RESULT STUDY OF DESTINATION AND SATISFACTION OF CHINESE TOURISTS, VISITING MONGOLIA

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Abstract. With the increasing number of foreign tourists visiting Mongolia, new tourist products and regional destinations are emerging. In recent years, the number of foreign tourists visiting Mongolia has increased, with Chinese tourists accounting for one-third of the market, and this growth is expected to continue. Thus, the results of a sample survey of 750 tourists and residents of Chinese tour operators in Mongolia have compiled 74 (18 groups) indicators reflecting the direction and satisfaction of Chinese tourists visiting Mongolia.
The results of the study identified 9 regions where Chinese tourists are more inclined to travel to Mongolia and summarized 9 factors that are necessary to improve Destination management.
The results of the study were ranked according to the Gray method, and the satisfaction score was assessed by quantitative and qualitative methods. As a result of this assessment, this paper shows that Ulaanbaatar, Gorkhi-Terelj National Park, and border regions are more satisfied.
Keywords: Destination, competitiveness, Tourists' satisfaction, Destination ranking, Gray method.

Introduction. One of the main vital concepts of tourism is the comprehension of a tourist *destination*. As described in the tourism study, "Destination" is a place to visit for tourism purposes. The tourist destination was described as follows by author Clare A. Gunn[1]. "A tourist destination" is a place that provides visitors with services and exhibits to enjoy their leisure time", he described. According to this view, tourist destination must include tourist attractions, products, and services that may be required during travel, and infrastructure to ensure the safety and comfort of the tourists.

Determining the competitiveness of a destination is an important part of tourism competitiveness, and calculation attempts have begun in the 1990s. Researchers believe that destinations will be existent in competition and lead through implementing environmental management, providing participation in public-private partnerships, and improving position in the market[1]. Competitiveness of a tourist destination[2] is considered to be a strong and efficient permanent position in the market. The main ways to promote competitiveness are to increase the tourism revenue and the number of tourists in the destination and to introduce and apply new products and services based on the results of the satisfaction survey.

Research purpose. The purpose of this study is to investigate and rank competitiveness and destination resources by reviewing the satisfaction and current situation of Chinese tourists, visiting Mongolia. This will create the basic conditions for updating and increasing the number of travel products and services offered to Chinese tourists under the demand of tourists.

Research methodology. This study is about influence factors on the satisfaction of Chinese tourists, visiting Mongolia, and utilized a rank order survey. Analysis on current situation and satisfaction on Chinese tourists, visiting Mongolia has been made. The survey was developed by random sample of Chinese tourists visiting Mongolia in 2018 - 2019 (a total of 750), 8 groups and 33 indicators of "Factors influencing tourist satisfaction" research model of authors (Li Tian Yuan, 2012),

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[1] Beneditti J. "The competitiveness of Brazil as Dutch holiday destination". 2010
[2] Baatartsooj G. "Stable tourism" UB city, 2006

1 group and 4 indicators of Mongolia's main tourist regions and destinations, a total of 9 groups and 37 indicators, and the level of satisfaction of factor is evaluated in 5 steps. The order of factors was determined by the Gray correlation method.

In modern times, the Gray correlation method is widely used to determine rankings. Gray correlation analysis is aimed at determining hierarchies using simple calculations rather than specific statistical distributions, and is generally similar to the World Economic Forum's Competitiveness Index methodology, but is an effective and flexible method used in the multidisciplinary analysis. The advantage of the Gray system is that it can analyze both specific issues and incomplete information. This is an analytical tool, especially in the absence of information. This was proposed by Deng Ju long, a scientist at the Huazhong University of Science and Technology in China, in line with the Gray system theory.

Gray correlation analysis is based on a method of measuring the relationship between factors. Gray correlation is a method aimed at determining the order of things by simple calculations without the need for small amounts of information and specific statistical distributions. Gray correlation analysis consists of 5 basic steps.

