

**Market Analysis of Rural Tourism in China's Urbanizing Suburbs: A Case Study of
Chengdu SanSheng Hua Village**

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Thesis Paper

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Abstract

With the rapid growth of urbanization, more and more people seek short reliefs in rural area during free time. Rural tourism is developing with the increasing need and requirement of urban residents. This study selects SanSheng Hua Villages as a case study to analyze the supply, demand, and strategies of the rural tourism market. This thesis utilizes Analytic hierarchy process-Fuzzy synthetic evaluation model and SWOT (Strengths, Weaknesses, Opportunities, and Threats) model to explore the present situation and tourists' attitudes toward SanSheng Hua Xiang. The result shows that the rural tourism market has the problems of homogenization, deficient infrastructure, messy and unprofessional management. The author thus recommends increasing characteristics, creativity, and unified management in SanSheng Hua Village for the future.

Keywords: rural tourism, fuzzy synthetic evaluation, SanSheng Hua Village

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2021 is still a harmful time for everyone, and I believe that tomorrow will be a better new day!

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Chapter 1

Introduction

This chapter introduces the present situation of rural tourism and the selected case firstly, and then comes to research questions, purpose statement, significance, research design, and structure of the thesis.

Under the rapid growth of urbanization, the urban population have increasing stress from work and life. Suburban countryside tours become an alternative to escape busy life for a short time. People can easily get in touch with nature in a 30-60 minutes drive. Therefore, rural tourism appeared and developed in the urban peripheries.

Chengdu city has many well-known titles like "The City of Gastronomy" and "Land of Abundance". People who live there have relaxing and happy life attitudes. Working hard and playing hard is their belief. Moreover, Chengdu is also one of the earliest cities to develop rural tourism (Zhang, 2013). Chengdu City has relatively mature rural tourism.

At the end of the 20th century, SanSheng Hua Village took the advantage of its rich natural resources and convenient location and became the representative of rural tourism in China. However, present SanSheng Hua Village faces the hard challenge that it loses comparative advantages under fierce competition. How to improve SanShen Hua Village from a marketing perspective needs further exploration.

1.1 Research Question

In this research, two questions are raised. First, What are present SanSheng Hua Village? Second, how visitors of SanSheng Village complex perceive its attributes and potential to serve as an attractive rural tourism site?

1.2 Purpose Statement

This thesis aims to provide an insight into the market supply, market demand, and marketing strategies of rural tourism in China. It will analyze present SanShen Hua Village's situation and tourists satisfaction degree and provide some useful suggestions for future development. Furthermore, it will contribute to better understanding rural tourism in the Chinese context.

1.3 Significance of Study

Compared with the systematic rural tourism research system in western countries, Chinese rural tourism lacks enough standardization and complete theories. Therefore, enriching rural tourism is very necessary.

What's more, rural tourism in suburbs is the "bridge" between urban and rural areas in cities. It is the opportunity for urban and rural residents to better know each other. It also promotes the spread of good resources and the decreasing gap between urban and rural areas.

1.4 Research Design

In order to study rural tourism in Chengdu, this research selected a representative case study. After taking the maturity and comprehensiveness into consideration, SanShenghua Village is the best choice. It is located in the Sansheng Street of Jinjiang District in Chengdu City, Sichuan Province, which is known as "the hometown of Chinese flowers and trees" (Haisen,

2017). It covers five small villages and 2500 acres. It is also the national construction of a new socialist countryside model. It has successfully become the national AAAA level scenic spot (Tan, 2006). SanSheng Hua Village has started to develop at the end of the 20th century. It has more than twenty years old history. A long history shows that it has relatively complete services and management. Different from some new projects, this case can avoid some extraneous variables, such as lack of operational experience. Plus, SanSheng Hua Villages has a high flow of people on weekends. It increases the feasibility of the collected data from tourists. A larger sample is more convincing in research. Therefore, SanSheng Hua Village is very suitable to do a market analysis and collect surveys.

Then, based on the case being selected, this study conducted a market analysis on this case that includes three parts: market supply analysis and market demand analysis.

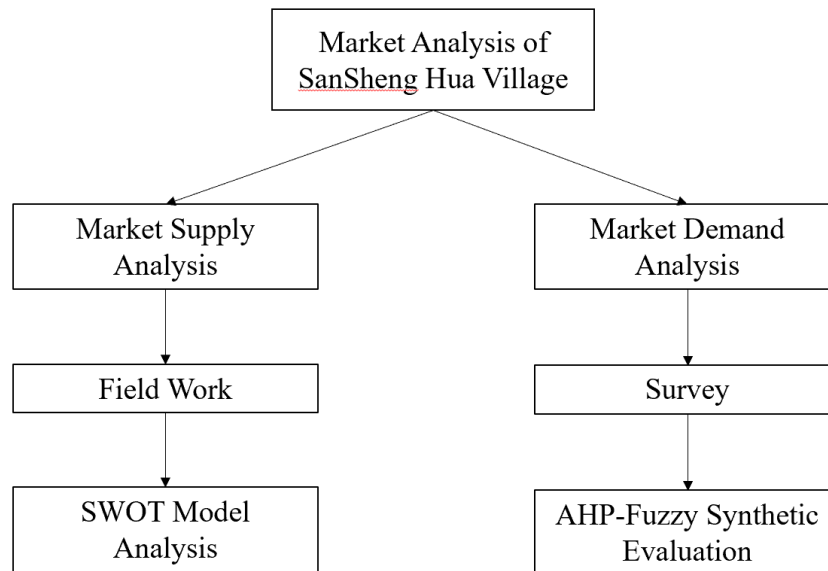


Figure 1-1: Research design

Firstly, to understand what the present SanSheng Hua Village provides, I made an on-the-spot investigation that I visited SanSheng Hua Village and had a very clear and detailed observation, collected detailed information about it, and applied SWOT model to analyze. I described and categorized its strengths, weaknesses, opportunities, and threats.

Finally, from the consumers' perspective, firstly, I created a questionnaire that includes tourists' basic information and attitudes toward different aspects of SanSheng Hua Village. After collecting data, I made a demographic analysis to explore the main characteristics of tourists and then I used AHP-Fuzzy synthetic evaluation method to quantify tourists' satisfaction and calculate the final score.

1.5 Structure of Thesis

The thesis comprises six chapters. The first chapter is the introduction that consists of research questions, purpose statement, significance, and method of research. As for the second chapter, it is the backgrounds of three topics. It firstly tracks the development history of rural tourism. After that, how urbanization evolves and grows in the Chinese context is another topic. Finally, it is the policy background under the Chinese government that promotes the development of rural issues.

The third chapter is a literature review in two parts. The first part is about rural tourism, such as its benefits, classification, characteristics. The second part is tools, models, and methods for market analysis will be proposed to confirm the rationality of the research method.

After these, the fourth chapter provides a detailed overview of the case I selected, SanSheng Hua Village, which covers the situation of location, transportation, natural resources, history, and accessibility.

Next, based on the fourth chapter, a market analysis starts in the fifth chapter. In the beginning, the present market's strengths, weakness, opportunities, and threats are listed and analyzed by the SWOT model. Then, tourists' and demographic information and satisfaction degree of rural tourism is evaluated.

Finally, in the last chapter, a summary of what this thesis find is posted firstly. Then, the limitation of this study and indication to further study will be also included. In the end, I give my recommendation towards rural tourism in China under the impact of urbanization.

Chapter 2

Background

This chapter includes the background of rural tourism development in the world, the background of urbanization in China, and policy background and support for rural tourism development.

2.1 The Background of Rural Tourism Development

Rural tourism originated in France. After World War II, everything needs to develop again, especially for the economy. However, the growth of the countryside is very slow, so the rural labour force moves to cities for a better life. In the 1850s, the French government advocated developing agriculture and tourism at the same, hence, rural tourism appeared. French government converted stables and warehouses into hotels. These hotels are cheap so that normal families can afford them. This new relaxing way attracts many citizens and becomes increasingly popular (Lin, 2019). Later, farms and manors were developed for entertainment which provides tourists with horseback riding, mountain climbing, outdoor camping, hiking, experience farming activities and other tourism projects. Since then, developed countries such as the United Kingdom, the United States, Japan has formed a large rural tourism industrial scale and has gradually embarked on the standardized development road (Huang, 2011).

As for China, Chinese rural tourism does not have a long history. It started in the 1950s and slowly developed in the rich countryside of southern China in the 1980s. Until the "98 Huaxia city and countryside tour" was promoted by China National Tourism Administration, China has the basic preparation of rural tourism and began to have rapid growth (Li & Sun, 2013). From the 1980s, the suburbs of Chengdu established separate rural tourism. It is a way

that urban residents go to the countryside to "see rural views, eat rural food, do rural activities, drink rural tea, live in the rural house". It is also the initial and common way of rural tourism at that time. At present, the forms of rural tourism have become more various and specific. For example, some forms of rural tourism can teach tourists traditional culture and planting knowledge.

2.2 The Background of Urbanization

Rural tourism development is tightly related to the urbanization process. The rapid growth of urbanization brings the appearance and boom of rural tourism.

At present, China's urbanization rate has jumped to 58.52% in 2017 from 10.64% in 1949. The average annual growth rate is 1.03%. The urban resident population increased from 40 million to 9300 million in 70 years with a net increase of 7.5%. This speed is the most fast in the world (Wang & Jiang, 2019).

From 1949 to 1977, it is the period before reform and opening-up. During this period, the pace of China's industrialization development is far higher than the pace of urbanization development. The reason is that under the condition of limited economic resources in China, more resources are used in the development of industrialization, which hinders the pace of urbanization. Although the industrialization of this period has made significant progress, there have also been corresponding problems, such as the lack of rationality in economic distribution, low utilization rate of the industry, unbalanced development between urban and rural areas, and large differences in employment, which hindered the economic development of China in that period (Shen, 216).

