

Study on Consumption Demand of Domestic Tourists in Hainan Free Trade Port

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Keywords: Hainan Free Trade Port; Domestic Tourists; Consumption Demand; Tourism Satisfaction

Abstract: In order to deeply understand the consumption demand of domestic tourists in Hainan Free Trade Port, we adopt the method of questionnaire to analyze the impact on tourists' tourism satisfaction from the three perspectives of tourists' familiarity with Hainan's policies on promoting consumption, the perception of Hainan's society and culture as well as the perception of Hainan's tourism public service quality; and at the same time, in view of the problems existing in Hainan's free trade port, we put forward suggestions such as diversified market positioning and pricing, increasing the protection and dissemination of local characteristics, and multi-dimensional administrative supervision, with a view to promoting the economic development of Hainan's free trade port. At the same time, to address the problems of Hainan Free Trade Port, we put forward the suggestions of diversified market positioning and pricing, increasing the protection and dissemination of local characteristics, and multi-dimensional administrative supervision, in order to promote the economic development of Hainan Free Trade Port.

1. Introduction

In recent years, with the continuous promotion of the state's policy on Hainan's free trade harbor ^[1], Hainan's tourism industry has ushered in unprecedented development opportunities. The implementation of the Hainan FTTP policy has injected new vitality into Hainan's tourism industry ^[2], and promoted the transformation and upgrading of the tourism market. In this context, an in-depth understanding of the consumption needs of domestic tourists in Hainan FTZ is of great significance for the sustainable and healthy development of Hainan's tourism industry.

With the continuous development of the domestic tourism market, the consumer demand and consumer behavior of tourists show a diversified trend ^[3]. Tourists are no longer satisfied with traditional sightseeing tours, but pay more attention to tourism experience, cultural exchange and personalized services ^[4]. As an international tourist island, Hainan Free Trade Port is endowed with unique natural resources and rich tourism resources, which can meet the diversified consumption needs of tourists. Therefore, researching domestic tourists' consumption demand and consumption behavior in Hainan Free Trade Port can help to better grasp the market trend and improve the quality of tourism services and tourists' satisfaction.

Through the research on the consumption demand of domestic tourists in Hainan Free Trade Port, we can gain a deeper understanding of tourists' familiarity with Hainan's policies to promote

consumption, the perception of Hainan's society and culture, as well as the perception of the quality of Hainan's tourism public services, which can provide strong support for the sustainable development of Hainan's tourism industry. The results of the research can provide a reference basis for tourism enterprises to formulate more accurate marketing strategies, promote tourism product innovation and service model innovation, and improve the competitiveness of the tourism industry and market share. At the same time, the research can also provide a decision-making basis for the government to formulate tourism policies and promote the healthy, stable and sustainable development of Hainan's tourism industry.

2. Research design

2.1 Investigative tools

The survey was conducted through the Credamo data collection platform, which is a large-scale data collection platform in China and is the only data research platform recognized by several internationally renowned academic journals.

2.2 Methodology of the survey

The questionnaire was conducted nationwide on March 11, 2024 through the national data sample pool on the platform. The research invitation was sent to more than 3 million respondents registered in the country through the Credamo data collection platform, and 600 respondents who responded earlier were randomly selected as final respondents, and 600 questionnaires were returned.

By setting up strict screening conditions to remove incomplete or non-compliant questionnaires, including removing sample data that has not been to Hainan, the valid sample volume is 527. Effective samples ensure the uniformity and representativeness of the sample distribution in terms of gender, age, education level, and monthly income level. The IP address information collected through the background can see that the sample comes from 31 provinces and cities and autonomous regions across the country. It is broad and diverse, which in turn ensures the reliability of the data analysis results.

2.3 Content of the survey

The survey was conducted in the form of a questionnaire and consisted of three main sections.

First, the basic information of the respondents, including gender, age, education level, monthly income level, city, frequency of traveling in the past 12 months, and mode of traveling.