Step1. Find the maximum value and the minimum value in the basic order

Step 2. Determine the relationship

a. High to low: Indication to show a list of the distance from China to the destination from high to low.

$$x_i^*(k) = \frac{x_i^{(o)}(k) - min\left\{x_i^{(0)}(k)\right\}}{max\left\{x_i^{(0)}(k)\right\} - min\left\{x_i^{(0)}(k)\right\}}$$

$i - factor$
$k - satisfaction\ level$
$x_i^{(o)} - normal\ coefficient\ or\ basic\ order$
$x_i^*(k) - comparison\ sequence, i\ factor\ \text{ба}\ (k)$
$satisfaction\ level$

b. Low to high: Indication to show a list of the distance from China to the destination from low to high.

$$x_i^*(k) = \frac{max\left\{x_i^{(0)}(k)\right\} - x_i^{(0)}(k)}{max\left\{x_i^{(0)}(k)\right\} - min\left\{x_i^{(0)}(k)\right\}}$$

Then find the maximum value of the above coefficient and the maximum value is equal to 1.

Step3. Calculate the absolute value between $x_0^*(k)$ ба $x_0^{*i}(k)$: $\Delta_{oi}(k) = x_0^*(k) - x_i^*(k)$

In other words, subtract each value of the comparison sequence from the maximum value of the comparison sequence.

Step4. Find correlation. $x_0 \in X_0$ Main sequence and $x_{0i} \in X_i$ comparison sequences are sets of X factor. Also, it will represent the correlation of $x_0(k), x_i(k)$.

$$r_k^0\left(x_0(k), x_i(k)\right) = \frac{min_i\ min_k\ \{x_o(k) - x_i(k)\} + \zeta\ max_i max_k\{x_o(k)x_i(k)\}}{x_o(k)x_i(k)\ \zeta max_i max_k\ \{x_o(k) - x_i(k)\}}$$

ζ (sort factor) is belong to $\in [0, \infty]$, however, have value between [0; 1]. ζ is high in sort when the number is low, and generally, it should be less than 0.5.

$$\Delta_{min} = \Delta_{oj}(k) = \{x_o - x_k\}$$
$$\Delta_{max} = \Delta_{oj}(k) = \{x_o - x_k\}$$

The main function of the sort factor ζ is to adjust the relationship between the base value and the measured value and the measured value.

Step5. Find the correlation order.

The degree of Gray correlation is calculated by the following formula.

$$r_k^0(x_i, x_i) = \frac{1}{n_k}\sum_{k=1}^{n} r(x_i(k), x_i(k))$$

$r_k^0(x_i, x_i)$ Factor, the aggregate index of k of (0), n_k is the number of variables in k indicator.

Result and discussion. A total of 750 subjects were chosen randomly and questioned according to the question below (Table 1).

Table. 1. General information (frequency, percent)

Basic information		Frequency	Percent
Gender	Male	347	46.3
	Female	403	53.7
Age	Under 20	6	0.8
	21-30	108	14.4
	31-40	198	26.4
	41-50	217	28.9
	51-60	133	17.7
	Below 60	88	11.7
Job	Student	11	1.5
	Self-employed	139	18.5
	Retired	91	12.1
	Worker	21	2.8
	Farmer, herder	95	12.7
	Entrepreneur	79	10.5
	Civil servant	314	41.9
Level of Education	Secondary school	70	9.3
	High and vocational school	89	11.9
	College	151	20.1
	Graduate degree	345	46.0
	Postgraduate degree	95	12.7
Income (month)	Under 2000 yuan	29	3.9
	2001-4000 yuan	157	20.9
	4001-6000	187	24.9
	6001-8000	164	21.9
	8001-10000	122	16.3
	10001-20000	72	9.6
	Below 20001 yuan	19	2.5
Frequency of travel	Once	401	53.5
	Twice	245	32.7
	more than 3	104	13.9
Duration of travel	Under 2	10	1.3
	3-4days	130	17.3
	5-6days	248	33.1
	More than 7 days	362	48.3
The total expense of travel	Under 3000	79	10.5
	3001-5000	244	32.5
	5001-8000	195	26.0
	8001-10000	142	18.9
	10001-15000	67	8.9
	Below 15000	23	3.1

A sample profile indicates that 53,7% were females while 46,3% were males. According to age, 26,4% is between the ages of 31-40, 28,9% is between the ages of 41-50, which is the majority. Whereas only 0,8% is aged under 20, the lowest in the area. Findings indicate that the civil servants are relatively high possibility to travel with 41,9%, yet students and workers are in the opposite. In terms of education level, 58.7 percent of the participants had a post-graduate education or higher education, and 67.7 percent of the participants had a monthly income of 2001-8000 yuan.