After reform and opening-up, from 1978 to 1998, At this time, the pace of urbanization in China gradually quickened. China's main focus transformed from restraining urbanization to

strictly controlling the scale of big cities. During this period, small and medium-sized cities gradually relaxed the restrictions on rural migrant workers. With the opening of the market economy, the economy of small and medium-sized cities and towns developed rapidly. The population movement from the countryside to cities greatly boosted the development of small and medium-sized cities (Wang, 2010).

From 1988 to the present, China began to encourage the development of large cities, and put forward the strategy of coordinated development of small towns and large, medium and small cities, the local government also began to encourage migrant workers to cities, China's urbanization accelerated significantly in this time. (Wang & Jiang, 2019).

2.3 Policy Background

In 2006, The State Council promulgated the outline of the Eleven five-year plan for Nationality Law of the People's Republic of China Economic and Social Development which clearly put forward the concept of "developing leisure agriculture". Subsequently, the Ministry of Agriculture issued the "implementation advice on the strategic deployment of the central government to promote the construction of a new socialist countryside" and announced that agriculture should expand tourism and cultural heritage function.

In present China, the poverty-stricken population as a whole has been lifted out of poverty. "Xiaokang" society is fully built in 2020. However, the income and economic gap between the countryside and cities are still big. Agriculture problem, countryside problem and farmer problem are the key issues that are tightly related to the economic and social development of China, and they are also the important foundation of China's goal of building a harmonious society, and the core of the "three rural issues" is the farmers. What farmers most concentrate on is their life quality and income. It is connected with the revitalization of the countryside. In a

word, only when the living environment gets better, people who live inside can enjoy the benefits of the positive change. Therefore, how to revitalize the countryside becomes the hot spot. The key point is the revitalization of agriculture. There is no denying that the government's regulation and help can promote the development of the countryside a lot. However, the most important driver of rural economic growth is rural transformation development. Different from the previous way that only focuses on planting and animal husbandry. Developing different rural industries and transforming is the most sustainable strategy. Rural Tourism is a valuable alternative to bolster the transformation and upgrading. It is also a relatively perfect method to solve "three rural issues" (agriculture, countryside and farmers) (Hubei Government, 2016). More specifically, for the development of agriculture, rural tourism increases the economic benefits of agriculture. It also grants new and creative functions to agriculture. Agricultural is not only for people's basic need but also for mental relief and joy. Rural tourism expands the meaning and appearance of agriculture. As for rural development, rural tourism breaks down the gap between cities and the countryside. It builds a platform for communication and interaction between them. Also, it attracts labour, information, and capital from cities. The countryside can take the advantage of urban resources to enter a bigger market, meanwhile, cities can fully explore the benefits and unique strengths to make the cooperation. In terms of the development of farmers, it can also create new positions to reduce the stress from unemployment. For the surplus labour force, they can have an easier way to move to cities as an information barrier doesn't exist. Therefore, under the policy guide, the development of rural tourism is meaningful and necessary.

Chapter 3

Literature Review

This chapter consists of two parts: the discussion on the definition of rural tourism and the category of rural tourism.

3.1 The Definition of Rural Tourism

As the tourism system is not very complete, there are various views about the definition of "rural tourism". According to Edward Inskip (1991), rural tourism refers to that tourists who live in villages learn about villages and local cultures, lifestyles and customs and often participate in village activities.

Rural Tourism is defined by the European Union (EU) and the Organization for Economic Cooperation and Development (OECD) (1994) as tourism that takes place in the countryside. "Rurality" is the core of rural tourism. Therefore, rural tourism should "takes place in rural areas, which is based on the special features of the rural world, small scale of operation, open space and sustainable development" (He, 2013).

There are some other views towards rural tourism. Mormont (1990) believed that the countryside contained overlapping social spaces. The attraction of the countryside is that it can provide something that a city cannot, such as different thought, institution, regulation and behaviour.

In China, many scholars have their own unique opinions toward rural tourism. Wang, Guo, and Xu (2006) held a similar view that rural tourism is characterized by the rural environment, agricultural activities and custom culture. It takes urban residents as the main

consumers, and tourists experience rural farming activities, understand and feel the traditional folk forms of tourism. According to Meng, Jia, and Yang (2002), rural tourism is a unique way of tourism that is different from man-made scenic spots and urban landscapes. It is a tourism activity that takes the natural ecological resources in rural areas as its attraction, including scattered in the city, the urban-rural fringe area, and rural areas. In 1999, Du and Xiang concluded that rural tourism is characterized by a rural ecological environment and rural life experience, provide tourists with ecological sightseeing, leisure entertainment, knowledge exploration, feel the nature of a new type of tourism. According to Xiao et al. (2001), "rural tourism refers to a tourism form which is based on the rural space environment, taking the unique rural production form, folk customs, life form, rural scenery, rural residence and rural culture as the object, using urban and rural differences to plan, design and combine products, and integrating sightseeing, sightseeing, entertainment, leisure, vacation and shopping". Plus, Wu et al. (2002) argued that rural tourism relies more on capital and high technology and uses less dedicated reception facilities.

3.2 The Category of Rural Tourism

If rural tourism is classified by geographic locations. It has three types. The first one is the suburban type. They mainly located near large and medium-sized cities. Some of the rural tourism is to meet the huge tourists' demand of large and medium-sized cities. It is on the basis of the original agriculture, modern technology, modern beauty, and the development of a variety of sightseeing agriculture (Xiao et al., 2001). The second one is the remote type. This type is generally inconvenient in transportation, meanwhile, it also has rich tourism resources which greatly attracts tourists. Or some tourists villages take generally inconvenient in transportation, this type either has rich tourism resources, which have a great attraction to tourists, so as to

develop tourism, such as Liukeng village in Le'an County, Jiangxi Province; or although the resources are very rich, however, various pro-poor policies of the state can also be developed, age of various pro-poor policies of the state can also develop (Xiao et al., 2001). The third one is scenic area edge type. It is located in the famous scenic area edge and combined with the scenic area. It relies on existing tourist resources to develop (Xiao et al., 2001).

Another classification method is for four purposes. One is mainly for agricultural activities. Tourists want to return to the countryside which is for leisure and holiday; another one is for eco-green tourism that relies on the village scenery; the third is for rural culture and customs. Tourists like to be embodied in the old place, practice and study different culture (Qiu & Yan, 2007).

What's more, according to landscape resources, rural tourism in China can be divided into nine major categories and 51 sub-categories based on China's National Standard (GBT-2003). The nine major categories are as follows: rural tourism with the natural landscape, rural tourism with the geographical landscape, rural tourism with architecture and culture, rural tourism with water landscape, rural tourism with the biological landscape, rural tourism with tourism products, rural tourism with historical sites, rural tourism with cultural activities, rural tourism with catering culture. In terms of the classification of landscape, it can be divided into the folk cultural landscape, settlement landscape, agricultural landscape (Ding, 2020).

Moreover, rural tourism can be categorized by several development patterns. The first one is the "farm family" pattern that is a kind of tourism way for urban residents to relax their body and mind and enjoy their spirits from the rural tourism. Farmers use local agricultural products to provide rural delicacies for urban residents. The second is the "leisure farm" model. The model is based on the vegetable garden, orchard, garden, tea garden, leisure fishery, and

other farms. It relies on rural idyllic scenery to provide urban residents with entertainment, leisure, catering and accommodation services. The third one is the "resort" model. It refers to several buildings designed and built on beautiful natural places to meet the needs of tourists for entertainment, vacation and leisure. A resort usually requires several things: entertainment, accommodation, food, and activities. The fourth one is the "local customs" model. This mode is a rural tourism model which attracts urban residents with the theme of rural folk customs, ethnic groups and their activities as well as the culture of traditional architecture. The last one is the "health and fitness" model. Taking advantage of the fresh air and quiet environment, urban residents can have rested and do exercise (Yang, 2011).

SanSheng Hua Village belongs to the suburban type. Its concentration is eco-green tourism and rural tourism with the natural landscape. It also mixes the "farm family" pattern and the "leisure farm" model.

Chapter 4

Case Overview

This chapter has a brief introduction at first and then has a detailed analysis from location, accessibility, economy, natural resources, cultural aspects.

4.1 Introduction

The National 4A scenic spot "Sansheng Hua Village" is located in Jinjiang District, Chengdu. It is located in the southeast of Chengdu Plain and covers an area of 2,500 acres. The total population of the five villages under its jurisdiction is 32,000. In recent years, it has been awarded "the first batch of national agricultural tourism demonstration spots" by National Tourism Bureau, and there are more than 300 star-rated village hotels, tourist souvenir shops and rural tourist reception points in the scenic spots (Xinhuanet, 2005). What's more, there are Xu Liaoyuan modern design art museum, the Landing Art Center and other arts and creative industry bases. Furthermore, the bailuan Eco Wetland Park and other sports and leisure facilities, Chengdu Chuanhua, orchid Expo Garden and other flower production demonstration base attract many visitors.



Figure 4-1 SanSheng Hua Village Panorama of Tourist Attractions (Miao, n.d.)

As Figure 4-1 shows, SanSheng Hua Village contains five natural villages: “Huaxiang Farm House”, “Happy Plum Blossom”, “Jiang’s Vegetable Field”, “Dongli Chrysanthemum Garden”, and “Lotus Pond”. Different villages have different features. Their uniqueness can be clearly understood by their names.

4.2 Location

SanSheng Hua Village has a very convenient location. It is about 7 kilometres away from downtown Chengdu City, only 7 kilometres away from the second ring road, about 10 kilometres away from the South Railway Station, and about 15 kilometres away from the airport.

4.3 Accessibility

SanSheng Hua Village has a relatively complete traffic network system. Traffic is very convenient, and the road is accessible. It has gradually formed “two horizontal and two vertical regional road network and four trunk roads” as the core road network structure. In addition, in Sansheng Hua Village area, the density of bus stop is very high. The number of bus stations is up to twenty.

