

Study on Behavioral Decision-making Based on Sunk Costs in Travel

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Abstract: As one of the most common decision-deviations in the traveler's decision-making process, the travel sunk costs effect is the irrational consumer decision-making phenomenon that travelers faced when they are affected by sunk costs. This paper examines the manifestation of sunk costs effect in travel, and then focuses on how the impact of the sunk costs effect travelers' subsequent consumption decisions, this paper also analyzes different attitudes and decision-making differences of different types of travelers on sunk costs. The pattern of behavior is divided into three categories, balanced, positive, and conservative, and the differences in the choices of respondents with different degrees, incomes, and occupations in the face of sunk costs are studied. Finally, it is pointed out that the future research should focus on the impact of sunk costs on travelers' consumption decision-feedback mechanisms, and the positive effect of sunk cost effects on travelers.

1. Introduction

Subsequent decision-making problems in disappointing travel are neglected issued in the study of the tourism academic community. The tourism academic community often regard pre-travel decision-making and post-travel evaluation as the focus of research [1]. It is a question to think about how to carry on the follow-up choice in the difficult journey.

All travellers should be rational, and all subsequent decisions should be based on their own utility maximization. Often in reality, travelers violate this principle and the sunk cost effect begins to emerge. What are the possible sunk costs of a traveler in the process of disappointment? [2] How does the sunk cost effect affect the traveler's subsequent consumption decision? [3] What is the difference between different travelers' decisions about sunk costs? [4] This paper attempts to make an empirical study of this.

2. Literature Review

Sunk cost is defined as; "The cost that has been paid, no matter what choice can not be retracted" [5]. According to the different nature of consumers' previous investment, the sunk costs are divided in two kinds. The first pattern is money, material and other monetary sunk costs. And then the second pattern is time, effort, expectation and other behavioral costs [6]. Sunk costs are The cost that has been paid, no matter what choice can not be retracted [7]. Therefore, consumers should ignore sunk costs and make rational consumption decisions. However folks are often affected by sunk costs in decision-making. Once individuals have invested a certain amount of money or energy, they have a tendency to invest more in order to prevent their former investments from being wasted [8]. Sunk costs are not related to subsequent correct consumption decisions, and past costs are considered irrelevant to investment. This is one of the basic principles of economics [9], However that's not the case., individuals tend to focus on the spending which have been produced rather than the future expectations, make irrational consumption decisions, the phenomenon means "sunk cost effect"

University of Cornell, Thale firstly mentioned this concept in economy. he believes, in consumer decision-making process, there are some irrational consumption behavior contrary to the principle of utility maximization, one of the most typical is "sunk cost effect", namely "individuals once bought a

commodity, then will increase the frequency of this kind of goods" [10]

3. Research Design

3.1 Questionnaire design

The questionnaire consists of four parts. (1) the degree of monetary sunk cost decision-making influence (2) timeliness sunk cost decision-making degrees (3) the impact degree of sunk cost decision-making expectations (4) the participants' social population information statistics.

This questionnaire using Li Kete five point attitude scale [17], according to the disappointed conditions travelers confront with, sunk cost divided into monetary sunk cost, timeliness sunk cost and expected sunk costs. All the data are used to make a decision analysis, from the decision-making, difference of behavior should be given 1 to 5 points, respectively

3.2 Data analysis

Table 1 Different types of sunk costs in specific forms

sunk cost expression form	Types of sunk cost	Sample size	The standard deviation	The sorting
You expect to taste the local specialty delicacies, taste and find it not to satisfy the appetite.	M	3.63	1.185	1
The hotel you booked is in poor condition, which can not meet your expectations.	M	3.47	1.096	2
You are not satisfied with the hotel service.	P	3.37	1.21	3
When you attend a folk performance event, after watching a period of time, you feel not interested.	T	3.35	1.317	4
During the trip, the tour guide has forced shopping and other behaviors.	M	3.23	1.508	5
You find the scenic spot is very crowded.	T	3.21	1.3	6
You are not satisfied with the service attitude of the catering service staff.	P	3.08	1.433	7
You are not satisfied with the tour guide you purchased.	M	3.06	1.061	8
After you stop at one of the scenic spots, it will take more time to get to the next spot.	T	3.02	1.393	9
You bought the ticket and found the scenery was not satisfactory.	M	2.81	1.069	10
Your entertainment has been in line for a while, with a long queue ahead.	T	2.81	1.501	11
You find that the sightseeing facilities in the scenic spot are rather shabby.	P	2.51	1.249	12
The scenic spots you bought are of poor quality.	M	2.47	1.645	13
You are not satisfied with the management service of the scenic spot (if there are no signs, the public toilets will be less)	P	2.41	1.197	14
You have made the travel guide, arranged the travel time, and found that the journey has not been expected.	T	2.3	1.07	15
When you arrive at your destination, you find that consumption is more expensive.	P	2.05	1.066	16

3.3 Classification

Through cluster analysis, travelers based on different factors are divided into three categories, which are as follows:

Cluster 1: the balanced type (n=330,53.9%), the most balanced feature is "neutral", that is, the traveler is neutral to the subsequent travel behavior in the sunk cost effect. Among the six indicators of "sunk costs of money", four indicators were second; "Time sunk costs" and "expected sunk costs" in each of the five indicators are second. Cluster 2: positive type (n= 156,25.5%). When face to the cost of sinking, the traveler pays more attention to the harvest and feeling of the journey. The "sunk costs of money", "sunk cost of time" and "expected sunk costs" have all been the third. Clustering 3: conservative type(n = 126,20.6%), the reason why this kind of traveler was named the "conservative type" is that, for the sunk cost, especially when uncertain to harvest, they do not want to do more to think about the value of subsequent travel, and they tend to maintain the existing state, more "risk-averse profits"

3.4 Behavior decision of different groups under sunk costs

(1) Career: the number of party organizations, enterprises and institutions and professional technical personnel in most state organs is stable. The above three types of practitioners, income, work, travel plan is relatively stable, leading them have higher stress ability for the sunk costs, they tend to decision whether to continue the trip again according to the surrounding environment.

(2) Educational background: the largest number of students with a master's degree are stable, with a population of 180, The followed type is positive and conservative one, with a population of 66 and 36 respectively; The rest of the respondents all have three different types of cluster, and the proportion is similar to the master. Sunk cost effect in different degree have different influence between groups.

(3) Income: three types show distinct characteristics. The most stable individuals, about 54%, are concentrated in the sunk cost, most of the population are under 200,000 incomes; The number of positive individuals was second, accounting for 25.5%, and most of the folks have the incomes of less than 100,000; The conservative population is the least, accounting for 20.5% of the population, mainly in the income of 20-500,000. The sociological feature of travelers' income is that there are more moderate income earners for stationary travelers, more low-income individuals among active travelers, and more of those with high incomes among conservative travelers. The sunk cost effect has obvious differentiation effect among different income groups.

4. Conclusion

In this paper, the author discusses the difference of decision making in the face of the sunk costs of travelers and finds that 53% of respondents do not significantly get the effect of sunk cost. With 25 percent of respondents travelers pay more attention to the gains and feelings of the journey. 20.6 percent of respondents will receive the impact of sunk costs.

In the aspect of sociological feature statistics, state organs and professional technicians have better cultural quality and income, most of which are stable and less affected by sunk costs. In terms of income, respondents' income level and travel behavior decision have strong linear relationship, and sunk cost effect has obvious different effect on different income groups.

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