establishment of a string of hierarchical regression models. See Table 5.4.2.3 for the main models involved, the variables and the analysis results.

Table 5.4.2.3 Results of the Test of the Moderating Effect of Hedonic Value[⑦]

Variable		HV			
		model 1	model 2	model 5	model 6
Control Variables	Age	0.012	0.009	-0.019	0.057
	Educational Background	0.103*	0.082	0.047	0.011
	Income	0.003	0.002	-0.005	0.039
Independent Variables	Value co-creation		0.362***	0.238***	0.202***
Moderating Variables	PD			-0.383***	-0.432***
	CI			0.028*	0.012
	MF			-0.202***	-0.266***
	UA			-0.122*	-0.245*
	GD			0.211***	0.181***
	IB			0.303***	0.254***
	CC			-0.286***	-0.322***
	CS			0.246***	0.228***
Interaction Item	PD×VCC				-0.236***
	CI×VCC				0.082
	MF×VCC				-0.192***
	UA×VCC				-0.345***
	GD×VCC				0.101
	IB×VCC				0.221***
	CC×VCC				-0.262***
	CS×VCC				0.051
Statistical Parameters	R2	0.053	0.511	0.752	0.811
	adjusted R2	0.047	0.502	0.722	0.785
	adjusted ΔR2	——	0.455	0.22	0.063

⑦ *** means $p<0.001$; ** means $p<0.01$; * means $p<0.05$; VCC = Value Co-creation, HV= Hedonic Value, PD = Power Distance Tendency, CI = Collectivism and Individualism, MF = Masculine, UA = Uncertainty Avoidance, GD = Gender, IB = Industry Background, CC = Co-creation Channel, CS = Co-creation Supporter

Variable	HV			
	model 1	model 2	model 5	model 6
F value	4.327***	46.118***	62.343***	58.211***
VIF	1.934	1.982	2.223	3.122

As the analysis results in Table 5.4.2.3 show, the R^2 adjusted by Model 1, Model 2, Model 5, and Model 6 all increases progressively, which indicates that the explanatory power of the models increases progressively. The F values of Model 1, Model 2, Model 5, and Model 6 are significant on $p < 0.001$ and passed the significance test. At the same time, the results of the VIF analysis show that the VIF index values of each variable are all greater than 0 and smaller than 10, indicating that there is no multicollinearity issue among the variables and the models are effective. The calculation results of Model 1 and Model 2 have verified the significant impact of value co-creation on hedonic value, which laid a foundation for verifying the moderating effect. Model 5 shows that value co-creation ($\beta = 0.362$, $p < 0.001$), power distance ($\beta = -0.383$, $p < 0.001$), collectivism and individualism ($\beta = 0.028$, $p = 0.152$), masculinity and femininity ($\beta = -0.202$, $p < 0.001$), uncertainty avoidance ($\beta = -0.122$, $p < 0.05$), customer gender ($\beta = 0.211$, $p < 0.001$), customer industry background ($\beta = 0.303$, $p < 0.001$), co-creation channel ($\beta = -0.286$, $p < 0.001$), and co-creation supporter ($\beta = 0.246$, $p < 0.001$) all have a significant impact on hedonic value, indicating that it was feasible to further test the moderating effect. The results of Model 6 show that the product term of value co-creation and power distance ($\beta = -0.432$, $p < 0.001$) has a significant negative effect on hedonic value (supporting Hypothesis H3b); the product term of value co-creation and collectivism and individualism ($\beta = 0.012$, $p = 0.088$) has no significant effect on hedonic value (not supporting Hypothesis H4b); the product term of value co-creation and

masculinity and femininity (β = -0.192, p<0.001) has a significant negative effect on hedonic value (supporting Hypothesis H5b); the product term of value co-creation and uncertainty avoidance (β =-0.345, p<0.001) has no significant effect on hedonic value (supporting Hypothesis H6b); the product term of value co-creation and customer gender (β = 0.101, p = 0.023) has no significant effect on hedonic value (not supporting Hypothesis H7b); the product term of value co-creation and customer industry background (β = 0.221, p< 0.001) has a significant positive effect on hedonic value (supporting Hypothesis H8b); the product term of value co-creation and co-creation channel (β = -0.262, p<0.001) has a significant negative effect on hedonic value (supporting Hypothesis H9b); the product term of value co-creation and co-creation supporter (β = 0.051, p = 0.125) has no significant effect on hedonic value (not supporting Hypothesis H10b).

5.4.3 Test of regional high-end hotels' "value co-creation → social value → publicity promotion behavior" pathway

5.4.3.1 Main effect test

The relationships between value co-creation, social value, and publicity promotion behavior was tested in a hierarchical regression analysis. The analysis results are shown in Table 5.4.3.1.

Table 5.4.3.1 Results of the Hierarchical Regression Model for Value Co-creation, Social Value, and Publicity Promotion Behavior[8]

variables		SV		PB (BR&LR)	
models		model 1	model 2	model 3	model 4
Control variables	Age	0.023	0.002	0.007	-0.015
	Education	0.052	0.052	0.069	0.022
	Earnings	0.019	-0.006	0.001	-0.037

[8] *** means p<0.001, ** means p<0.01, * means p<0.05, VCC=value co-creation, SV=social value, PB=Publicity promotion behavior, BR=Business Recommendation, LR=Life Recommendation

variables		SV		PB（BR&LR）	
models		model 1	model 2	model 3	model 4
Variables	VCC		0.428***		
	SV				.453***
Statistical parameters	R2	0.053	0.608	0.023	0.625
	adjusted R2	0.047	0.582	0.031	0.592
	adjusted ΔR2	——	0.535	——	0.561
	F value	4.327***	59.239***	64.522***	52.335***
	VIF	1.934	2.001	2.326	2.452

The R2 adjusted by Model 1 and Model 2 increases progressively to 0.047 and 0.582 respectively, indicating that the explanatory power of Model 1 and Model 2 increases progressively. The F values of Model 1 and Model 2 are 4.327 and 59.239 respectively, which are significant on p<0.001, and the F values of both models passed the significance test. The VIF index values of all variables are greater than 0 and smaller than 10, indicating that there is no multicollinearity issue among the variables and that the models are effective. The results of the analysis of Model 1 show that the relationships between social value and age (β=0.023, p=0.539), education (β=0.052, p=0.065), and earnings (β=0.019, p=0.682) are not significant. The results of Model 2 show that value co-creation has a significantly positive impact on social value, with the coefficient β=0.428 (p<0.001), thus validating Hypothesis H1b proposed in this study.