4.4 Economy

In 2005, SanSheng Hua Village received 7.47 million tourists all over the world, realizing a tourism revenue of 192 million yuan (Sichuan Tourism Planning & Design Institute, 2006).

The main tourism income is from catering. According to Sichuan Tourism Planning & Design Institute (2016), taking “Huaxiang Farm House” and “Happy Plum Blossom” as an example, the catering income of these two villages accounted for 82.08% of the total annual income of SanSheng Hua Village.

SanSheng Hua Village is famous for its flowers, vegetable production and management, and urban tourism projects so that the main income is from flower production value, the

economic income of the tertiary sector, and farmers' income. Economic income of the tertiary sector means the service industry income brought by tourists. "The output value of flowers and plants rose from 61.68 million yuan in 2005 to 158.71 million yuan in 2015, and the economic income of the tertiary sector rose from 140.54 million yuan in 2005 to 492.81 million yuan in 2015. The average annual income of rural households rose from 5,876 yuan in 2005 to 35,224 yuan in 2015" (Shang, 2017). The increment of farmers income comes from four ways. The first one is rent. Farmers can receive more than 10,800 yuan per acre a year from the transfer of land contract rights. The second is wage. After farmers become agricultural workers that work in companies or do operational activities like catering, they have more than 500 yuan monthly wage or higher operating income. Thirdly, farmers can get share capital from professional management companies and enjoy the share of the benefit. Moreover, farmers can get insurance money if they meet the requirement (Sichuan Tourism Planning & Design Institute, 2006).

4.5 Natural resources

SanSheng Hua Village's green coverage rate is more than 80%, so the environment and air are very good. Each region is planted with large areas of flowers and seedlings. For flower resources, the area of flower cultivation is more than 8,000 mu, among which "Huaxiang Farm House" is an important wholesale and distribution area of flowers in southwestern China, "Happy Plum Blossom" is an important plum production base in the southwest region, and it is also one of the four largest plum forests in China, therefore, this area is rich in flower resources.

Furthermore, SanSheng Hua Village has different kinds of the natural landscape. In terms of wetland, "Happy Plum Blossom" occupies 400 mu and "Dongli Chrysanthemum Garden" has 100 mu. In "Happy Plum Blossom", there exists a pool with a small island. In "Lotus Pond", the

pool is much larger and the lotus will bloom in Summer, which attracts many tourists to take photos and have fun.

4.6 Culture and Activities

In “Lotus Pond”, there has gradually formed a famous artist village. With the arrival of the artists, it gradually gives off its own artistic flavour. LanDing artist village has attracted more than 40 artists to move here. This village has also been approved by the Ministry of culture as a cultural industry demonstration base and has gradually become an important gathering place for contemporary art in Chengdu. In addition, SanSheng Hua Village has also formed a painting and calligraphy processing, picture frames, painting tools production, pigments, brushes, canvas wholesale sales and other industries. The public can also experience arts in art exhibitions and galleries.

SanSheng Hua Village provides services include leisure, sightseeing, entertainment, business meeting, and so on. Different generations can easily find their interesting activities in it. Children can have intimate contact with nature and do exercise on the lawn. Young couples can ride bicycles and visit unique cafeterias. Families can drink tea, communicate, and play majiang (famous game of Sichuan) in gardens. The businessman can meet clients in quiet yards and enjoy the sunshine. Women can pick out fresh and beautiful flowers in the market. Old people can go fishing and have a rest by the pool. In a word, the activities of SanSheng Hua Village are pretty rich and colourful. Everyone can find the most proper way to relax.

Chapter 5

Market Analysis

In this chapter, market supply analysis uses SWOT method to carry on the qualitative analysis of SanSheng Hua Village, I found out its strengths, weaknesses, opportunities, and threats and make a detailed analysis of it. Then, I made a survey to collect information and data from tourists, analyzed it by analytic hierarchy process and fuzzy synthetic evaluation model, and discussed the results.

5.1 Market Supply Analysis

5.1.1 Strengths

Besides the location, natural resources, and other characteristics of SanSheng Hua Village that have described in the case introduction, there are still some strengths that show the advanced thoughts of planning.



Figure 5-1, “Huaxiang Farm House Green Space”, Yiyi Jiang

Firstly, in “Huaxiang Farm House”, the public space is well built and operated. Many old buildings are renovated and the government demolished some houses to enlarge the open space

for residents to gather, communicate, and exercise. Figure x shows that green space is planted with flowers and grass and the streets are clean.



Figure 5-2, “Huaxiang Farm House Streets”, Yiyi Jiang

Secondly, from figure x, internal streets are separated into two parts: for cars and for pedestrians. It is surprising to see that on rural roads. It increases the safety and accessibility of the roads. The design express people-oriented thinking.

5.1.2 Weakness

At first, SanSheng Hua Village lacks unified planning. Even though “Huaxiang Farm House" has done very well in public space, the development of these five villages is unbalanced. The other four villages have small open space and private areas are enclosed by walls. Furthermore, public space lacks governance and it is always very dirty and messy. It will greatly influence the tourists' mood when walking or driving inside. As for streets, only “Huaxiang Farm House" sets pedestrian area. In other villages, cars and people are on the same road. Both car drivers and pedestrians feel stressed when moving forward.

Next, SanSheng Hua Village has the problem of homogenization that most stores inside are similar and it doesn't have unique characteristics. In term of stores, most of them are similar in the internal environment, building style, category of food, and entertainment. Although some popular stores are hot on social media, there exist some differences between imagination and

reality. For these five villages, although they have different themes, they don't fully express it. Taking "Dongli Chrysanthemum Garden" as an example, besides planting and selling Chrysanthemum, there is no other action or planning to explore other activities related to Chrysanthemum, such as teaching tourists planting knowledge and producing special flower products. In addition, there is no denying that SanSheng Hua Village has varieties of entertainment activities, but its competitors also have. SanSheng Hua Village doesn't have comparative advantages and tourists won't only come for its attractive activities.

Moreover, management problem is another important issue. Most owners of the stores are local villagers. The management team member is always their own family members and cousins. Such a traditional management method is not conducive to the improvement of the service level, innovation and creativity. In Health, security, fire, prices and services and other regulatory oversight, what they have done is not perfect. The conflicts between consumers and waiters are common and many tourists serve themselves because waiters are too busy to take care of them. In the area, the phenomenon of disorder management and disorder order exists, but the government and the organizations have not formed effective force in the management. Plus, SanSheng Hua Village doesn't have a unified management department, and five villages have their own management teams.

In addition, five villages are separated and the connection among them is insufficient. The roads between the two villages are hard to find and drive. Tourists are bounded in one village and cannot have deep experience. It is also one of the reasons why the development of five villages are uneven. Tourists don't have opportunities and willing to walk or drive to other villages after staying in a village for a while.

Lastly, most of the houses of LanDing artist village is vacant. Many artists only regard them as a warehouse to put their painting and tools. Therefore, the activities for artists in LanDing artist village are not as colourful as imagined before. The main cause of the recent situation is that facilities and services cannot support artists and their families living. There is no nearby supermarket, school, and shopping mall. A hospital is newly built and will open soon. However, it also takes more than fifteen minutes to drive from LanDing artist village to the hospital. Internal supply is only for basic daily use. Living inside for a long time is not convenient for artists, especially for artists who have children and old people.

5.1.3 Opportunities

First, SanSheng Hua Village has some reputation and brand influence. When many Chengduers plans for a rural tour, SanSheng Hua Village belongs to one of their top three choices. Compared with other new projects, it has an informed market system. It only needs to change and update in some aspects.

Besides, Chengdu is a growing city. The population flow of Chengdu is always increasing. At the end of 2019, the permanent population was 16.581 million, an increase of 251,100 or 1.54% over the end of the previous year (Chengdu Bureau of Statistics, 2019). Therefore, the market for rural tourism is enlarging and SanSheng Hua Village should seize this chance.

Furthermore, Chengdu-Chongqing regional economic circle is a main concentration of the Central government for western China. Its construction began in January 2020. This economic zone is not only included Chongqing and Chengdu, but also other cities from Sichuan Province, such as Suining, Ziyang, Nanchong. The development of Chengdu-Chongqing regional economic circle will promote the population mobility of different cities. SanSheng Hua Village

has more chances to attract tourists from other cities. Next, other than Chengdu-Chongqing regional economic circle, there are other policies that supports rural tourism which is mentioned in the background like the aim of solving "three rural issues" and "the rural revitalization strategy".

In addition, according to the following survey result, SanSheng Hua Village mainly attracts middle-income visitors. It is another opportunity that the village can seize to enlarge the population of target visitors.

5.1.4 Threats

The competitors of SanSheng Hua Village come from three levels.

At first, SanSheng Hua Village needs to compete with other forms of entertainment. For family, most cities have the underwater world, the zoo, science and technology museums, and these alternatives can disperse tourists of SanSheng Hua Village.

Second, another type of competitors is different forms of tours. China has many gorgeous natural landscapes, such as seas, mountains, lakes. Such form of tours takes tourists more time and energy, but it gives them more meaningful moments and deeper understanding. Hence, different forms of tours like landscape tour bring stress to SanSheng Hua Village.

Then, the most strong and straight competitor is other projects from rural tourism. In Chengdu, there are other rural tourism villages. In western Chengdu, Nongke village in Pidu district has larger capital investment and a more unique building style and environment. In the east, longquan mountain has a peach blossom festival and other participatory activities. In the South, Konggang flower field has the unique spotlight that tourist can see airplanes' landing. Therefore, SanSheng Hua Village should maximize its characteristics and promote itself step by step.