The second is to analyze the effects of tourists' policy familiarity, perceived quality of tourism public services, and perceived social and cultural conditions on tourism satisfaction in Hainan.

Third, the five dimensions of tourists' social and cultural perception of Hainan are refined to further analyze the impact of tourists' social and cultural perception on the degree of satisfaction of Hainan tourism.

The fourth is to refine the four latitudes of the tourists' perception of the quality of tourism public services, and further analyze the impact of the tourists' perception of the quality of tourism public services on the degree of satisfaction with Hainan's tourism.

3. Findings

3.1 Basics

Based on the returned valid questionnaires, the demographic characteristics of the respondents were analyzed, as shown in Table 1.

Table 1: Results of demographic characteristics of the sample

Demographic characteristics	causality	frequency	Percentage (%)
distinguishing between the sexes	male	170	32.3
	women	357	67.7
age	18 years and under	6	1.1
	19 years old 24 years old	97	18.4
	25 years old 34 years old	263	49.9
	35 years old 44 years old	138	26.2
	45 years old 55 years old	14	2.7
	55+	9	1.7
Demographic characteristics	causality	frequency	Percentage (%)
educational attainment	Junior high school and below	2	0.4
	High school or junior college	14	2.7
	three-year college	38	7.2
	undergraduate (adjective)	353	67
	Master's degree or above	120	22.8
Monthly income level	Below 3,000	47	8.9
	3 000 5 999	90	17.1
	6 000 9 999	153	29
	10 000 20 000	194	36.8
	20,000 and above	43	8.2
host city	Beijing, Shanghai, Guangzhou and Shenzhen	165	31.3
	Provincial capitals or second tier	252	47.8
	Third tier or below	110	20.9
family situation	lone	167	31.7
	Married, childless	41	7.8
	Married with children under 18 years of age	296	56.2
	Married with children over 18	23	4.4
Frequency of trips in the last 12 months	once a month	43	8.2
	semiannually	353	67
	once a year	92	17.5
	More than once a year	39	7.4
Way to travel	by oneself	22	4.2
	With friends.	150	28.5
	Family Together	355	67.4
Demographic characteristics	causality	frequency	Percentage (%)
Approaches to tourism decision-making	Draw up your own	377	71.5
	Partner development	82	15.6
	Parental development	8	1.5
	The child develops	6	1.1
	Friends or others	54	10.2

According to the statistical results can be seen, in terms of the personal situation of the sample, the sample gender composition of 357 women (67.7%) and 170 men (32.3%); age is mainly concentrated in the 25 years old, 34 years old (49.9%), followed by 35 years old, 44 years old (26.2%); most of the tourists with a bachelor's degree of education (67%); the level of monthly income is concentrated in the 10,000 yuan , 20,000 yuan (36.8%) and 6,000 yuan, 9,999 yuan (29%); the distribution of cities are provincial capitals or second-tier (47.8%), North, Shanghai, Guangzhou and Shenzhen (31.3%), and third-tier or below (20.9%); the crowd of people's family situation is mainly "married with children under 18" (56.2%), followed by singles (31.2%), followed by single people (31.2%). In terms of the travel habits of the sample, the frequency of travel in the past 12 months was mostly once every six months (67%); the mode of travel was mainly family travel (67.4%), followed by friends' travel (28.5%); and the decision-making process was mainly focused on the travelers themselves (71.5%).

To summarize, the representative population profile in this research sample is 25, 44 years old, married with children under 18 years old or single female tourists, whose travel habits are mostly family trips or trips with friends, and trips once every six months. They make their own travel decisions rather than leaving them to their partners.