The R2 adjusted by Model 3 and Model 4 increases progressively to 0.031 and 0.592 respectively, indicating that the explanatory power of Model 3 and Model 4 increases progressively. The F values of Model 3 and Model 4 are 64.522 and 52.335 respectively, which are significant on p<0.001, and the F values of both models passed the significance test. The results of the VIF analysis show that the VIF index values of all variables are greater than 0 and smaller than 10, and there is no multicollinearity issue among the variables. This

proves the validity of the model. Model 3 was used to verify whether the four control variables directly affect publicity promotion behavior. The analysis results show that age (β=0.007, p=0.421), education (β=0.069, p=0.325), and earnings (β=0.001, p=0.882) have no significant relationship with publicity promotion behavior. Model 4 was used to test whether social value directly impacts publicity promotion behavior. The analysis results show that social value has a significantly positive impact on publicity promotion behavior, with the coefficient β=0.453 (p<0.001), thus validating Hypothesis H2b proposed in this study.

5.4.3.2   Mediating effect test

According to the results of the main effect analysis, there is a significant relationship between value co-creation and social value, and between social value and publicity promotion behavior, which provide conditions for further testing the mediating role of social value in the relationship between value co-creation and publicity promotion behavior. The Bootstrap Method was used to test the mediating role of social value between value co-creation and publicity promotion behavior. See Table 6.4-2 for the results. It can be seen that the indirect effect of the "value co-creation→ social value → publicity promotion behavior" pathway is significant, the standard error is within an acceptable range, and the 95% confidence interval doesn't include 0. This indicates that social value has a significant mediating effect. See Table 5.4.3.2 for specific analysis results.

Table 5.4.3.2 Results of the Test of the Mediating Effect of Social Value (Bootstrap Method)[9]

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[9] *** means p<0.001, ** means p<0.01, * means p<0.05, VCC=value co-creation, SV=social value

Independent Variables	Mediating Variables	Dependent Variable	Indirect Effect	Standard Error	95% Confidence Interval	
					Lowest Value	Highest Value
VCC	SV	PB	0.3532**	0.0139	0.2605	0.4356

5.4.3.3 Moderating effect test

Following the above analysis steps, we tested the moderating effect in the "value co-creation→social value →publicity promotion behavior" pathway by centralizing the control variables, independent variables, and moderating variables and building a series of hierarchical regression models. See Table 5.4.3.3 for the main models involved, the variables, and the analysis results.

Table 5.4.3.3 Results of the Test of the Moderating Effect of Social Value[⑩]

Variable		SV			
		model 1	model 2	model 5	model 6
Control Variables	Age	0.023	0.002	-0.019	0.057
	Educational Background	0.052	0.052	0.047	0.011
	Income	0.019	-0.006	-0.005	0.039
Independent Variables	Value co-creation		0.428***	0.238***	0.202***
Moderating Variables	PD			-0.392***	-0.453***
	CI			0.328***	0.201***
	MF			-0.236***	-0.378***
	UA			-0.222***	-0.332***
	GD			-0.132***	-0.221***
	IB			-0.325***	-0.368***
	CC			-0.227***	-0.311***
	CS			0.329***	0.211***
Interaction Item	PD×VCC				-0.402***
	CI×VCC				0.331***
	MF×VCC				-0.259***
	UA×VCC				-0.262***
	GD×VCC				-0.182***
	IB×VCC				-0.343***
	CC×VCC				-0.338***
	CS×VCC				0.202***
Statistical	R^2	0.053	0.608	0.783	0.823

[⑩] *** means $p<0.001$, ** means $p<0.01$, * means $p<0.05$, VCC=value co-creation, SV=social value, PD=power distance, CI=collectivism and individualism, MF=Masculine, UA=uncertainty avoidance, GD=gender, IB=industry background, CC=co-creation channel, CS=co-creation supporter

Variable		SV			
	Parameters	model 1	model 2	model 5	model 6
Parameters	adjusted R2	0.047	0.582	0.766	0.792
	adjusted ΔR2	——	0.535	0.184	0.026
	F value	4.327***	59.239***	63.455***	59.662***
	VIF	1.934	2.001	2.129	2.866

According to the analysis results shown in Table 5.4.2.3, the R2 adjusted by Model 1, Model 2, Model 5, and Model 6 increases progressively, indicating that the explanatory power of Model 1, Model 2, Model 5, and Model 6 increases progressively. The F values of Model 1, Model 2, Model 5, and Model 6 are significant on $p<0.001$ and passed the significance test. At the same time, the results of the VIF analysis show that the VIF index values of each variable are all greater than 0 and smaller than 10, indicating that there is no multicollinearity issue among the variables and the models are effective. The calculation results of Model 1 and Model 2 verified the significant impact of value co-creation on social value, which laid the foundation for testing the moderating effect. Model 5 shows that value co-creation ($β=0.238$, $p<0.001$), power distance ($β=-0.392$, $p<0.001$), collectivism and individualism ($β=0.328$, $p=0.152$), Masculine ($β=-0.236$, $p<0.001$), uncertainty avoidance ($β=-0.222$, $p<0.05$), customer gender ($β=-0.132$, $p<0.001$), customer industry background ($β=-0.325$, $p<0.001$), co-creation channel ($β=-0.227$, $p<0.001$), co-creation supporter ($β=0.329$, $p<0.001$) all have a significant impact on social value, indicating that it is feasible to further test the moderating effect. The results of Model 6 show that the product term of value co-creation and power distance ($β=-0.453$, $p<0.001$) has a significant negative impact on social value (supporting Hypothesis H3c); the product term of value co-creation and collectivism and individualism ($β=0.201$, $p<0.001$) has a significant positive impact on social value (supporting Hypothesis H4c); the product term of value

co-creation and Masculine ($\beta=-0.378$, $p<0.001$) has a significant negative impact on social value (supporting Hypothesis H5c); the product term of value co-creation and uncertainty avoidance ($\beta=-0.332$, $p<0.001$) has a significant negative impact on social value (supporting Hypothesis H6c); the product term of value co-creation and customer gender ($\beta=-0.221$, $p<0.001$) has a significant negative impact on social value (supporting Hypothesis H7c); the product term of value co-creation and customer industry background ($\beta=-0.368$, $p<0.001$) has a significant negative impact on social value (supporting Hypothesis H8c); the product term of value co-creation and co-creation channels ($\beta=-0.311$, $p<0.001$) has a significant negative impact on social value (supporting Hypothesis H9c); the product term of value co-creation and co-creation supporter ($\beta=0.211$, $p<0.001$) has a significant negative impact on social value (supporting Hypothesis H10c).