5.2 Market Demand Analysis

This study uses the survey to explore tourists' satisfaction with SanSheng Hua Village. This questionnaire consists of two parts: the first is the basic information of the respondents, including their gender, age, education level, monthly income, occupation type, average travel time, travel consumption, etc. This information can help us to analyze some of the basic factors that influence tourists' satisfaction. The second part is to investigate the tourists' satisfaction with all aspects of SanSheng Hua Village. The second part is the core of this questionnaire. In the second part, tourists' views on the landscape, food, entertainment, service and other aspects are investigated. Based on the Likert five-point scale, "very dissatisfied", "dissatisfied", "neutral", "satisfied", "very satisfied" were recorded on a scale of 1-5.

The questionnaires of this study were officially distributed from March 12, 2021 to March 14, 2021 for three days. I spent more than four hours every day and stop pedestrians to ask them whether they are willing to fill out the consent forms and questionnaires. Among them, 70 questionnaires were distributed in each village of SanSheng Hua Village. A total of 335 questionnaires were collected, and 315 were left after the invalid questionnaires were screened out after data verification, with an effective rate of about 90%. The time for participant's involvement in the study is 5 minutes. There is no risk of participating. Participants will not receive personal (direct) benefit from taking part in this research study. However, the information collected from this research may help others in the future.

5.2.1 Basic Information

Gender of tourists

Gender	Male	Female
--------	------	--------

Number	150	165
Percentage	47.6%	52.4%

Table 5-1: Distribution of tourists' gender

Table 5-1 shows that the distribution of gender is even.

Place of residence of tourists

Area	Chengdu City	Other cities in Sichuan	Other
Number	252	53	10
Percentage	80.0%	16.8%	3.2%

Table 5-2: Distribution of tourists' place of residence

From Table 5-2, tourists' place of residence is centralized in Chengdu City. The attraction of SanSheng Hua Village for foreign tourists is low.

Age of tourists

Age	18-30 years old	31-50 years old	Above 50 years old
Number	80	132	103
Percentage	25.4%	41.9%	32.7%

Table 5-3: Distribution of tourists' age

Table 5-3 presents that young people (18-30 years old) is the smallest group of the population that went to SanSheng Hua Village. The main consumer groups are middle-aged and old people. This study excluded children (below 18 years old) because they don't have the independent ability that decision is made by their family. Therefore, SanSheng Hua Village lacks the appeal to the young population.

Education of tourists

Education	Middle school or below	High school	Bachelor degree	Master degree or above
Number	56	108	131	20
Percentage	17.8%	34.3%	41.6%	6.3%

Table 5-4: Distribution of tourists' education

Table 5-4 exhibits that the distribution of tourists' education is relatively equal, but the amount of tourists with high education is low.

Monthly income of tourists

Monthly Income	Below 1870	1870-5000	5000-8000	8000-10000	Above 10000
Number	45	102	102	36	30
Percentage	14.3%	32.4%	32.4%	11.4%	9.5%

Table 5-5: Distribution of tourists' monthly income

Table 5-5 demonstrates that tourists are concentrated in the middle and lower-income groups. SanSheng Hua Village should raise and upgrade its quality and service to attract a high-income population.

Occupation	The staff of state agencies and institutions	Private company employee	Self-employed individual	Student	freelancer	Retired	Other
Number	50	68	52	31	43	68	3
Percentage	15.9%	21.6%	16.5%	9.8%	13.7%	21.6%	0.9%

Table 5-6: Distribution of tourists' occupation

From Table 5-6, the occupation of tourists is relatively normally distributed. The private company employees and retired people occupy the most. The percentage of students is the smallest.

Travel Types

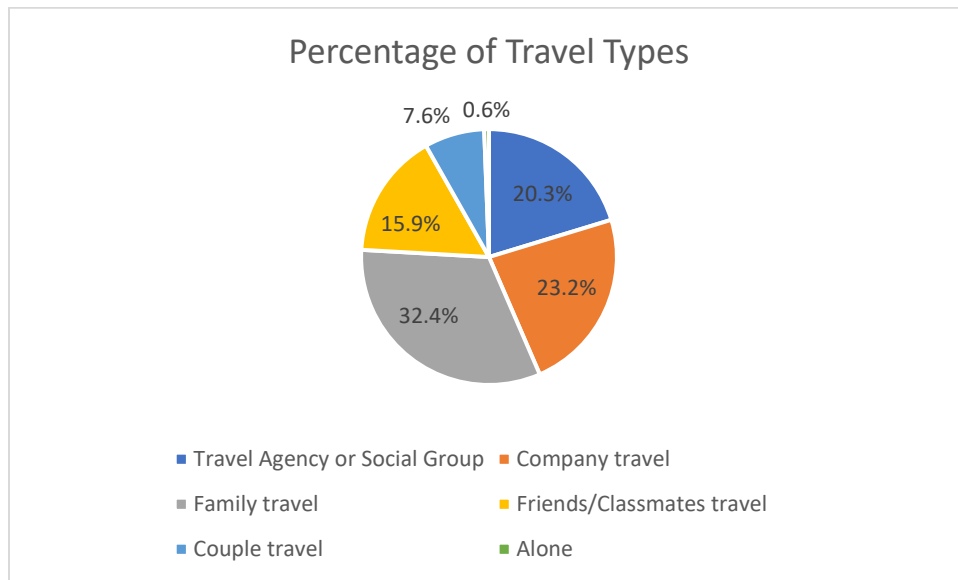


Figure 5-3: The distribution of travel types

From Figure 5-3, the most common travel type is a family travel and then is followed by company travel and travel agency or social group travel. Hence, SanSheng Hua Village is mainly served for group travel rather than individual travel.

Travel Time

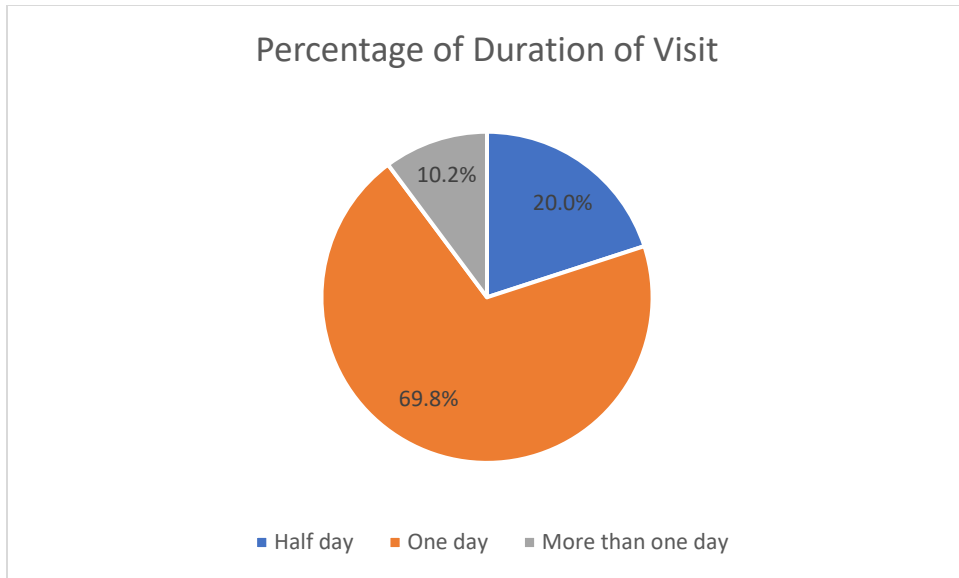


Figure 5-4: The distribution of duration of visit

Figure 5-4 shows that nearly 90% of tourists stay in SanSheng Hua Village for less than one day. It is related to the quality of accommodation, its location, and the activities here.