3.1.1 Visitors' knowledge of Hainan's free trade port policy

In order to test how much people know about the policy and how it affects their behavior, we set up two question items for the test, and the results of the test are shown in Table 2:

Table 2: Tourists' Knowledge of Hainan's Consumption Promotion Policies

Tourists' Policy on Promoting Consumption in Hainan Level of Understanding	N	Mean \pm standard deviation	test value	P
Knowledge of recent consumer promotion policies (e.g. tax exemptions) in Hainan Province	527	5.4 \pm 1.00	5	>0.05
These policies on traveling to Hainan Promotion	527	5.68 \pm 1.06	5	<0.01

It can be seen from the above form that tourists' understanding of policies and the degree of promotion of policies on tourism are divided into 5.4 and 5.68. The P value is less than 0.05, and the degree of understanding is less than 80% and it is not significant, which means that through this survey, it is found that tourists' awareness of the policy of Hainan Free Trade Port is generally higher, and the awareness of policies has promoted the policy of going to Hainan before going to Hainan Tourism will.

3.1.2 Tourists' perception of Hainan's society and culture

The Overall Scheme of China (Hainan) Pilot Free Trade Zone proposes to build a pilot ecological civilization zone, accelerate the formation of a business environment with the rule of law and facilitation, and a fair, open, unified and efficient market environment. In order to measure the socio-cultural situation in Hainan Province, based on previous scales, we set up several question items for measurement. The first aspect is to measure the tourists' evaluation of the socio-economics and infrastructures of Hainan Province, and the second aspect is to measure tourists' perception of the social atmosphere of Hainan Province, the third aspect measures people's evaluation of the natural environment of Hainan Province, the fourth aspect measures people's emotional image of Hainan Province, and the fifth aspect measures the humanistic environment.

Because the above questionnaire data continuous numerical variables are selected, the

descriptive statistical analysis and single sample T test are selected to examine the current situation. The test results are shown in Table 3.

Table 3: Tourists' perceptions of social and cultural conditions in Hainan

Tourists' perceptions of Hainan's socio-cultural conditions	N	Mean \pm standard deviation	test value	P
Do you think Hainan has excellent facilities?	527	5.77 \pm 0.92	5	<0.01
Do you think that Hainan has very good accommodation?	527	5.83 \pm 0.98	5	<0.01
Do you think traveling to Hainan is worthwhile?	527	5.73 \pm 1.04	5	<0.01
Do you think it is safe to travel to Hainan?	527	5.91 \pm 0.98	5	<0.01
Do you think Hainan is good for relaxation?	527	6.2 \pm 0.79	5	<0.01
Do you think Hainan has a beautiful natural environment?	527	6.43 \pm 0.73	5	<0.01
Do you think Hainan is a desirable travel destination?	527	6.13 \pm 0.8	5	<0.01
Do you think that Hainan has rich cultural resources and cultural attractions?	527	5.84 \pm 0.97	5	<0.01
Do you think the locals in Hainan are friendly?	527	5.53 \pm 1.09	5	>0.05

As can be seen from the above table, the mean scores of tourists' scores on Hainan's socio-economic and infrastructural facilities, social atmosphere, natural environment, emotional image and humanistic environment are 5.57, 5.83, 5.73, 5.91, 6.2, 6.43, 6.13, 5.84, 5.53, except for the scores of the humanistic environment (Do you think that Hainan's locals are friendly?), which are all significantly higher than 5. All of them are significantly higher than 5 points, the degree of the mean score is higher than 80%, and the p-value of the one-sample t-test is all less than 0.05, which means that, through this research, tourists traveling to Hainan perceive a positive social and cultural situation, but the construction of the humanistic environment is still to be strengthened, and the local people in Hainan need to adapt to the construction of the FTIP as soon as possible with a more enthusiastic and friendly attitude to the environment of travelers from all over the country and even the travelers from all over the world.

3.1.3 Tourists' Perceptions of the Quality of Hainan Tourism Public Services

The "14th Five-Year Plan for Building an International Tourism Consumption Center in Hainan Province" proposes to create a safe, secure, and honest consumption environment, create a convenient consumption environment, and standardize market regulation. In this study, we measured the quality of tourism public services as an indicator to measure the perception of tourists on the quality of tourism public services and to test the implementation of the policy.