5.5 Summary of the Results of the Test of Research Hypotheses

Table 5.5 Results of the Test of Main Research Hypotheses

hypotheses	Test Results
H1a: Value co-creation has a significant positive impact on customer economic value.	Approve
H1b: Value co-creation has a significant positive impact on customer hedonic value.	Approve
H1c: Value co-creation has a significant positive impact on customer social value.	Approve
H2a: Economic value has a significant positive impact on the publicity promotion behavior of regional high-end hotels.	Approve
H2b: Hedonic value has a significant positive impact on the publicity promotion behavior of regional high-end hotels.	Approve
H2c: Social value has a significant positive impact on the publicity promotion behavior of regional high-end hotels.	Approve
H3a: The relationship between the value co-creation of regional high-end hotels and customer economic value is moderated by power distance.	Approve
H3b: The relationship between the value co-creation of regional high-end hotels and customer hedonic value is moderated by power distance.	Approve
H3c: The relationship between the value co-creation of regional high-end hotels and customer social value is moderated by power distance.	Approve

hypotheses	Test Results
H4a: The relationship between the value co-creation of regional high-end hotels and customer economic value is moderated by collectivism and individualism.	Disapprove
H4b: The relationship between the value co-creation of regional high-end hotels and customer hedonic value is moderated by collectivism and individualism.	Disapprove
H4c: The relationship between the value co-creation of regional high-end hotels and customer social value is moderated by collectivism and individualism.	Approve
H5a: The relationship between the value co-creation of regional high-end hotels and customer economic value is moderated by masculinity and femininity.	Approve
H5b: The relationship between the value co-creation of regional high-end hotels and customer hedonic value is moderated by masculinity and femininity.	Approve
H5c: The relationship between the value co-creation of regional high-end hotels and customer social value is moderated by masculinity and femininity.	Approve
H6a: The relationship between the value co-creation of regional high-end hotels and customer economic value is moderated by uncertainty avoidance.	Disapprove
H6b: The relationship between the value co-creation of regional high-end hotels and customer hedonic value is moderated by uncertainty avoidance.	Approve
H6c: The relationship between the value co-creation of regional high-end hotels and customer social value is moderated by uncertainty avoidance.	Approve
H7a: The relationship between the value co-creation of regional high-end hotels and customer economic value is moderated by customer gender.	Approve
H7b: The relationship between the value co-creation of regional high-end hotels and customer hedonic value is moderated by customer gender.	Disapprove
H7c: The relationship between the value co-creation of regional high-end hotels and customer social value is moderated by customer gender.	Approve
H8a: The relationship between the value co-creation of regional high-end hotels and customer economic value is moderated by customer industry background.	Approve
H8b: The relationship between the value co-creation of regional high-end hotels and customer hedonic value is moderated by customer industry background.	Approve
H8c: The relationship between the value co-creation of regional high-end hotels and customer social value is moderated by customer industry background.	Approve
H9a: The relationship between the value co-creation of regional high-end hotels and customer economic value is moderated by the co-creation channel.	Approve
H9b: The relationship between the value co-creation of regional high-end hotels and customer hedonic value is moderated by the co-creation channel.	Approve

hypotheses	Test Results
H9c: The relationship between the value co-creation of regional high-end hotels and customer social value is moderated by the co-creation channel.	Approve
H10a: The relationship between the value co-creation of regional high-end hotels and customer economic value is moderated by the co-creation supporter of the hotel.	Approve
H10b: The relationship between the value co-creation of regional high-end hotels and customer hedonic value is moderated by the co-creation supporter of the hotel.	Disapprove
H10c: The relationship between the value co-creation of regional high-end hotels and customer social value is moderated by the co-creation supporter of the hotel.	Approve

Chapter VI Conclusions and Inspirations

6.1 Conclusions and Discussions

In view of the current development of and the dilemma facing regional high-end hotels in China, this dissertation aims to study how regional high-end hotels can effectively promote their publicity through reasonable value co-creation strategies. To this end, this dissertation brings up three core research topic after an analysis of the practice and theoretical research on regional high-end hotels. The first research topic is what is the content of the value co-creation of regional high-end hotels. The second research topic is how does value co-creation impact the pathway towards the promotion of the publicity of regional high-end hotels. The third research topic is what situational factors will impact the role of value co-creation in promoting the publicity of regional high-end hotels.

To address the above three research topics, this dissertation carries out both qualitative and quantitative research. First, based on a qualitative analysis of regional high-end hotels, the value co-creation theory, customer value, and hotel publicity, this dissertation determined the content of value co-creation (dialog, access, risk assessment, and transparency), customer value (economic value, hedonic value, and social value) and publicity promotion behavior (business recommendation and life recommendation) in a regional high-end hotel research scenario to answer the first question. It also constructed a model for regional high-end hotels to promote their publicity through value co-creation and the "value co-creation→customer value→publicity promotion behavior" pathway to answer the second question. Secondly, it developed a tool for measuring constructs that is applicable to regional high-end hotel scenarios,

covering the four constructs of value co-creation, customer value, publicity promotion behavior, and customer cultural background. And after an analysis of the data obtained from 702 questionnaires distributed to the customers of regional high-end hotels, it tested the impact between value co-creation, customer value, and publicity promotion behavior and the moderating effect of customer cultural background, customer gender, customer industry background, co-creation channel, and co-creation supporter in the process of value co-creation. Specifically, this dissertation draws the following conclusions:

6.1.1 Value co-creation positively affects the visibility promotion of regional high-end hotels through customer value.

This dissertation finds from theoretical analyses and empirical tests that regional high-end hotels can enhance their visibility through the "value co-creation → customer value → visibility promotion behavior" pathway. The research results show that value co-creation has a significant positive impact on customer economic, hedonic and social values in regional high-end hotel scenarios. Moreover, this pathway follows the law of progressive increase. The impact of value co-creation on customer economic, hedonic and social values increases progressively; the impact of customer economic, hedonic and social values on visibility promotion behavior increases progressively; the mediating effect of customer economic, hedonic and social values on the positive correlation between value co-creation and visibility promotion behavior increases progressively.

6.1.2 The moderating effect of customer value creation in value co-creation.

With a focus on the customer value creation sub-process of the value co-

creation process, this dissertation studies and tests the moderating effect of customer cultural background, customer gender and customer industry background on customer value creation in regional high-end hotels' value co-creation process.

(1) Power distance regulates the positive correlation between value co-creation and customer value. Its negative regulation effect on the positive correlation between value co-creation and customer social value is the largest of all, followed by its negative regulation effect on the positive correlation between value co-creation and customer hedonic value and its negative regulation effect on the positive correlation between value co-creation and customer economic value. A stronger power distance cultural background on the part of regional high-end hotel customers means a weaker positive effect of value co-creation on customer value.

(2) Collectivism and Individualism Regulate the Relationship between Value Co-creation and Customer Social Value. A stronger collectivist cultural background on the part of regional high-end hotel customers means a stronger positive effect of value co-creation on customer value. However, collectivism and individualism do not significantly regulate value co-creation's relationships with customer economic value and customer hedonic value. This may be because a collectivist cultural background can promote collaboration and co-creation between customers and regional high-end hotels and boost the efficiency of value co-creation; on the other hand, it leads customers to make sacrifices for and concessions to the collective they belong to and reduce the acquisition of individual values (economic and hedonic values). The positive effects offset the negative effects. As a result, collectivism and individualism do

not significantly regulate value co-creation's relationships with customer economic value and customer hedonic value.