Travel Expenditure

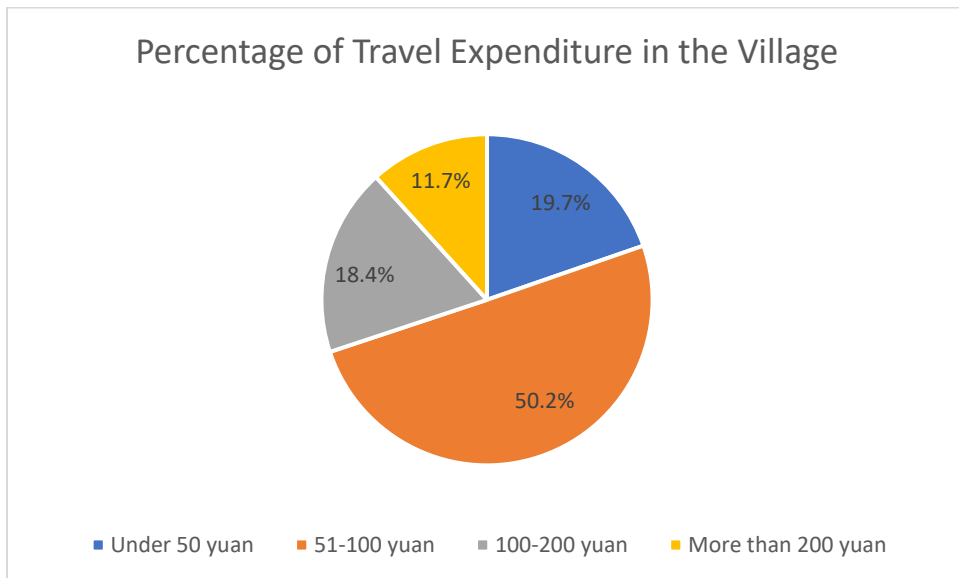


Figure 5-5: The distribution of travel expenditure in the village

Biggest expenditure on tour

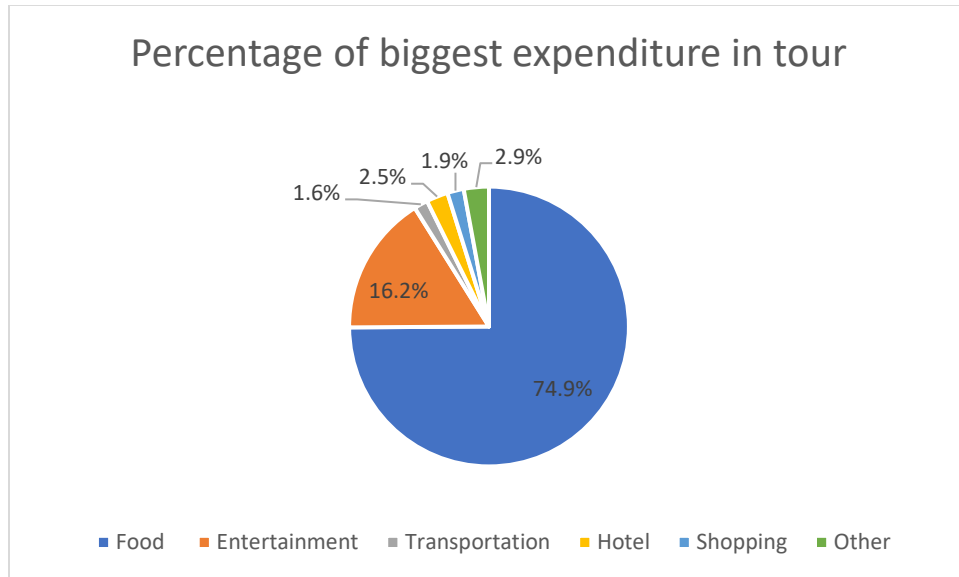


Figure 5-6: The distribution of biggest expenditure in tour

Figure 5-4 indicates that most of the tourists' biggest consumption is food consumption (catering). However, accommodation, shopping, transportation account for a small proportion. As the entertainment activities are not exclusive. Most of them are traditional and won't cost a lot of money.

5.2.2 Satisfaction degree of rural tourism on SanSheng Hua Village

Step 1: Building Hierarchy of Criteria for Satisfaction Degree of Rural Tourism

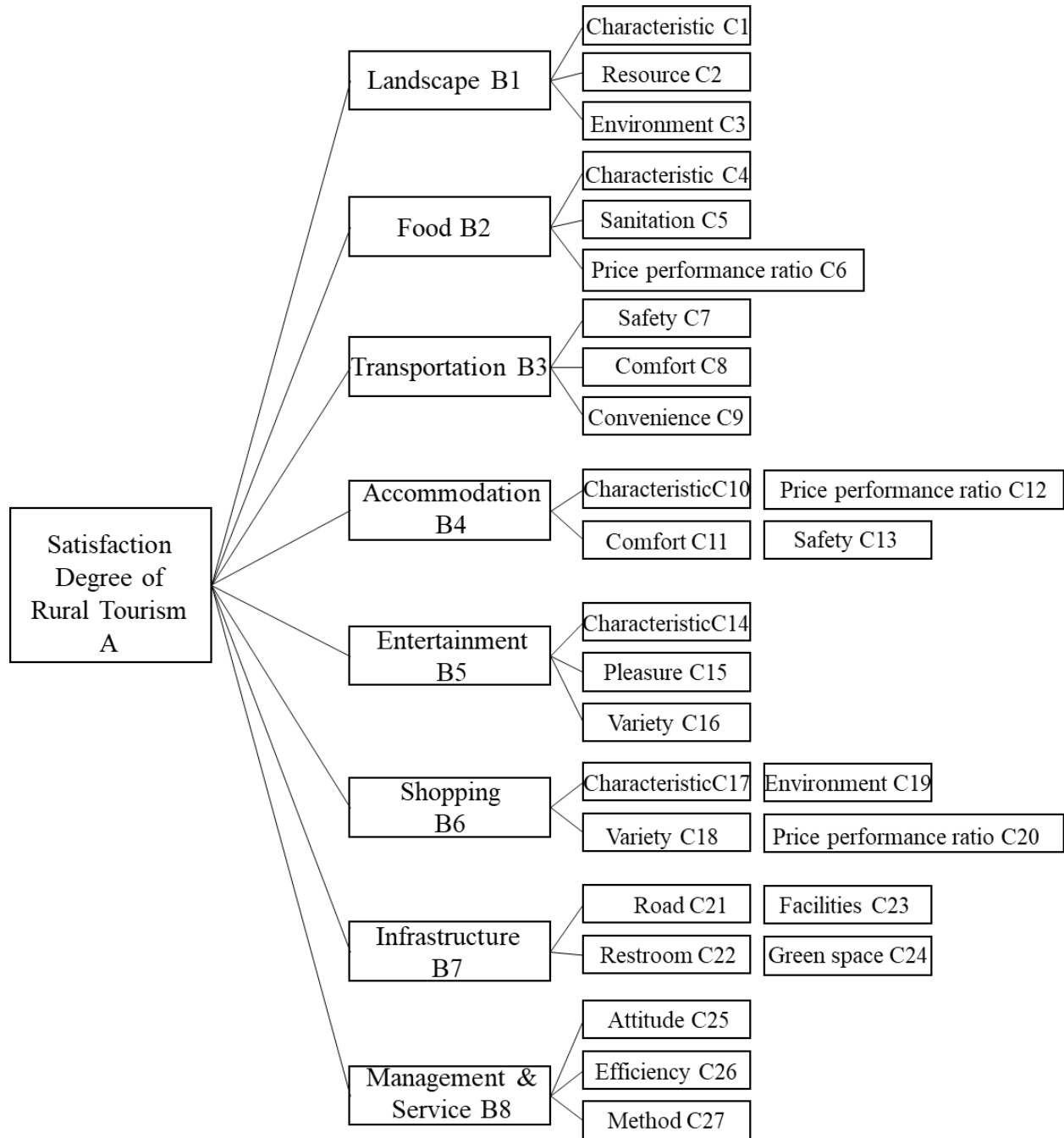


Figure 5-7: Hierarchy of Criteria for Satisfaction Degree of Rural Tourism

Firstly, this thesis uses the analytic hierarchy process (AHP) to determine the importance of different criteria. The comparison among many factors in some systems like satisfaction degree cannot be described quantitatively, so it is necessary to transform the semi-qualitative and

semi-quantitative problems into quantitative problems. Analytic hierarchy process (AHP) is an effective method to solve this kind of problems. The analytic hierarchy process (AHP) hierarchizes the complex decision-making system and provides a quantitative basis for analysis and decision-making by comparing the importance of various related factors layer by layer.

Figure 5-5 exhibits criteria from different layers to evaluate tourists' satisfaction degree towards SanSheng Hua Village. First, analysis is started with initial criteria, which is shown in Figure 5-6.

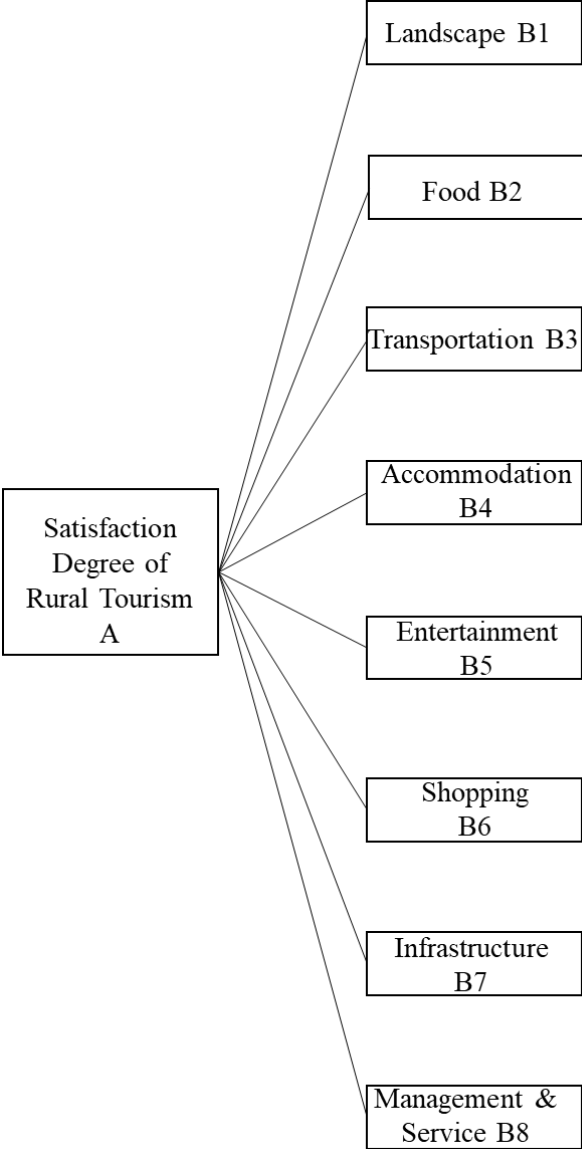


Figure 5-8: Initial Criteria for Satisfaction Degree of Rural Tourism

Step 2: Determining Relative Importance of Criteria

After the evaluation hierarchy has been established, the criteria should be compared in pairs to determine their relative importance (Vargas, 2010). Hence, I create matrix A. W represents the total column value.

$$A = \begin{pmatrix} A & A_1 & A_2 & \dots & A_n \\ A_1 & W_1/W_1 & W_1/W_2 & \dots & W_1/W_n \\ A_2 & W_2/W_1 & W_2/W_2 & \dots & W_2/W_n \\ \vdots & \vdots & \vdots & \dots & \vdots \\ A_n & W_n/W_1 & W_n/W_2 & \dots & W_n/W_n \end{pmatrix}$$

In the beginning, the relative weight of the initial criteria groups should be determined. The different number represents different relative importance. Taking the first column as an example, if the food is regarded as less important than landscape according to the result of the questionnaire, its number is 1/3. As entertainment is less important than food, so it is 1/5.