In the frequency of travel, 53.5 percent are first-time tourists to Mongolia, and the percentage of tourists who travel for 5-6 days or more than 7 days is high, which is 81.4 percent, and the total cost per tourist is around 3001-10,000 yuan, which is the total of 77.5 percent participants.

According to the frequency of participants destinations (Figure 1), the highest number of participants was in the Ulaanbaatar region (720), and 675 was in the Gorkhi-Terelj National Park, 330

was in the Orkhon Valley, 36.9 percent was in the Khuvsgul region, and 32 percent was in the Eastern region, 9.1 percent was in Bulgan-Selenge region, 6 percent was in Gobi region, 35 percent was High Mountain region, and 4.3 percent was in the border region.
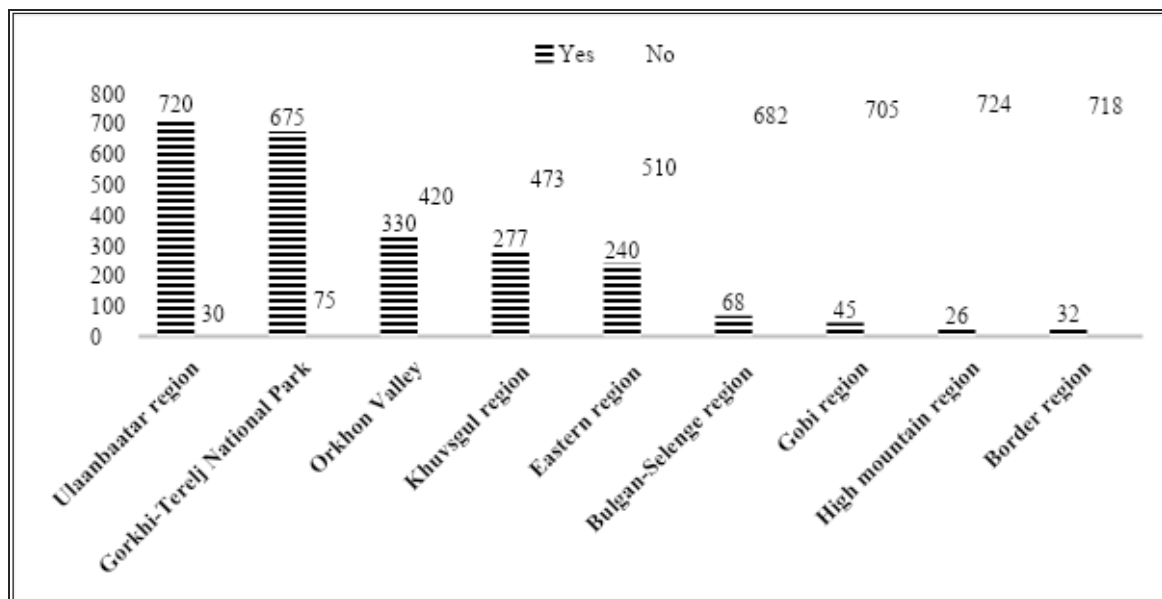

Fig. 1 Frequency and region of destination

The followings are indicators of factors influencing satisfaction. (Table 2)

Table 2. Factors influencing satisfaction

№	Factor	Satisfaction
1	Satisfaction with nature	The value, types, characteristics of nature, cost of a ticket
2	Satisfaction with travel environment, weather, and atmosphere	Urban-rural style, clean environment, pleasant atmosphere, and social safety
3	Satisfaction with accommodation	Accommodation price, comfort, and quality
4	Satisfaction with food service	A specialty of food, price, hygiene
5	Satisfaction with souvenir	Rural areas souvenirs, price, choices, market demand
6	Event	Features, types, prices, and quality of anniversary events
7	Satisfaction with transportation	Transportation, types, communication, high road
8	Satisfaction with travel service	Guide skills, local friendliness, integrated travel information system, signage
9	Destination	Destination selection, historical and cultural exhibits, accessibility, and personal assessment of the destination

Participants rated 1-5 on each of the 37 indicators of 9 groups of the study ("excellent-5, good-4, medium-3, bad-2, very bad-1"). Rates were collected, analyzed and the average was calculated using the SPSS program:

"EXCELLENT"

combined with "excellent + good rating";

"Medium" rating is "PLEASANT"

"UNPLEASANT"

Combined with "bad + very bad"

Based on the number of participants considered the most favorable, Gray calculated the ranking of the factors using the correlation method.