The question item is measured from four aspects, namely, the quality of tourism public information services, the quality of tourism safety and security services, the quality of tourism public transportation services, and the quality of tourism administrative and regulatory services. And due to the same type of data, it continues to be analyzed by the above method. The test results are shown in Table 4.

Table 4: Tourists' Perception of the Quality of Hainan Tourism Public Services

Tourists' Perceptions of Hainan's Tourism Public Services Perceived Quality of Hainan Tourism Public Services	N	Mean ± standard deviation	test value	P
Hainan's tourism public information service High quality	527	5.73±0.97	5	<0.01
Hainan's travel safety and security do Very good	527	5.85±0.97	5	<0.01
Public transportation in Hainan is very convenient	527	5.64±1.1	5	<0.01
Hainan's tourism regulatory services are in place to quickly resolve traveler	527	5.53±1.15	5	>0.05

As can be seen from the above table, the scores of tourists on the quality of tourism public information services, the quality of tourism safety and security services, the quality of tourism public transportation services, and the quality of tourism administrative and regulatory services are 5.73, 5.85, 5.64, and 5.53 respectively, all of which are significantly higher than 5 points, except that the average score of the quality of tourism administrative and regulatory services is less than 80%, and all the p-values of the single-sample t-tests are less than 0.05. It means that through this research, tourists have a relatively positive evaluation of the quality of tourism public services in Hainan Province, but the quality of tourism administrative supervision services in Hainan needs to be further strengthened.

3.1.4 The Effects of Tourists' Policy Familiarity, Perceived Quality of Tourism Public Services, and Perceived Social and Cultural Conditions on Tourism Satisfaction in Hainan

The statistical method chosen to study the influencing factors is regression analysis. Because the dependent variable of this study, tourism satisfaction, is a continuous numerical variable (Likert scale score), linear regression analysis was chosen for this study.

A linear regression analysis was conducted with tourists' policy familiarity, perceived quality of tourism public services, and perceived social and cultural conditions as independent variables, and tourists' satisfaction with Hainan tourism as the dependent variable, and the results of the analysis are shown in Tables 5.

Table 5: Influence of tourists' policy familiarity, tourism public service quality, and perceived social and cultural conditions on tourism satisfaction in Hainan

independent variable	Unstandardized coefficient	Standardized coefficient	t	P
(Constant)	0.46		1.45	0.14
Policy familiarity	0.08	0.10	2.90	0.00
Quality of public services in tourism	0.17	0.16	3.48	0.00
Sociocultural situation	0.65	0.40	8.77	0.00

The above arithmetic results can be derived:

1) The model fit is good, with an adjusted R-square of 0.342, which means that the independent variables involved in this regression analysis have an influence of 34.2% on the dependent variable (34.2% of the change in the dependent variable is caused by the three independent variables), i.e., this regression model is able to explore the influencing factors of tourism satisfaction relatively well

2) The linear regression model of this study is significant, $F = 101.586$, $p < 0.001$, social and cultural conditions and the quality of tourism public services have a positive and positive effect on tourism satisfaction, and policy familiarity has a positive and positive effect on tourism satisfaction.

Therefore, improving the publicity of the policy and the efficiency of publicity can help to improve the satisfaction of tourists.

3.2 Influence of cultural environmental conditions, infrastructure and socio-economic environment, social atmosphere, natural environment, and emotional image on tourists' satisfaction with Hainan tourism

It was further explored which specific parties of the socio-cultural situation would have an impact on tourism satisfaction. Since the dependent variable of this study, tourism satisfaction, is a continuous numerical variable (Likert scale score), linear regression analysis was chosen for this study.