	Landscape	Food	Transportation	Accommodation	Entertainment	Shopping	Infrastructure	Management & Service
Landscape	1	3	3	7	5	7	5	5
Food	1/3	1	1	5	3	5	3	5
Transportation	1/3	1	1	5	3	5	3	3
Accommodation	1/7	1/5	1/5	1	1/5	1/3	1/5	1/3
Entertainment	1/5	1/3	1/3	5	1	3	1	3
Shopping	1/7	1/5	1/5	3	1/3	1	1/3	1/3
Infrastructure	1/5	1/3	1/3	5	1	3	1	1
Management & Service	1/5	1/5	1/3	3	1/3	3	1	1

AHP Analysis of Initial Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI
Landscape	2.774	34.671%		
Food	1.467	18.338%		
Transportation	1.360	16.999%		
Accommodation	0.207	2.585%	8.527	0.075
Entertainment	0.742	9.276%		
Shopping	0.309	3.860%		
Infrastructure	0.635	7.937%		
Management & Service	0.507	6.335%		

Table 5-7: Comparison matrix for initial criteria groups

Table 5-8: AHP analysis of intimal criteria

Table 5-7 shows the relative weight of initial criteria which is determined by the tourists' views about importance. Then, I use SPSS to do an analytic hierarchy process (AHP) which is used to study the 8-order judgment Matrix of Landscape, Food, Transportation, Accommodation, Entertainment, Shopping, Infrastructure, Management & Service. After calculation, the total column value is (2.774,1.467,1.360,0.207,0.742,0.309,0.635,0.507) and their corresponding Eigenvector is: 34.671%,18.338%,16.999%,2.585%,9.276%,3.860%,7.937%,6.335%. Besides, based on Eigenvector, Maximum Eigenvalue (λ_{\max}) can be calculated as (8.527). Then, according to the formula below:

$$CI = (\lambda_{\max} - n) / (n - 1)$$

CI (Consistency Index) can be calculated and used in the following Consistency Index Test.

Next, RI (Random consistency index) is shown in Table 5-9. RI is determined by its order number of the matrix.

		RI													
<i>n</i>		3	4	5	6	7	8	9	10	11	12	13	14	15	16
R		0.52	0.89	1.12	1.26	1.36	1.41	1.46	1.49	1.52	1.54	1.56	1.58	1.59	1.594
I															3
<i>n</i>		17	18	19	20	21	22	23	24	25	26	27	28	29	30
R		1.606	1.613	1.620	1.629	1.635	1.640	1.646	1.649	1.655	1.658	1.663	1.667	1.669	1.672
I		4	3	7	2	8	3	2	7	6	7	1	0	3	4

Table 5-9: Random consistency index

This matrix is an 8-order matrix, so RI is 1.41. In addition, according to the formula:

$$CR = CI/RI$$

CR (Consistency Rate) can be calculated as 0.053.

Consistency Index Result of Initial Criteria layer

Maximum Eigenvalue	CI	RI	CR	Consistency Index Result
8.527	0.075	1.410	0.053	Pass

Table 5-10: Consistency Index Result of Initial Criteria layer

In general, the smaller the CR is, the better the consistency of the matrix is. If CR is less than 0.1, then the matrix satisfies the consistency index test. If CR is greater than 0.1, then the matrix does not have consistency. It should be properly adjusted and analyzed again. As CR is 0.053 which is smaller than 0.1, it means that the calculated weights are consistent.

After analyzing the initial criteria layer, the secondary criteria layer can be analyzed with the same steps.

Landscape Criteria

Landscape Criteria			
	Characteristic	Resource	Environment
Characteristic	1	1/3	1/5
Resource	3	1	1/3
Environment	5	3	1

Table 5-11: Comparison matrix for Landscape Criteria

AHP Analysis of Landscape Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI
Characteristic	0.318	10.616%		
Resource	0.781	26.050%	3.039	0.019
Environment	1.900	63.335%		

Table 5-12: AHP Analysis of Landscape Criteria

Consistency Index Result of Landscape Criteria

Maximum Eigenvalue	CI	RI	CR	Consistency Index Result
3.039	0.019	0.520	0.037	Pass

Table 5-13: Consistency Index Result of Landscape Criteria

From Table 5-12 and Table 5-13, this is a 3-order judgement matrix of Characteristic, Resource, Environment. After calculation, the total column value is (0.318,0.781,1.900) and their corresponding Eigenvector is 10.616%, 26.050%, 63.335%. Besides, based on Eigenvector, the

Maximum Eigenvalue can be calculated as (8.527). CI is 0.019, CR is 0.037. Hence, this matrix satisfies the consistency index test.

Food Criteria

Food Criteria			
	Characteristic	Sanitation	Price-performance ratio
Characteristic	1	0.142857143	0.2
Sanitation	7	1	2
Price-performance ratio	5	0.5	1

Table 5-14: Comparison matrix for Food Criteria

AHP Analysis of Food Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI
Characteristic	0.226	7.546%		
Sanitation	1.772	59.072%	3.014	0.007
Price-performance ratio	1.001	33.382%		

Table 5-15: AHP Analysis of Food Criteria

Consistency Index Result of Food Criteria

Maximum Eigenvalue	CI	RI	CR	Consistency Index Result
3.014	0.007	0.520	0.014	Pass

Table 5-16: Consistency Index Result of Food Criteria

From Table 5-15 and Table 5-16, this is a 3-order judgement matrix of Characteristic, Sanitation, Price-performance ratio. After calculation, the total column value is (0.226,1.772,1.001) and their corresponding Eigenvector is 7.546%, 59.072%, 33.382%.What's more, the Maximum Eigenvalue can be calculated as (3.014). CI is 0.007, CR is 0.014. Hence, this matrix satisfies the consistency index test.

Transportation Criteria

Transportation Criteria			
	Safety	Comfort	Convenience
Safety	1	3	1
Comfort	0.3333333333	1	0.5
Convenience	1	2	1

Table 5-17: Comparison matrix for Transportation Criteria

AHP Analysis of Transportation Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI 值
Safety	1.329	44.286%		
Comfort	0.510	16.984%	3.018	0.009
Convenience	1.162	38.730%		

Table 5-18: AHP Analysis of Transportation Criteria

Consistency Index Result of Transportation Criteria

Maximum Eigenvalue	CI	RI	CR	Consistency Index Result
3.018	0.009	0.520	0.018	Pass

Table 5-19: Consistency Index Result of Transportation Criteria

In Table 5-18 and Table 5-19, this is a 3-order judgement matrix of Safety, Comfort, Convenience. After calculation, the total column value is (1.329, 0.510, 1.162) and their corresponding Eigenvector is 44.286%, 16.984%, 28.730%. Moreover, the Maximum Eigenvalue can be calculated as (3.018). CI is 0.009, CR is 0.018. Hence, this matrix passes the consistency index test.

Accommodation Criteria

	Characteristic	Comfort	Price-performance ratio	Safety
Characteristic	1	0.14285714 3	0.2	0.14285714 3
Comfort	7	1	2	1
Price-performance ratio	5	0.5	1	0.5
Safety	7	1	2	1

Table 5-20: Comparison matrix for Accommodation Criteria

AHP Analysis of Accommodation Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI
Characteristic	0.197	4.914%		
Comfort	1.491	37.284%		
Price-performance ratio	0.821	20.517%	4.016	0.005
Safety	1.491	37.284%		

Table 5-21: AHP Analysis of Accommodation Criteria

Consistency Index Result of Accommodation Criteria

Maximum Eigenvalue	CI	RI	CR	Consistency Index Result
4.016	0.005	0.890	0.006	Pass

Table 5-22: Consistency Index Result of Accommodation Criteria

In Table 5-21 and Table 5-22, this is a 4-order judgement matrix of Characteristics, Comfort, Price-performance ratio, Safety. After calculation, the total column value is (0.197, 1.491, 0.821, 1.491) and their corresponding Eigenvector is 4.914%, 37.284%, 20.51%, 37.284%. Plus, the Maximum Eigenvalue can be calculated as (4.016). CI is 0.005, CR is 0.006. Hence, this matrix passes the consistency index test.

Entertainment Criteria

Entertainment Criteria			
	Characteristic	Pleasure	Variety
Characteristic	1	0.2	0.333333333
Pleasure	5	1	0.5

Variety	3	0.5	1
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Table 5-23: Comparison matrix for Entertainment Criteria

AHP Analysis of Entertainment Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI
Characteristic	0.329	10.959%		
Pleasure	1.744	58.126%	3.004	0.002
Variety	0.927	30.915%		

Table 5-24: AHP Analysis of Entertainment Criteria

Consistency Index Result of Entertainment Criteria

Maximum Eigenvalue	CI	RI	CR	Consistency Index Result
3.004	0.002	0.520	0.004	Pass

Table 5-25: Consistency Index Result of Entertainment Criteria

From Table 5-24 and Table 5-25, this is a 3-order judgement matrix of Characteristics, Pleasure, Variety. After calculation, the total column value is (0.329, 1.744, 0.927) and their corresponding Eigenvector is 10.959%, 58.126%, 30.915%. Plus, the Maximum Eigenvalue can be calculated as (3.004). CI is 0.002, CR is 0.004. Hence, this matrix passes the consistency index test.

Shopping Criteria

Shopping Criteria

	Characteristic	Variety	Environment	Price-performance ratio
Characteristic	1	0.33333333	0.33333333	0.2
Variety	3	1	1	0.33333333
Environment	3	1	1	0.33333333
Price-performance ratio	5	3	3	1

Table 5-26: Comparison matrix for Shopping Criteria

AHP Analysis of Shopping Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI
Characteristic	0.315	7.887%		
Variety	0.804	20.089%	4.044	0.015
Environment	0.804	20.089%		
Price-performance ratio	2.077	51.935%		

Table 5-27: AHP Analysis of Shopping Criteria

Consistency Index Result of Shopping Criteria

Maximum Eigenvalue	CI	RI	CR	Consistency Index Result
4.044	0.015	0.890	0.016	Pass

Table 5-28: Consistency Index Result of Shopping Criteria

From Table 5-27 and Table 5-28, this is a 4-order judgement matrix of Characteristics, Variety, Environment, Price-performance ratio. After calculation, the total column value is (0.315, 0.804,

0.804, 2.077) and their corresponding Eigenvector is 7.887%, 20.089%, 20.089%, 51.935%. Moreover, the Maximum Eigenvalue can be calculated as (4.044). CI is 0.015, CR is 0.890. Hence, this matrix passes the consistency index test.