Factors influencing tourist satisfaction (frequency) and "Destination" ranking

Rates were summarized using the "SPSS" program and the average was made as "excellent + good rating"="EXCELLENT", "Medium" ="PLEASANT", and "bad + very bad" ="UNPLEASANT".

The rankings of each indicator (Table 3) were converted to scores, and the scores were aggregated to produce a general ranking.

General Ranking (Table 3) has been made as calculating the overall point of each destination based on the transfer of each satisfaction indicator, such as 9 points for Rank I, 8 points for Rank II, 7 points for Rank III, and so on.

Table 3. Competitiveness ranking (Gray Method)

№	Destination	Nature pleasure		Environment pleasure		Foodservice		Souvenir		accommodation		Events		Transportation		Travel service		Destination		Total	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
1	Ulaanbaatar	IY	6	II	8	YI	4	IY	6	IY	6	IY	6	YI	4	IY	6	IY	6	II	52
2	Gorkhi-Terelj	III	7	YI	4	Y	5	III	7	Y	5	Y	5	IY	6	IX	1	YII	3	YI	43
3	Orkhon valley	Y	5	YII	3	IY	6	II	8	YI	4	II	8	II	8	YI	4	III	7	I	53
4	Khuvsgul region	YI	4	Y	5	YII	3	YI	4	III	7	YI	4	YII	3	YII	3	Y	5	YIII	38
5	Eastern	YII	3	IY	6	YIII	2	YII	3	YII	3	YII	3	Y	5	Y	5	YI	4	IX	34
6	Bulgan – Selenge region	IX	1	IX	1	IX	1	I	9	I	9	III	7	I	9	III	7	YIII	2	Y	46
7	Gobi	II	8	III	7	III	7	IX	1	II	8	YIII	2	III	7	I	9	IX	1	III	50
8	High mountain region	YIII	2	YIII	2	I	9	Y	5	YIII	2	I	9	IX	1	YIIII	2	II	8	YII	40
9	Border region	I	9	I	9	II	8	YIII	2	IX	1	IX	1	YIII	2	II	8	I	9	IY	49

This general ranking only relates to destinations based on the 9 satisfaction factors assessed according to the survey questionnaire (Figure 2). In other words, the travel regions of Mongolia were ranked based on the results of the survey and the tourist satisfaction survey.
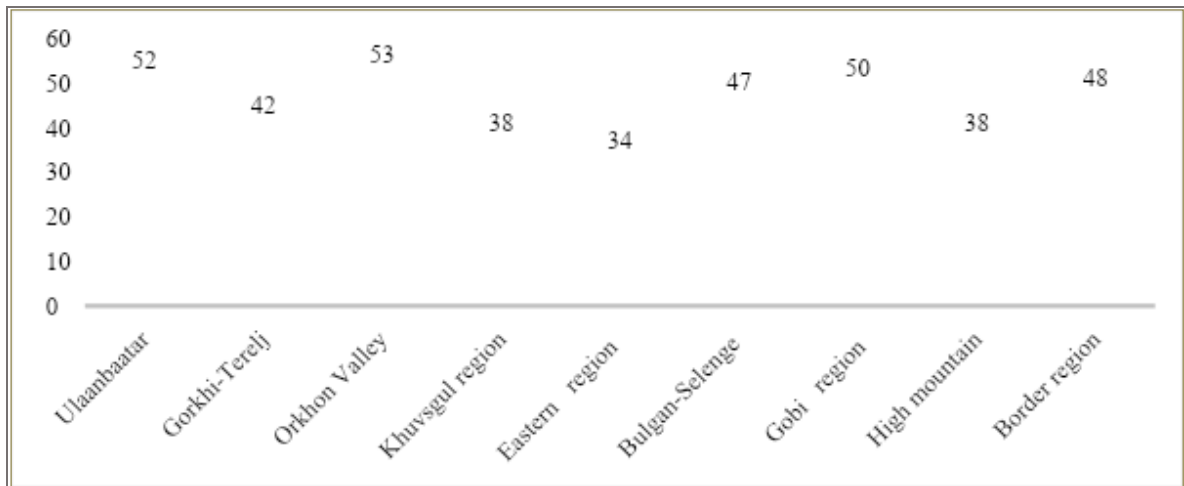