Linear regression analysis was conducted with cultural environmental conditions, infrastructure and socio-economic environment, social atmosphere, natural environment, and emotional image as independent variables and tourism satisfaction as dependent variable, and the results are shown in Table 6:

Table 6: State of the cultural environment, infrastructure and socio-economic environment. The Effects of Social Atmosphere, Natural Environment, and Emotional Image on Tourists' Satisfaction with Hainan Tourism

independent variable	Unstandardized coefficient	Standardized coefficient	t	P	VIF
(Constant)	0.82		2.28	0.02	
cultural environment	0.18	0.17	4.53	P < 0.001	1.33
Infrastructure and socio-economic environment	0.45	0.37	8.87	P < 0.001	1.52
social climate	0.08	0.08	2.02	0.04	1.35
environment	0.00	0.00	0.06	0.94	1.22
emotional image	0.11	0.10	2.7	0.00	1.24
Adjusted R-square			0.31		
F			54.76		
P			P < 0.001		
Dependent Variable: Tourism Satisfaction					

The above arithmetic results can be derived:

1) The model fit is good, and the adjusted R-square is 0.31, which means that the independent variables involved in this regression analysis affect the dependent variable to the extent of 31% (31% of the changes in the dependent variable are caused by the five independent variables), i.e., the current regression model is able to explore the influencing factors of tourism satisfaction relatively well.

2) The linear regression model of this study is significant, $F = 54.764$, $P < 0.001$, cultural environmental conditions, infrastructure and socio-economic environment, social atmosphere, emotional image has a positive effect on tourism satisfaction, and infrastructure and social environmental conditions have the greatest impact, and infrastructure and socio-economic environment is determined by the following four aspects of the degree of shopping, lodging facilities, and the degree of good value.

3.3 The Impact of Public Information Service Quality, Tourism Safety and Security, Public Transportation, and Tourism Administrative and Regulatory Services on Tourists' Satisfaction with Hainan Tourism

To further explore which specific aspects of tourism public service quality have an impact on

tourism satisfaction. Since the dependent variable of this study, tourism satisfaction, is a continuous numerical variable (Likert scale score), linear regression analysis was chosen for this study.

Linear regression analysis was conducted with public information service quality, tourism safety and security, public transportation, and tourism regulatory services as independent variables and tourism satisfaction as dependent variable, and the results are shown in Table 7 below:

Table 7: Influence of Public Information Service Quality, Tourism Safety and Security, Public Transportation, and Tourism Administration and Supervision Services on Tourists' Satisfaction with Hainan Tourism

independent variable	Unstandardized coefficient	Standardized coefficient	t	P	VIF
(Constant)	2.89		12.73	P < 0.001	
Quality of public information services	0.15	0.17	3.69	P < 0.001	1.66
Travel safety and security	0.07	0.08	1.83	0.06	1.53
mass transit	0.09	0.11	2.69	0.00	1.40
Tourism Administrative Supervision Services	0.18	0.25	5.53	P < 0.001	1.59
Adjusted R-square			0.23		
F			46.81		
P			P < 0.001		
Dependent Variable: Tourism Satisfaction					

The above arithmetic results can be derived:

1) The model fit is good, with an adjusted R-square of 0.237, which means that the independent variables involved in this regression analysis affect the dependent variable to a degree of 23.7% (23.7% of the change in the dependent variable is caused by the four independent variables), i.e., the current regression model is able to explore the influencing factors of tourism satisfaction relatively well.

2) The linear regression model of this study is significant, $F = 46.812$, $P < 0.001$, the quality of public information services, public transportation, and tourism regulatory services have a positive effect on tourism satisfaction, and the quality of public information services and tourism regulatory services have the greatest impact.