Infrastructure Criteria

Infrastructure Criteria				
	Road	Public restroom	Public facilities	Open green space
Road	1	1	3	2
Public restroom	1	1	2	2
Public facilities	0.333333333	0.5	1	0.5
Open green space	0.5	0.5	2	1

Table 5-29: Comparison matrix for Infrastructure Criteria

AHP Analysis of Infrastructure Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI
Road	1.425	35.623%	4.046	0.015
Public restroom	1.300	32.498%		
Public facilities	0.500	12.506%		
Open green space	0.775	19.374%		

Table 5-30: AHP Analysis of Infrastructure Criteria

Consistency Index Result of Infrastructure Criteria

Maximum Eigenvalue	CI	RI	CR	Consistency Index Result
4.046	0.015	0.890	0.017	Pass

Table 5-31: Consistency Index Result of Infrastructure Criteria

In Table 5-30 and Table 5-31, this is a 3-order judgement matrix of Road, Public restroom, Public facilities, Open green space. After calculation, the total column value is (1.425, 1.300, 0.500, 0.775) and their corresponding Eigenvector is 35.623%, 32.623%, 12.506%. 19.374%. Plus, the Maximum Eigenvalue can be calculated as (4.046). CI is 0.015, CR is 0.017. Hence, this matrix passes the consistency index test.

Management & Service Criteria

Management & Service Criteria			
	Attitude	Efficiency	Method
Attitude	1	0.33333333	3
Efficiency	3	1	5
Method	0.33333333	0.2	1

Table 5-32: Comparison matrix for Management & Service Criteria

AHP Analysis of Management & Service Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI
Attitude	0.781	26.050%	3.039	0.019
Efficiency	1.900	63.335%		

AHP Analysis of Management & Service Criteria

Criteria	Total Column Value	Eigenvector	Maximum Eigenvalue	CI
Method	0.318	10.616%		

Table 5-33: AHP Analysis of Management & Service Criteria

Consistency Index Result of Management & Service Criteria

Maximum Eigenvalue	CI	RI	CR	Consistency Index Result
3.039	0.019	0.520	0.037	Pass

Table 5-34: Consistency Index Result of Management & Service Criteria

In Table 5-33 and Table 5-34, this is a 3-order judgement matrix of Attitude, Efficiency, Method. After calculation, the total column value is (0.781, 1.900, 0.318) and their corresponding Eigenvector is 26.050%, 63.335%, 10.616%. Plus, the Maximum Eigenvalue can be calculated as (3.039). CI is 0.019, CR is 0.037. Hence, this matrix passes the consistency index test.

Step 3: Creating Weight coefficient of initial layer and secondary layer

Target layer	Initial layer	weight coefficient of the initial layer	Secondary layer	weight coefficient of the secondary layer	Comprehensive weight
Satisfaction degree of rural tourism A	Landscape B1	34.671%	Characteristic C1	10.616%	3.681%
			Resource C2	26.050%	9.032%
			Environment C3	63.334%	21.959%
	Food B2	18.338%	Characteristic C4	7.546%	1.384%
			Sanitation C5	59.072%	10.833%
			Price-performance ratio C6	33.382%	6.122%
	Transportation B3	16.999%	Safety C7	44.286%	7.528%
			Comfort C8	16.984%	2.887%
			Convenience C9	38.730%	6.584%
	Accommodation B4	2.585%	Characteristic C10	4.914%	0.127%
			Comfort C11	37.284%	0.964%
			Price-performance ratio C12	20.517%	0.530%
			Safety C13	37.284%	0.964%
	Entertainment B5	9.276%	Characteristic C14	10.959%	1.017%

		Pleasure C15	58.126%	5.392%
		Variety C16	30.915%	2.868%
Shopping B6	3.860%	Characteristic C17	7.887%	0.304%
		Variety C18	20.089%	0.775%
		Environment C19	20.089%	0.775%
		Price-performance ratio C20	51.935%	2.005%
Infrastructure B7	7.937%	Road C21	35.623%	2.827%
		Public restroom C22	32.498%	2.579%
		Public facilities C23	12.506%	0.993%
		Open green space C24	19.374%	1.538%
Management & Service B8	6.34%	Attitude C25	26.050%	1.650%
		Efficiency C26	63.335%	4.012%
		Method C27	10.616%	0.673%

Table 5-35: Weight coefficient of initial layer and secondary layer

Table 5-35 exhibits the weight coefficient of the initial layer and secondary layer. After determining the weight of the criteria, the next step is fuzzy synthetic evaluation.

Fuzzy Synthetic Evaluation

Step 1: Calculating the degree of membership of evaluation towards SanSheng Hua Village

From the survey collected, the degree of membership of evaluation towards SanSheng Hua Village can be calculated (Table 5-36).

Initial layer	Secondary layer	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied	Average satisfaction degree
Landscape B1	Characteristic C1	0.159	0.283	0.317	0.143	0.098	3.262
	Resource C2	0.238	0.254	0.381	0.079	0.048	3.555
	Environment C3	0.143	0.165	0.302	0.254	0.136	2.925
Food B2	Characteristic C4	0.206	0.317	0.302	0.111	0.064	3.490
	Sanitation C5	0.095	0.133	0.254	0.413	0.105	2.700
	Price performance ratio C6	0.213	0.381	0.311	0.095	0.000	3.712
Transportation B3	Safety C7	0.111	0.165	0.314	0.254	0.156	2.821
	Comfort C8	0.073	0.146	0.283	0.359	0.139	2.655

	Convenience C9	0.238	0.30 5	0.3 01	0.073	0.083	3.542
Accommodati on B4	Characteristic C10	0.048	0.07 9	0.4 86	0.241	0.146	2.642
	Comfort C11	0.067	0.11 1	0.2 83	0.346	0.193	2.513
	Price performance ratio C12	0.117	0.16 8	0.4 32	0.108	0.175	2.944
	Safety C13	0.083	0.11 7	0.5 56	0.102	0.142	2.897
Entertainment B5	Characteristic C14	0.114	0.17 8	0.3 97	0.184	0.127	2.968
	Pleasure C15	0.057	0.13 3	0.3 90	0.242	0.178	2.649
	Variety C16	0.168	0.20 0	0.2 83	0.117	0.232	2.955
Shopping B6	Characteristic C17	0.083	0.14 3	0.5 08	0.216	0.050	2.993
	Variety C18	0.051	0.12 1	0.2 83	0.329	0.216	2.462
	Environment C19	0.111	0.17 8	0.4 95	0.114	0.102	3.082
	Price performance ratio C20	0.187	0.22 9	0.2 79	0.172	0.133	3.165
Infrastructure B7	Road C21	0.038	0.05 3	0.2 29	0.578	0.102	2.347
	Public restroom C22	0.051	0.05 1	0.2 48	0.394	0.256	2.247
	Public facilities C23	0.111	0.17 1	0.3 97	0.181	0.140	2.932

	Open green space C24	0.165	0.168	0.238	0.178	0.251	2.818
Management & Service B8	Attitude C25	0.067	0.105	0.425	0.206	0.197	2.639
	Efficiency C26	0.102	0.140	0.390	0.247	0.121	2.855
	Method C27	0.038	0.079	0.406	0.277	0.200	2.478

Table 5-36: Degree of membership of evaluation towards SanSheng Hua Village

Step 2: Building the factor set and evaluation set

Factor set means a common set of various factors that affect the evaluation object. According to the AHP method, the judgement Matrix can be obtained. Evaluation set in this thesis refers to "very satisfied", "satisfied", "neutral", "dissatisfied", and "very dissatisfied".

Step 3: Determining the single factor evaluation matrix R and Calculating total satisfaction degree

The single factor evaluation matrix R is below:

$$R_i = \begin{pmatrix} r_{i1} & r_{i2} & r_{i3} & r_{i4} & r_{i5} \\ r_{21} & r_{22} & r_{23} & r_{24} & r_{25} \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ r_{n1} & r_{n2} & r_{n3} & r_{n4} & r_{n5} \end{pmatrix} (i = 1,2,3; n = 1,2, \dots, 12)$$

Hence, the single factor fuzzy synthetic evaluation of the initial layer is:

$$B_i = W_i \cdot R_i (i = 1,2,3)$$

B_i represents the results of fuzzy synthetic evaluation on all initial criteria; W_i represents the weight of all secondary criteria; R_i represents the degree of membership of all secondary criteria.

Next, the satisfaction degree of rural tourism towards SanSheng Hua Village is:

$$A = W \cdot R$$

A represents the total satisfaction degree of SanSheng Hua Village; W represents the weight of all initial criteria; R represents the degree of membership matrix.