Fig. 2. General ranking assessment of destination (points)

Gray calculated the "destination ranking" using a correlation method, converted it to a numerical value, and determined the ranking of the 9 travel regions. This shows that Chinese tourists visit the Orkhon Valley, Ulaanbaatar, and Gobi regions in terms of competitiveness.

The region's high competitiveness varies on nine factors that affect the destination and it shows the difference in the study. The ranking of satisfaction factor indicators (Fig. 3) were considered for each destination.
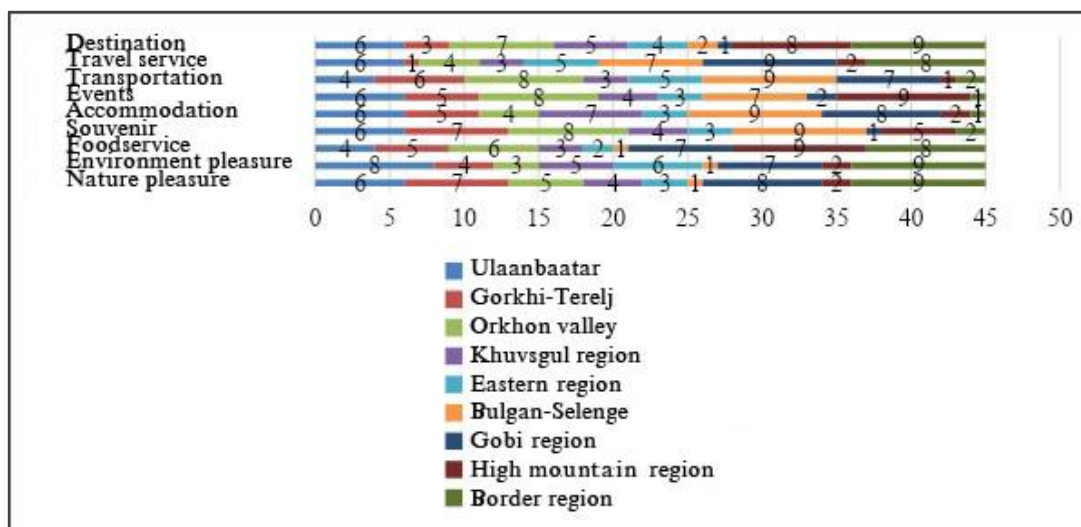
Fig. 3. Factors ranking of destination (point)

Conclusions. To determine the competitiveness of tourism regions is important for strengthening the region's strengths, improving its weaknesses, and developing sustainable development policies. Ulaanbaatar, the Orkhon Valley, the Gobi, and the border areas are the most competitive, as the weak regions include the Eastern region, the western or High Mountain region, and the Khuvsgul region. The weak regions are spatially remote, the exhibit distance is long, and roads and infrastructure are poorly developed, which makes them less competitive. Based on the satisfaction of about 170,000 Chinese tourists visiting Mongolia (MNET report, 2019), destination ranking was made by Gray correlation method and concluded as follows.

- Regardless of the region is close, short-term (5-7 days) and low-cost (about 1,000 yuan) trips are purchased, depending on income level and purpose of the trip;

- Tourists are interested in nature, historical and urban travel, and the number of tourists is not increasing well enough due to poor information access and visa issues.

Finally, this study can be the basis paper for the Government of Mongolia to steadily increase the number of Chinese tourists, to increase the number of products and services to key markets addressing infrastructure issues (Report of the Director of the Ministry of Nature, Environment and Tourism, 2019) and decision making.

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