4. Conclusions and recommendations

4.1 Conclusions

4.1.1 Tourists' knowledge of Hainan's culture and tourist attractions is low

When researching the degree of tourists' understanding of Hainan's culture and tourist attractions, all of the scores were significantly higher than 5, except for the human environment score (Do you think Hainan locals are friendly?). With the exception of the social atmosphere, emotional image and humanistic environment scores, the mean scores of the tourists' understanding of Hainan were all significantly higher than 5, with a mean score of more than 80%, and the p-values of the one-sample t-tests were all less than 0.05. The tourists interviewed for the tourists' understanding of Hainan perceived a positive social and cultural situation, but the construction of the humanistic environment still needs to be strengthened.

4.1.2 Tourists' perception of the quality of Hainan's administrative supervision is low

Through this research, tourists have a relatively positive evaluation of the quality of tourism

public services in Hainan Province, but the quality of tourism administrative regulatory services in Hainan needs to be further strengthened. The quality of administrative regulatory services involves the degree of protection of local consumer rights and interests of tourists in Hainan, and the related reasons for the lower perception may be quality management problems, informationization construction problems, and interaction with the community and feedback mechanism problems.

4.1.3 Tourists perceive high cost of Hainan tourism

In this research, the average scores of tourists' perceived high and low costs of travel, accommodation and food in Hainan are 4.8, 4.95 and 4.62 respectively, which are less than 80%, and the p-value of the one-sample t-test is greater than 0.05. This indicates that the actual costs of the three key elements of tourism, namely travel, accommodation and food, for tourists traveling to Hainan have exceeded the range of tourists' psychological expectations. There are two possible reasons for this problem: first, the price is higher than the industry average, and second, the value is lower than the industry average.

4.2 Suggestion

4.2.1 Creating diversified market positioning and pricing for Hainan's "tourism + shopping" products

For high-income tourists, it is necessary to provide high-end tourism products and services such as high-end resort hotels, private customized itineraries, luxury yachts, etc., aiming to meet the high-value experience of tourists; for middle-income tourists, it is necessary to provide cost-effective tourism products, such as star-rated hotel accommodations with a global quality assurance, and tourism routes featuring the core values of Hainan's tourism. For the low-income market, Hainan should develop self-guided tours that offer low-cost but secure accommodation, more free attractions and program experiences, tourist souvenirs with local characteristics, and warm folk customs and welcome, catering to the current consumer trends of micro-vacations, camping tours, and urban wanderings.

4.2.2 Enhance the preservation and dissemination of local distinctive cultures to enhance their visibility

In order to attract tourists, Hainan's tourism industry needs to continuously explore and integrate local cultural resources, and through various forms of display and experiential activities, such as folkloric performances, handicraft production, and specialty foods, etc., tourists can gain a deeper understanding and appreciation of Hainan's cultural heritage. This will not only help the protection of local cultural characteristics, but also promote cultural exchanges and dissemination ^[5], so that Hainan's multicultural influence can be continuously expanded.

4.2.3 Multi-dimensional administrative supervision, innovation to empower the vitality of Hainan tourism and shopping market

Establishing Market Regulation and Administrative Regulatory Mechanisms and Measures , through multi-dimensional administrative regulatory initiatives such as price regulation of shopping products, service regulation of the shopping process, and the government's creation of a word-of-mouth community of merchants and tourists, will help create a regulated, orderly and vibrant tourism and shopping market in Hainan. This will not only enhance Hainan's international image, but also provide tourists with a better and safer tourism and shopping experience.

5. Conclusion

According to the survey, although Hainan FTTP has comprehensive tourism consumption competitiveness in geographic location, tourism resources, national policies and other aspects, but compared with other developed FTTP which has many years of successful operation experience, there is still a certain distance.

Therefore, in the future development, Hainan Free Trade Port needs to do a good job of top-level design and planning, to create Hainan "tourism + shopping" products of diversified market positioning and pricing, increase the protection and dissemination of local characteristics of the culture and multi-dimensional administrative supervision, to improve market awareness and satisfaction, and boost the tourism of Hainan Free Trade Port to a new level.

Acknowledgment

Horizontal Research Project of Hainan College of Economics and Trade (H2200301)

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