(3) Masculine regulate the positive correlation between value co-creation and customer value, with a positive moderating effect on the positive correlation between value co-creation and customer economic value and a negative moderating effect on the positive correlation between value co-creation and customer hedonic value and customer social value. The research results show that the stronger the masculine cultural background of regional high-end hotel customers is, the stronger the positive effect of value co-creation on customer economic value will be. This may be because customers with a masculine cultural background tend to compete to acquire value and they attach more importance to individuals' utilitarian value. Yet when the masculine cultural background of customers is strong, the positive effect of value co-creation on customer hedonic value and customer social value will weaken. This may be because customers with a masculine cultural background, different from those with a feminine cultural background, do not value the benefits derived from relationships and as a result, their perception of social value is weakened; instead, they will assess the energy and time investment entailed by value co-creation in a utilitarian manner and as a result, the possibility of their obtaining hedonic value is reduced.

(4) Uncertainty avoidance regulates the positive correlation between value co-creation and customer value. It has a significantly negative moderating effect on value co-creation's relationships with customer hedonic value and customer social value but produces no significant effect on the relationship between value co-creation and customer economic value. The research results

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show that if regional high-end hotel customers have a strong uncertainty avoidance cultural background, the positive effect of value co-creation on customer economic value will be weak. This may be because value co-creation is an innovative activity that crosses the original boundary between customers and businesses and it involves a certain degree of challenge and risk for customers. Customers with an uncertainty avoidance cultural background are more cautious and conservative. They even duck interaction with strangers, making it tougher to acquire hedonic and social values from value co-creation. What's more, customer uncertainty avoidance cultural background wields no significant influence on the relationship between value co-creation and customer economic value. This is probably because customers with an uncertainty avoidance cultural background are better positioned to assess calculation-based economic value and perceive economic value, which to some extent offsets the negative effects.

(5) Gender regulates the positive correlation between value co-creation and customer value, with a positive moderating effect on the positive correlation between value co-creation and customer economic value, a negative moderating effect on the positive correlation between value co-creation and customer social value, and no significant effect on the relationship between value co-creation and customer hedonic value. The research results show that male customers of regional high-end hotels receive a higher economic value than female customers in value co-creation. However, the social value they obtain is lower than that acquired by their female counterparts. This may be due to the difference in interaction motive between men and women. Women often interact with others to establish relationships and enlist emotional support, so they obtain a higher

social value than men in value co-creation. Men tend to participate in interaction with specific purposes, such as gathering information about the industry, hotel discounts, future cooperation opportunities, etc. Therefore, men are more conscious of goals and utility than women in value co-creation and they are more sensitive to economic value. In addition, gender has no significant influence on the relationship between value co-creation and customer hedonic value probably because hedonic value is derived from the pleasure that individuals immersed in value co-creation get. Here, individuals' personality and emotion, rather than gender differences, are at work.

(6) Customer industry background regulates the positive correlation between value co-creation and customer value, with a positive moderating effect on the positive correlation between value co-creation and customer economic and hedonic values and a negative moderating effect on the positive correlation between value co-creation and customer social value. The research results show that customers of regional high-end hotels who work in high-tech industries get a higher economic value and a higher hedonic value in value co-creation than those who work in low-tech industries. On the one hand, this may be because the problems encountered by high-tech industries are often more complicated and the solution of these problems requires multi-party cooperation. Therefore, customers who work in high-tech industries have more interaction and cooperation experiences. They tend to meet their own needs in value co-creation and can effectively obtain economic value highly relevant to themselves in the process. On the other hand, customers engaged in high-tech industries often come into contact with knowledge of diverse cultures and multiple fields. This makes it easier for them to deal with all types of situations and conflicts with

ease in value co-creation and obtain more hedonic value. But note that customers of regional high-end hotels who work in high-tech industries obtain a lower social value than those who work in low-tech industries in value creation. This may be due to the fierce competition and rapid flow of talent and knowledge in high-tech industries. Consequently, individuals in these industries tend to prioritize their own interests and do not have the energy or time to build or maintain social relations. This explains why they cannot get a high social value in value co-creation.

6.1.3   The moderating effect of the encounter process in value co-creation.

With a focus on the encounter sub-process of the value co-creation process, this dissertation explores and verifies the moderating effect of value co-creation channels on the encounter sub-process in regional high-end hotels' value co-creation process. Traditional co-creation based on face-to-face interpersonal interaction and digital co-creation based on digital virtual network platforms are two different ways in which customers encounter regional high-end hotels. Verification finds that co-creation channels regulate the relationship between value co-creation and customer value-- in different directions. Co-creation channels have a positive moderating effect on the positive correlation between value co-creation and customer economic value, and they have a negative moderating effect on the positive correlation between value co-creation and customer economic and hedonic values. These research results suggest that digital co-creation can transform regional high-end hotels' value co-creation activities into customer economic value more effectively than traditional co-creation. This may be because digital virtual network platforms provide

customers with ampler information about the products, services and brands of regional high-end hotels, and customers can, through digital network platforms, effortlessly compare and assess the products, services and prices of the regional high-end hotels they intend to choose with those of other hotels. This promotes efficiency in economic value generation. On the contrary, traditional co-creation can transform the value co-creation activities of regional high-end hotels into customer hedonic value and social value more effectively than digital co-creation. This may be because face-to-face interaction is more vivid and real than digital interaction-- a conclusion consistent with the viewpoints of scholars studying value co-creation in the hospitality field (Fu et al., 2020; Navarro et al., 2015).

6.1.4   The moderating effect of the hotel value creation process in value co-creation.

With a focus on the hotel value creation sub-process of the value co-creation process, this dissertation explores and verifies the moderating effect of co-creation carriers on the hotel value creation sub-process of regional high-end hotels' value co-creation process. Intangible services and tangible products are regional high-end hotels' important carriers for value creation in the process of value co-creation. Verification finds that co-creation carriers regulate the relationship between value co-creation and customer value-- in different directions and to different degrees. Co-creation channels have a negative moderating effect on the positive correlation between value co-creation and customer economic value, a negative moderating effect on the positive correlation between value co-creation and customer social value, and no significant moderating effect on the positive correlation between value co-

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creation and customer hedonic value. These research results show that product-centric co-creation can transform regional high-end hotels' value co-creation activities into customer economic value more efficiently than service-centric co-creation. On the contrary, service-centric co-creation can transform regional high-end hotels' value co-creation activities into customer social value more efficiently than product-centric co-creation. Differences between product innovation and service innovation may explain the opposite moderating effects. Value co-creation is essentially an innovation activity involving both customers and enterprises. Service-centric co-creation is manifested as intangible activities such as the development of new service components or service models. It places emphasis on human emotional attributes (Nijssen et al., 2006) and is favorable for enhancing customer social value. On the contrary, product-centric co-creation is manifested as tangible activities such as the development of physical products. It places emphasis on the physical attributes of products (Nijssen et al., 2006), provides customers with clues as to the assessment of economic value and is conducive to the production of economic value in value co-creation. Co-creation channels have no significant moderating effect on the positive correlation between value co-creation and customer hedonic value probably because there exists a "push-pull" interactive relationship between products and services when it comes to customer hedonic value creation. In other words, services and products do not exclude each other when it comes to the effect of regional high-end hotels' value co-creation activities on customer hedonic value. Product innovation provides physical media for service innovation, and service innovation in turn expands and supplements product innovation. Product innovation drives service innovation, and vice versa. Both are intended to help

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customers enjoy products or their utility (Luo & Jiang, 2020).