Target layer	Total satisfaction degree	Initial layer	weight coefficient of the initial layer	Average satisfaction degree of Initial criteria	Secondary layer	weight coefficient of the secondary layer	Comprehensive weight	Average satisfaction degree of secondary criteria
Satisfaction degree of rural tourism A	2.990	Landscape B1	34.671%	3.125	Characteristic C1	10.616%	3.681%	3.262
					Resource C2	26.050%	9.032%	3.555
					Environment C3	63.335%	21.959%	2.925
		Food B2	18.338%	3.097	Characteristic C4	7.546%	1.384%	3.49
					Sanitation C5	59.072%	10.833%	2.7
					Price-performance ratio C6	33.382%	6.122%	3.712

Transportation B3	16.999%	3.072	Safety C7	44.286%	7.528%	2.821
			Comfort C8	16.984%	2.887%	2.655
			Convenience C9	38.730%	6.584%	3.542
Accommodation B4	2.585%	2.751	Characteristic C10	4.914%	0.127%	2.642
			Comfort C11	37.284%	0.964%	2.513
			Price-performance ratio C12	20.517%	0.530%	2.944
			Safety C13	37.284%	0.964%	2.897
Entertainment B5	9.276%	2.779	Characteristic C14	10.959%	1.017%	2.968
			Pleasure C15	58.126%	5.392%	2.649
			Variety C16	30.915%	2.868%	2.955
Shopping B6	3.860%	2.994	Characteristic C17	7.887%	0.304%	2.993
			Variety C18	20.089%	0.775%	2.462
			Environment C19	20.089%	0.775%	3.082

				Price-performance ratio C20	51.935%	2.005%	3.165	
				Road C21	35.623%	2.827%	2.347	
				Public restroom C22	32.498%	2.579%	2.247	
				Public facilities C23	12.506%	0.993%	2.932	
		Infrast ructur e B7	7.937%	2.479	Open green space C24	19.374%	1.538%	2.818
				Attitu de C25	26.050%	1.650%	2.639	
		Mana gemen t & Servic e B8	6.34%	2.759	Efficie ncy C26	63.335%	4.012%	2.855
				Metho d C27	10.616%	0.673%	2.478	

Table 5-37: The result of the fuzzy synthetic evaluation

In Table 5-37, the total satisfaction degree of SanSheng Hua Village is 2.990. This number belongs to "Neutral". It means that tourists don't feel satisfied or dissatisfied with SanSheng Hua Village. It indicates that SanSheng Hua Village doesn't have comparative benefits or some very attractive spotlights to intrigue tourists. Therefore, changing and upgrading for SanSheng Hua Village is very necessary and urgent.

SanSheng Hua Village has a beautiful landscape, delicious food, and convenient transportation. From satisfaction degree of Initial criteria, landscape, food, and transportation are three aspects that tourists are satisfied with. Their corresponding degree is 3.125, 3.097, 3.072. These are SanSheng Hua Village's strengths in tourists' view. It should keep them and maximize their influence.

What's more, tourists are neutral about accommodation, entertainment, shopping, infrastructure, and management and service, so some improvements can be made and some advantages can be kept and utilized. Accommodation should improve its characteristics and comfort to provide a better-qualified environment. Entertainment lacks enough pleasure although it already has some characteristics and varieties. As for shopping, the biggest problem is that the variety of goods is too limited. Tourists don't have many choices. A high price-performance ratio is accepted by most tourists. Among these five factors, infrastructure gets the lowest satisfaction degree. Tourists are concerned about public restrooms and roads, but SanSheng Hua Village doesn't do well in them. In terms of management and service, the method should be revised. More specifically, some old and traditional methods should be abandoned and professional and useful method should be learned from other cases.

Chapter 6

Conclusion

In this chapter, I discussed the result of market analysis firstly. Then, I gave some recommendations towards present problems. Finally, I listed the limitation of this research.

6.1 Discussion of Market Analysis

From the last chapter, this thesis finds that the main consumer group of SanSheng Hua Village is middle-aged and old people. Most tourists don't have high income and spend less than 100 yuan in SanSheng Hua Village. They usually don't stay for longer than one day. Restaurants are most popular in SanSheng Hua Villages as tourists spend most on food. Most of them visit SanSheng Hua Village with a family member.

Tourists don't show very extreme attitudes toward SanSheng Hua Village. This thesis utilizes the analytic hierarchy process and fuzzy synthetic evaluation and quantifies the satisfaction of tourists. The results indicate SanSheng Hua Village's pros and cons in consumers' opinions.

Firstly, SanSheng Hua Village has rich flower resources and a gorgeous landscape. Its location is very convenient for different types of transportation. Its food is distinctive and special compared with normal Chengdu traditional food in cities. Its price-performance ratio is pretty high and the expenditure in SanSheng Hua Village is acceptable for the most population.

However, there is no denying that SanSheng Hua Villages needs to do more in some aspects. After taking the results of fieldwork on market supply analysis and tourists' satisfaction analysis into consideration, SanSheng Hua Village exists several problems as follows.

First, SanSheng Hua Village lacks its own characteristics and speciality. Homogenization is common and severe in it. There are many types of rural tourism products, but they are small in

scale and cannot form a complete tourism industry chain (food, accommodation, travel, tourism, shopping, entertainment). Many store and shops are fungible. Other than food, accommodation, entertainment, shopping doesn't have enough creativity. Activities and goods are commonly seen in other tourist villages and tourist regard SanSheng Villages as normal tourist village when they look around. In addition, because villagers do not have a comprehensive grasp of market information, they lack the ability to segment market demand and position products professionally, as a result, most of the existing rural tourism products are focused on providing food and lodging services for farmers and seasonal picking activities, and the products are not clearly characterized and serialized, which cannot meet the multi-level and personalized tourism needs of tourists, product homogenization is serious.

Second, the infrastructure issue is the most challenging issue in SanSheng Hua Village. Present public facilities like parking lots, restrooms and roads cause crowding, congestion, and inconvenience. It is the biggest difficulty that many tourist villages are facing. Most tourists only visit after work time or on weekends. If tourist villages invest much capital on infrastructure such as parking lots, they are vacant most time. The return from this is pretty low.

Moreover, the management of SanSheng Hua Village is separated and inefficient. Property owners and villages control their stores, but most of them don't know how to operate them and improve the service quality. Under such a management method, conflicts and inconvenience always appeared. The present situation is that many stores are closed due to management problems. Plus, individual management has low-risk resistance. For instance, COVID-19 leads to the closures of many stores in SanSheng Hua Village. If they cannot make a profit in one year, their saving cannot afford their stores' deficit.

6.2 Recommendations

Unified management and operation ensure the possibility of sustainable development. Unified management teams have professional employee, a complete operating system and advanced management strategies. It has higher resilience towards risks and accidents. It is also easier for them to bring in capital and invest capital in infrastructure. This method can solve infrastructure and management issue at the same time.

Characteristics are the origin of attractiveness. Social media is an information platform in present society. If some places or things are truly creative and attractive, many people are willing to try and experience them. Therefore, the most important thing is "creativity". If SanSheng Hua Village can create some new activities or buildings that other tour villages cannot provide, SanSheng Hua Village has an amount of competitiveness in the rural tourism market.

The "Rural Tourism Law" has not yet entered the legislative level of the National People's Congress, and the development of rural tourism has not yet been provided with special and specific legal provisions and explanations, a reality that tourists can't protect. The lack of policy and law restricts the coordination and operation of all kinds of relations in rural tourism activities. Hence, in terms of policy and regulation level, the government can do more in the future.

6.3 Limitations

Constrained by the time frame for conducting surveys with tourists, the number of participants is limited. The sample population may not represent the tourist population. Moreover, SanSheng Hua Village consists of five villages. Their development is very uneven, so tourists' attitudes can be completely different. However, I don't separately think about and study each village. This survey collects and analyzes all five villages of SanSheng Hua Villages. Hence, the result of the analysis may not represent some villages' situation.

Furthermore, in the designing questionnaire process, the initial criteria and secondary criteria are determined by me. I may ignore some other important factors that will influence the accuracy of the final results.

In AHP-Fuzzy evaluation, when comparing relative importance pairs to pairs, I just consider approximate thoughts of tourists which are collected in surveys. It is not very accurate as the feelings and attitudes are hard to be very clear.

In this thesis, I don't have the opportunity to interview the local government officials and experts. They can offer deeper acknowledgement towards SanSheng Hua Village. This may provide a suggestion for future study.

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Travel Overview.

Survey on Rural Tourism Market Analysis

Dear Madam/sir: Hello! Thank you for taking the time to fill out this questionnaire! I am a graduate student in Columbia University and I am conducting a survey on the “Rural Tourism Market Analysis in Suburbs of Cities Under the Process of Urbanization in China: A Case Study of Chengdu SanSheng Hua Village”. We hope that you can take the time to help us complete this questionnaire, which will help improve the quality of rural tourism in Chengdu, to provide you with better services in the future. The results of this survey are for academic use only. Your personal information will not be disclosed. Please feel free to fill in. Thank you very much for your support!

Section I. Your Basic Information

1. Gender: Male Female
2. Place of residence: Chengdu City Other cities in Sichuan Province Other
3. Age: 18-30 31-50 Above 50
4. Education: Middle school or below High school Bachelor degree Master degree or above
5. Average monthly income: Below 2000 2000-5000 5000-8000 8000-10000 Above 10000
6. Occupation: Staff of state agencies and institutions Private company employee Self-employed individual Student Freelancer Retired Other

Section II. Rural Tourism Survey

1. What kind of travel do you usually choose (you can choose more than one):
Travel Agency or Social Group Company travel Family travel Friends/Classmates travel Couple travel Alone
2. How long do you stay: Half day One day More than one day
3. How much do you spend: Under 50 yuan 51-100 yuan 100-200 yuan
More than 200 yuan

4. What is your biggest expenditure of rural trip: Food Entertainment Transportation
Hotel Shopping Other

Section III. Satisfaction Degree of SanSheng Hua Village

Please grade the satisfaction factors of SanSheng Hua Village as listed in the table below, thanks!

First-level factor	Second-level factor	Very satisfied (5)	Satisfied (4)	Neutral (3)	Unsatisfied (2)	Very unsatisfied (1)
Landscape	Characteristic					
	Resource					
	Environment					
Food	Characteristic					
	Sanitation					
	Price performance ratio					
Transportation	Safety					
	Comfort					
	Convenience					
Accommodation	Characteristic					
	Comfort					
	Price performance ratio					
	Safety					
Entertainment	Characteristic					
	Pleasure					
	Variety					
Shopping	Characteristic					
	Variety					
	Environment					
	Price performance ratio					
Infrastructure	Road					
	Public restroom					

	Public facilities					
	Open green space					
Management & Service	Attitude					
	Efficiency					
	Method					

Finally, please sort these factors according to their importance.
 Thanks a lot!