6.2 Theoretical Contributions

This dissertation draws on the value co-creation theory, the customer value theory and existing research findings on marketing to conduct a theoretical study of the ways to enhance the visibility of regional high-end hotels adopting "value co-creation → customer value → visibility promotion behavior" as the pathway. This dissertation makes the following three major theoretical contributions:

6.2.1 It is the first of its kind to introduce the concept and characteristics of regional high-end hotels and to examine their relationship with other types of hotels.

It defines regional high-end hotels as hotels which, with brand influence limited to a specific area, qualify for star-rated hotel status or deliver services on par with or even higher than star-rated hotels. And it outlines three characteristics of regional high-end hotels: the hotels mainly serve customers on business trips; the hotel customers have eminent industry backgrounds; the hotels depend on the regional economy for development. These research results provide conceptual support and theoretical basis for research on regional high-end hotels.

6.2.2 It comprehensively reveals the mechanism by which value co-creation influences visibility promotion in the regional high-end hotel scenario.

This dissertation is an attempt to deepen the cross-study covering value co-creation, customer value and brand equity. It constructs a model to show the theoretical relationships among value co-creation, customer value and visibility

promotion behavior in the regional high-end hotel scenario, analyzes the differential influences of value co-creation on customer economic, hedonic and social values and the differential influences of these three customer values on visibility promotion behavior, and demonstrates the direct, multi-level influences of customer value on value co-creation and visibility promotion behavior. In value co-creation with regional high-end hotels, the social value obtained by customers plays the biggest role in the visibility promotion pathway, followed by hedonic value and economic value. The research conclusions provide an empirical basis for the accurate prediction of the impact of value co-creation on the visibility of regional high-end hotels, as well as an analytical basis for future explorations of the factors influencing the brand equity of regional high-end hotels and the pathway towards visibility promotion at the customer value level.

6.2.3   It leverages the regional high-end hotel scenario to develop reliable and valid measurement tools.

This dissertation provides scientific, comprehensive and accurate measurement tools for the study of value co-creation and brand equity in regional high-end hotel scenarios. The dimensions, accuracy, scientificity or universality of the bulk of the scales used to measure value co-creation in the past empirical studies are disputable. With a focus on the characteristics of the regional high-end hotel scenario, this dissertation develops an initial question bank using deduction as the framework and induction as the supplement, and designs a formal scale based on a preliminary survey. These scales strengthen the regional high-end hotel scenario's connections with value co-creation, customer value and visibility promotion behavior and provide quantitative

research tools applicable to the regional high-end hotel scenario.

6.3　Enlightenment for Hospitality Practice

This paper builds on value co-creation theory to provide the "value co-creation → customer value → visibility promotion behavior" pathway for the visibility promotion of regional high-end hotels. Empirical test results show that value co-creation positively affects the visibility promotion of regional high-end hotels through customer value. At the same time, power distance, collectivism and individualism, Masculine, uncertainty avoidance, customer gender, customer industry background, co-creation channel and co-creation carrier all regulate the outcome of this pathway in different directions and to different degrees. The above research conclusions provide regional high-end hotels with enlightenment as to how to enhance their visibility.

6.3.1　Give value co-creation and customer value their due importance

Regional high-end hotels can carry out value co-creation activities to create value for customers and promote their visibility. Regional high-end hotels can create value for customers through four types of value co-creation activities: (1) Dialogue with customers. While listening to customers' opinions, regional high-end hotels should also interact, share and communicate with and learn from customers, as well as engage them in dialogues as equal problem solvers. A regional high-end hotel and its customers create and maintain a cohesive community. This community can enable not only the sharing of knowledge about the regional high-end hotel's services and products, but also high-level dialogues between the regional high-end hotel and its customers by which customers are able to integrate their values into the process of value creation. (2) Give customers access to information. Regional high-end hotels should offer

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customers easy access to products and services as well as related information. They can post online their latest room rates and the types and configurations of their guest rooms and banquet halls. In addition, they can give customers the rights to try their new dishes, new services and new products in person. (3) Help customers assess risks. Regional high-end hotels should objectively and scientifically assess the possible negative impacts of their services and products on customers to help customers avoid potential risks. They should also help customers gain potential information about their products and services. This way, the latter can adequately assess risks based on their own circumstances and fully realize the relativity between benefits and risks. (4) Maintain transparency. Maintaining transparency can solve the problem of information asymmetry between regional high-end hotels and their customers. Hotels should provide customers with convenient online and offline access to information about products, services, business systems, hotel reputation, etc. Good transparency is essential for building trust between regional high-end hotels and their customers. This trust can sharpen customers' perception of value in a direct way.

Regional high-end hotels cannot get around customer social value when trying to promote their visibility. In regional high-end hotel scenarios, the influence of value co-creation on customer economic value, hedonic value and social value increases progressively. In the meantime, the influence of economic value, hedonic value and social value on visibility promotion behavior also increases progressively. This shows that social value is key to transforming value co-creation into visibility promotion of regional high-end hotels. Therefore, regional high-end hotels should try to enhance customers' social value in the process of value co-creation. They can help customers connect to

their target groups. That is to say, they can make customers feel that they have come into contact with or even joined their desired groups by participating in value co-creation activities. For example, they can create distinctive selfie spaces where customers can take photos or shoot short videos with celebrities or hotel executives. These moves can help customers improve their social image and status through value co-creation.

6.3.2   Take into account boundary conditions in the customer value creation process

It is an important pathway towards enhanced visibility for regional high-end hotels to make customers gain value from value co-creation. However, when regional high-end hotels carry out value co-creation activities with customers, the customer value creation process will be subject to the influence of customer characteristics. As a result, the generation of customer values (economic, hedonic and social) will be mediated by customers' cultural background, gender and industry background. To maximize value co-creation's positive effect on visibility promotion, regional high-end hotels should map out value co-creation strategies that correspond to customers' cultural background, gender and industry background. The research results indicate that regional high-end hotels should adopt three value co-creation strategies to promote their visibility according to customer characteristics, as shown in Table 6.3.2.

Table 6.3.2 Formulation Basis of Strategies for Promoting the Visibility of Regional High-end Hotels[11]

Visibility Promotion Strategies		Economic Value Strategy	Hedonic Value Strategy	Social Value Strategy
Custo mer	Power distance	Low	Low	Low
	Collectivism/individ	—	—	Collectivism

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[11] "—" indicates that the corresponding customer characteristic bears no relevance to the formulation of value co-creation strategies.

Visibility Promotion Strategies		Economic Value Strategy	Hedonic Value Strategy	Social Value Strategy
culture	ualism			
	Masculine/feminine	Masculine	Feminine	Feminine
	Uncertainty Avoidance	—	Low	Low
Gender		Male	—	Female
Industry background		High-tech industry	High-tech industry	Low-tech industry

Specifically, regional high-end hotels should adopt economic value oriented value co-creation strategies to enhance their visibility among male customers with a low power distance, a masculine cultural background and a high-tech industry background. Value co-creation should best center on economic value. The following strategies can be adopted to sharpen customers' perception of economic value and hence enhance visibility: (1) Provide information about incentives and discounts to help customers obtain economic value itself and related information; (2) Provide customers with "direct and quick" participation methods to shorten the time customers and hotels spend on establishing connections with each other and reduce customers' time cost; (3) Use machine algorithms, artificial intelligence, big data and other IT means to assess customer expectations and offer services and products beyond customer expectations.

Regional high-end hotels should adopt hedonic value oriented value co-creation strategies to enhance their visibility among customers with a low power distance, a feminine cultural background and a high-tech industry background. Value co-creation should best center on hedonic value. The following strategies can be adopted to sharpen customers' perception of hedonic value and hence enhance visibility: (1) Stress customers' experience and sense of participation and use such information technologies as machine algorithms, artificial intelligence and big data to identify real customer needs and provide them with

services and products that greatly interest them. (2) Drive customers to participate in value co-creation wholeheartedly through gamified marketing and deliver flow experience.

Regional high-end hotels should adopt social value oriented value co-creation strategies to enhance their visibility among female customers with a low power distance, a collectivist and feminine cultural background and a low-tech industry background. Value co-creation should best center on social value. The following strategies can be adopted to sharpen customers' perception of social value and hence increase visibility: (1) Provide customers with ample opportunities and time for sharing. For example, hotels can develop some handy apps. With these apps, customers can share their use experiences with hotel services and products on social media to amplify their sense of social participation. (2) Gain an in-depth knowledge of customers' underlying needs and provide customers with loving, caring and personalized interaction spaces and experiences through citizen's value co-creation behavior.

6.3.3 Emphasize co-creation channels in the encounter process

In value co-creation, the encounter process is a bridge between regional high-end hotels and customers. The research results indicate that regional high-end hotels should discover customers' value preferences before carrying out value co-creation activities. Regional high-end hotels should adopt digital co-creation channels and the following strategies to enhance customers' perception of social value and hence increase their visibility among economic value oriented customers: (1) Employ digital technology to increase the frequency and quality of their interaction with customers and provide customers with flexible co-creation opportunities. (2) Employ digital network technology to help

customers solve ethical problems such as privacy security, big data profiteering and false sales that disturb digital platforms. (3) Leverage digital communities to foster digital co-creation and encourage opinion leaders and followers in the community to provide value, define value and sublimate value.

Regional high-end hotels should use traditional offline co-creation channels and the following strategies to enhance customers' perception of social value and hence increase their visibility among hedonic and social value oriented customers: (1) Provide customers with opportunities for unusual, fresh, novel and thrilling in-person experiences. Regional high-end hotels can, for example, engage customers in desserts making in their dining rooms, or appoint customers as paid duty managers. (2) Provide customers with offline social communication venues with regional cultural characteristics and bring in the regional culture to extend brand influence.

6.3.4 Put stress on co-creation carriers in high-end hotels' value creation process

The co-creation medium is the value co-creation theme developed by regional high-end hotels, which can carry out value co-creation activities with customers around a specific service or product. Co-creation carriers belong to a sub-process of value co-creation-- the enterprise value creation process. This sub-process led by an enterprise contains two parts: organizational learning and relationship experience design. The research results indicate that regional high-end hotels should choose and design co-creation carriers according to customers' value preferences so as to develop organizational learning process and relationship experience design which are conducive to the visibility enhancement of hotels.

Regional high-end hotels should use their products as co-creation carriers to enhance their visibility among economic value oriented customers. On the one hand, they can motivate customers to participate in product improvement and development to sharpen customers' perception of economic value and hence enhance their visibility. Specifically, they can discuss with customers the design defects in hotel room supplies (bedding, linen, curtains, safe boxes, electric irons, ironing boards, etc.) and hotel furniture (ceramic tableware, wine sets, plastic tea sets, stainless steel products on the turntable, food models, glassware, bar carts, tablecloths, etc.), as well as the use experiences with them (both good and bad experiences included). On the other hand, they can make customers try out new hotel products to enhance their visibility. Most importantly, they can let customers try out new products and give corresponding feedback and at the same time adequately prize and reward customer feedback before new production, entertainment and leisure facilities (fitness equipment, recreational facilities, hydrotherapy apparatuses, etc.) and single-use articles (toilet paper, combs, shower caps, facial tissues, disposable pens, shoe lifters, shampoo, soap, etc.) are put into use.

Regional high-end hotels should use their services as co-creation carriers and motivate customers to participate in service improvement and development to sharpen customers' perception of social value and hence enhance their visibility among social value oriented customers. On the one hand, they should discuss with customers issues about hotel staff especially whether hotel staff are patient, meticulous, flexible, active, enthusiastic, responsible or cooperative. On the other hand, they should also discuss and explore with customers problems encountered in the service process, with the focus on reservation process, check-

in process, check-out process, accounting treatment process and conference reception process. Finally, they should be active to collect customer feedback and solutions, assess the feasibility of feedback and solutions, and assign specific personnel or teams to follow up feasible solutions and improve and innovate service processes.

For hedonic value-oriented customers, regional high-end hotels can use either products or services as co-creation carriers. Regional high-end hotels should take customer interest as the driving force of co-creation, provide convenience and adequate time for customers carrying out co-creation activities around products or services and empower customers in the meantime. Hotels can hand the dominant right over to customers and let customers deepen co-creation after the launch of value co-creation activities.

6.4 Limitations and Outlooks

While this dissertation has offered some insights into the visibility promotion of regional high-end hotels, it has exposed some limitations due to the limited research resources and research perspectives available to the research team. Revealing these limitations can point us to areas with research potential:

(1) This research lacks in good enough universality. Due to the limited strength and resources of the research team, this dissertation has verified its research model and hypothesis only based on Ming Du Lakeside Hotel in Nanning, the capital of Guangxi Province. Although Ming Du Lakeside Hotel has the characteristics of regional high-end hotels and can make the research conclusions kind of representative, the conclusions should be verified in more scenarios to enhance their universality. The visibility promotion mechanism of

a regional high-end hotel works only in the area where the hotel is located, and areas often differ from one another economically and culturally. The research conclusions that this paper draws based on Nanning, the capital of Guangxi Province, as the research scenario may not be fully applicable to high-end hotels in other regions. Therefore, future research can investigate the visibility promotion mechanisms of regional high-end hotels in other regions.

(2) More influencing factors remain to be considered. This dissertation sees only customers on business trips as the main consumers of regional high-end hotel services and consequently maintains that visibility promotion behavior is mainly subject to the influence of cultural background, gender, industry background, co-creation channels and co-creation carriers. Future research can study regional high-end hotels that mainly serve customers on family tours and explore extra influencing factors such as the spirit of adventure and previous experience. We speculate that family-oriented customers with an adventurous spirit may be more inclined to publicity promotion behavior, because such behavior is essentially risk-taking behavior beyond the customer role, with uncertain outcomes. Adventurous family-oriented customers have a more tolerant and optimistic attitude toward the disappointment that may be caused by such behavior. In addition, we also speculate that family-oriented customers with different experiences will have different attitudes toward publicity promotion behavior. Compared with family-oriented customers disappointed by and dissatisfied with regional high-end hotels, those with happy experiences may be more willing to perform publicity promotion behavior.

(3) This research lacks in multiple research perspectives. The survey conducted herein adopts a customer-based perspective and relies on customer

perception to test the visibility promotion pathway of regional high-end hotels. Though this type of value co-creation and customer value measurement conforms to the law that customers are the creators and evaluators of value, the measurement of visibility promotion behavior, the outcome variable, is not objective enough. Future research can further measure customers' recommendation behavior on digital platforms.

(4) More theoretical explorations are expected. This dissertation studies the pathway towards visibility promotion of regional high-end hotels mainly based on the value co-creation theory and the customer value theory. It is hoped that follow-up research will further verify this relationship under other theoretical frameworks. For example, the theory of two-sided platforms can be employed to explore how to enhance hotel visibility by motivating the front-line employees and customers of regional high-end hotels.

(5) It is important to investigate the competitive landscape of regional high-end hotels. This study focuses solely on the visibility promotion of regional high-end hotels. However, in real-world business practices, the visibility of these hotels is also influenced by their existing and potential competitors in the hotel industry. Therefore, future research will delve deeper into the competitive relationship between regional high-end hotels and their competitors in terms of visibility promotion. The research encompasses two main directions: the first is the analysis on the competitive ecology of visibility promotion for regional high-end hotels, while the second is the study of competitive strategies for visibility promotion of regional high-end hotels.

(6) Further research is needed to explore the integration of customer value.

This paper utilizes the value co-creation theory to develop a model for visibility promotion of regional high-end hotels, with the key path of "value co-creation → customer value → recommendation behavior" and three mediator variables: economic value, hedonic value, and social value. While studying the impact of each individual customer value can help identify differences and inform the development of effective visibility promotion strategies for regional high-end hotels, combining all three customer values into a single integration variable can enhance the applicability and universality of research findings. Therefore, analyzing the integrated customer values will be the focus for the further research.

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Appendix 1 Interview Structure on the Scale Development of Visibility Promotion of Regional High-end Hotels

Dear friend,

I am a Ph.D. student at Cheung Kong Graduate School of Business and I'm researching the visibility of regional high-end hotels. The purpose of this interview is to learn more about your view on the visibility of regional high-end hotels and the promotion of their visibility. It

would be hugely appreciated if you can participate. Your feedback will serve as an important reference for our research. Rather than true/false questions, all the below just ask for your real feelings. Again, our gratitude is beyond words.

Explanation of key variables: (1) "Regional High-end Hotels" refers to the five-star hotels that are rooted in a certain region with localized operation as their core, different from chained-brand hotels. For instance, Ming Du Lakeside Hotel is a luxury hotel with a super five-star standard of construction and decoration and serves mainly customers in Nanning, Guangxi Province. (2) "Value Co-creation" emphasizes the process of creating value for customers by direct interaction between them and regional high-end hotels. (3) "Visibility" here is referred to as the ability of regional high-end hotels to impress themselves on customers' minds, or to what degree customers are familiar with them.

Questions in the interview are as follows:

Please answer the following questions based on your recent experience in a regional high-end hotel that impresses you most:

1)   What are the characteristics of the regional high-end hotel, and how does it differ from international and national ones?

2)   What kind of value you can obtain from your stay in the regional high-end hotel? Anything unique?

3)   What are the existing problems of the regional high-end hotel?

4)   Why does the regional high-end hotel attract you?

5)   What factors will influence your experience during the stay?

6)   Under what circumstance will you recommend the regional high-end hotel to your colleagues?

7)   Under what circumstance will you recommend the regional high-end hotel to your family?

8)   Is there any value co-creation during your stay?

9)   Is there any terrible memory in the value co-creation? (You can just fill "NO" if there's nothing to answer)

10)   Is there any wonderful memory in the value co-creation?

11)   Against the backdrop of COVID-19, what kind of trouble that regional high-end

hotels might get into?

12)   Under the influence of the macroeconomic downturn and the epidemic, how can regional high-end hotels practice value co-creation effectively?

13)   Compared with large hotel chains, what advantages and disadvantages do you think regional high-end hotels will have?

14)   Why would you like to choose the regional high-end hotel rather than large hotel chains?

Appendix 2 Formal Questionnaire

Distinguished lady/sir,

Thank you for your time on this questionnaire! I am a Ph.D. student at the Cheung Kong Graduate School of Business and I'm conducting the Study on Visibility Promotion of Regional High-end Hotels Based on the Value Co-creation Theory. The information and data collected from this anonymous questionnaire will be kept secret and will not be used for any commercial purpose. Please answer the following questions based on your experience in the hotel and there is nothing true or false but personal. Thanks for your participation and advice once more!

Part I: Personal Information (Please place a tick in the appropriate box)

1. Do you think the role of digital devices or tools is great in your communication with the hotel? □Yes □No

2. What do you think is the main topic of communication between you and the hotel? □Service (intangible services: wake-up calls, some solutions, etc.) □Product (tangible products: food, drinks, equipment, etc.)

3. Gender: □Male □Female

4. Age: □Below 20 □20-25 □26-30 □31-35 □Above 36

5. Educational Background: □Junior middle school □Senior middle school □Junior College □Bachelor's degree □Master's degree or above

6. Enterprise Attribute: (e.g. " state-owned business", " joint venture", "private", "foreign company" and others)

7. Profession: (e.g. "agriculture", "mining", "manufacturing ", "finance", "service ", "internet" and others)

8. Business scope of your unit: .

9. Do you think your profession belongs to the high-tech industry? □Yes □No

10. Monthly income (RMB): □Below 3,000 □3,000-4,999 □5,000-6,999 □7,000-8,999 □9,000-11,999 □12,000-13,999 □14,000-15,999 □16,000-17,999 □18,000-19,999 □Above 20,000

Part II: Surveyed Questions (Please place a tick in the appropriate box based on your real experience and feeling)

1. Please answer the following questions about value co-creation according to your

stay in the hotel and choose the most suitable description of your actual condition. (Tick the

corresponding box. 1 = strongly disagree; 2 = disagree; 3 = slightly disagree; 4 = no preference;

5 = slightly agree; 6 = agree; 7 = strongly agree)

1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = no preference, 5 = slightly agree, 6 = agree, 7 = strongly agree	
Dialog	
1) The hotel staff communicated with me systematically.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) The hotel encouraged me in a special manner to communicate with it via its platform or staff.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) The goal of the communication is to ask for suggestions on the improvement of existing products/services or the production of new services/products.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) The hotel encouraged its staff to chat with me about any and all aspects of my experience of services/products there.	1□ 2□ 3□ 4□ 5□ 6□ 7□
Access	
1) I could choose a product/service of the hotel due to some elements, e.g. utility, appearance, etc.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) I could always choose the way I liked to communicate with the hotel staff.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) I felt easy to enjoy the service/product wherever, whenever and however I preferred.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) I had many choices about how to enjoy a service or product.	1□ 2□ 3□ 4□ 5□ 6□ 7□
Risk Assessment	
1) I was fully informed of the benefits of the product/service I receive.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) I was fully informed of the risks of the product/service I receive.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) The hotel encouraged me to learn more about the details of its products and services.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) The hotel would suggest how to use its products/services in case of any risks.	1□ 2□ 3□ 4□ 5□ 6□ 7□
Transparency	
1) The information on the hotel website was up-to-date.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) The hotel followed the information disclosure policy because there was no need to conceal anything.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) The hotel replied to my questions about the hotel and its check-in procedures immediately.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) The hotel fully disclosed the detailed cost and pricing associated with the design and delivery of the service/product experience.	1□ 2□ 3□ 4□ 5□ 6□ 7□

    2.   Please answer the following questions about customer value according to your stay

in the hotel and choose the most suitable description of your actual condition. (Tick the

corresponding box. 1 = strongly disagree; 2 = disagree; 3 = slightly disagree; 4 = no preference;

5 = slightly agree; 6 = agree; 7 = strongly agree)

1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = no preference, 5 = slightly agree, 6 = agree, 7 = strongly agree	
Economic Value	
1) I obtained the information or knowledge I needed from the hotel	1□ 2□ 3□ 4□ 5□ 6□ 7□

and its staff.	
2) The interaction with the hotel's service personnel allowed me to gain essential information about the services and products.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) I learned new ways to experience services or use products from the hotel's management or service personnel.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) What I enjoyed was much more than what I paid the hotel.	1□ 2□ 3□ 4□ 5□ 6□ 7□
Hedonic Value	
1) I felt relaxed when staying at this hotel.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) During the stay, I could free myself from stress and burdens.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) I was excited about living in this hotel.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) I had both visual and auditory enjoyment at this hotel.	1□ 2□ 3□ 4□ 5□ 6□ 7□
Social Value	
1) I made new friends during my stay at this hotel.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) I gained a sense of accomplishment by staying at this hotel.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) I improved my self-image by staying at this hotel.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) I earned respect or recognition by staying at this hotel.	1□ 2□ 3□ 4□ 5□ 6□ 7□

3. Please answer the following questions about how to raise its popularity among customers according to your stay in the hotel and choose the most suitable description of your actual condition. (Tick the corresponding box. 1 = strongly disagree; 2 = disagree; 3 = slightly disagree; 4 = no preference; 5 = slightly agree; 6 = agree; 7 = strongly agree)

1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = no preference, 5 = slightly agree, 6 = agree, 7 = strongly agree	
Business Recommendation	
1) I will recommend this hotel to my colleagues in my department of my company.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) I will recommend this hotel to my colleagues in other departments of my company.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) If I have the opportunity, I will recommend this hotel to partner companies that are in the same industry but other regions of China.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) If I have the opportunity, I will recommend this hotel to partner companies that are in both different industries and different regions of China.	1□ 2□ 3□ 4□ 5□ 6□ 7□
5) If I have the opportunity, I will recommend this hotel to overseas partner companies.	1□ 2□ 3□ 4□ 5□ 6□ 7□
Daily Recommendation	
1) I will share this hotel brand with my family.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) I will share this hotel brand with my friends.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) I will book in this hotel with my family if we travel to this region again.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) I will book in this hotel with my friends if we travel to this region again.	1□ 2□ 3□ 4□ 5□ 6□ 7□
5) I will recommend this hotel to those around me who want to visit this region.	1□ 2□ 3□ 4□ 5□ 6□ 7□

4. Please answer the following questions about customers' cultural background according to your stay in the hotel and choose the most suitable description of your actual condition. (Tick the corresponding box. 1 = strongly disagree; 2 = disagree; 3 = slightly disagree;

4 = no preference; 5 = slightly agree; 6 = agree; 7 = strongly agree)

1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = no preference, 5 = slightly agree, 6 = agree, 7 = strongly agree	
Power Distance Orientation	
1) High-ranking people should not consult low-ranking people too often.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) Higher-ranking people should keep their distance from lower-ranking people in social contact.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) Lower-ranking people should not oppose the decision made by higher-ranking people.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) High-ranking people should not delegate core tasks to low-ranking people.	1□ 2□ 3□ 4□ 5□ 6□ 7□
Collectivism and Individualism	
1) Individuals should sacrifice their interests for the collective.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) Collective interests are always prior to individual incentives.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) The success of the collective always weighs more than that of an individual.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) The collective benefits should be taken into consideration in the pursuit of individual goals.	1□ 2□ 3□ 4□ 5□ 6□ 7□
Masculinization	
1) It's more vital for men than women to have a job.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) Men often solve a problem by logic while women by intuition.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) For men, solving tough problems usually requires an active and coercive approach.	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) Men are more decisive than women in making decisions.	1□ 2□ 3□ 4□ 5□ 6□ 7□
Uncertainty Avoidance	
1) Safety is essential for my life.	1□ 2□ 3□ 4□ 5□ 6□ 7□
2) Life is full of uncertainty so we must always be on guard against bad things.	1□ 2□ 3□ 4□ 5□ 6□ 7□
3) It is common to lead an unstable life, to improve which requests adventure. (Reverse – item)	1□ 2□ 3□ 4□ 5□ 6□ 7□
4) Things change. However, progress is available only in the midst of change. (Reverse – item)	1□ 2□ 3□ 4□ 5□ 6□ 7□