

A Basic Study of the Influence of Tourism Awareness on Behavior

Akiko Kondo and Satoshi Togawa

Department of Media and Information Systems, Shikoku University, Japan

ABSTRACT

The promotion of tourism is one of the most important issues in Japan, which is facing a long-term and rapid decline in population and an aging society with fewer children than any country in the world has ever experienced. It is required to clarify the details of the mechanisms of tourism exchange. The aim of this study is to clarify the behaviors that lead people to actually decide on and visit a tourism destination based on their awareness of factors related to tourism, such as the importance of these factors. The importance of relaxing in an atmosphere different from that of everyday life, as well as food and nature unique to the tourist destination, was found to be highly attractive for tourism. The study also clarified the influence of such awareness on the behavior of actually visiting a tourist destination.

Keywords: Tourism, Awareness, Regional problem solving, Tourism interaction model

INTRODUCTION

In 2023, for the first time, the population of all 47 prefectures in Japan declined. It is predicted that Japan will continue to face a long-term, rapid population decline and an aging society with fewer children than any other country in the world has ever experienced. In this situation, the promotion of tourism interaction is one of the most important issues. This is because tourism has a wide-ranging impact on local employment and the local economy, as well as improving local vitality. Under these circumstances, it is necessary to elucidate the mechanism of tourism interaction.

With the promotion of DX (Digital Transformation), the use of AI and IoT has become much more advanced and easier than before. On the digital twin (virtual space), unlike the conventional metaverse space, the real space environment can be completely reproduced, and monitoring and simulation can be performed. This calls for the use of this technology for tourism interaction. This is because in the digital twin space, its reproduction AI has been constructed based on AI analysis methods based on actual data, and simulations that are difficult to experiment with are now possible. On the other hand, the reproduction and simulation do not consider people's consciousness and thoughts, and as with generative AI, they adopt the best-fitting results based on numerical precision, and are not capable of clarifying the specific factors that bring about the results.

The purpose of this study is to clarify the relationship between tourism factors and performance, considering the influence of people's awareness and

thoughts about tourism on their actual behavior. This study is a basic analysis in clarifying the mechanism of tourism interaction considering people's awareness as a factor.

Specifically, the following analysis will be conducted. Regarding attitudes toward tourism, we will use a questionnaire to ask about the importance of each item in terms of what people seek in tourism, the importance of each item in selecting a tourist destination, and the actual number of times people have actually visited a tourist destination. Based on the survey results, the relationship between people's awareness and tourism behavior will be quantitatively clarified using factor analysis and binomial logistic regression.

EXISTING STUDIES AND CHARACTERISTICS OF THIS STUDY

We review existing studies that are closely related to this study and summarize the characteristics of this study.

Much study related to tourism attractiveness and impact analysis has been done over the years.

Several reviews on this theme also exist (e.g. Kondo et al., 2017). Regarding tourism in Japan, Muroya (1998) analyzed the evaluative structure of attractiveness in tourism spots in order to evaluate the attractiveness of tourism attractions. Kamata et al. (2006) conducted factor analysis to understand the structure of attractiveness of Japanese tourist attractions and then examined the relationship between these tourism factors and tourism demand. Some studies have proposed ways to capture and analyze the economic impact of tourism (Stynes, 1997), and others have found that the image of a tourist destination when visited leads to revisits and recommendations to others (Chen et al., 2007). Furthermore, there is a study (Hamimah et al., 2020) that clarified tourism motives centered on food from a questionnaire. As for quantitative analysis, there are also results that constructed a cross-sectional and panel model (Xiang et al., 2010) and applied a gravity model (Konsnan, 2013). In addition, some studies have analyzed the structure of behavior using factor analysis and logit models to determine the impact of the pandemic on tourism-related firms under COVID-19 (Haisheng et al., 2021). Another study (Juan et al., 2006) estimated a logit model for tourism destination choice that revealed that the effects of distance and price are moderated by tourists' motives.

Thus, there are many studies on tourism. In this study, we clarify the importance of each item in tourist attraction and destination selection, and then clarify the influence of people's awareness on their actual tourism behavior.

IMPORTANCE OF TOURISM DESTINATION SELECTION FACTORS

As we have mentioned, social conditions have changed, and the situation surrounding tourism has also changed dramatically. In this study, a web-based questionnaire survey was conducted nationwide in order to clarify the awareness of tourism and each factor of tourism purpose and destination selection. The summary and distribution of respondents are shown in Table 1.

Table 1. Survey summary.

Period March 13, 2023 - March 20, 2023			
Number of Responses Valid responses: 1,032 [Number distributed: 10,175]			
Characteristic	Sample	Characteristic	Sample
Gender		Occupation	
Male	547	Public employee	
Female	554	Executive	16
Age group		Company employee(clerical)	144
Under 15	88	Company employee(technical)	89
15 – 19	170	Company employee(other)	114
20 – 29	172	Self-employee	43
30 – 39	170	Freelance	37
40 – 49	170	Housewife/ Househusband	128
50 – 59	161	Part-time job	118
Over 60	170	Student	260
Area		Other	
Hokkaido	60	Marital status	110
Tohoku	77	Unmarried	
Kanto	414	Married	630
Chubu	173	Presence of children	470
Kinki	206	With	404
Chugoku	47	Without	697
Shikoku	23		
Kyushu	101		

In this study, in order to clarify what factors lead people to tourism behavior, the importance of each item as a tourism purpose or attraction was investigated in the questionnaire. 20 items were answered from 6 options, each of which was selected by the respondents. Figure 1 shows the distribution of the importance of each item as a tourism purpose or attraction, and the correlation coefficients show the relationship among the 20 items. Among the experience tourism indicators, only the three indicators of “Entertainment, Traditional culture, and Agriculture, forestry, and fisheries” exceeded 0.6, while the other indicators had low correlations. The distribution of importance shows that the importance of tourism attractions related to resources that have long taken root in the tourism destination, such as Food, Nature and Scenery, is high. Also, the importance of lodging, transportation, and an atmosphere different from daily life to relax from the daily routine is also high.

Figure 2 shows the distribution of the importance of the factors in determining the tourist destination. One of the items in the factors determining the tourist destination is an indicator of tourist purpose and attractiveness, as indicated above. From the correlation coefficients among these 11 items, ease of using public transportation at the tourist destination and ease of using public transportation to and from the destination are above 0.6 at 0.65, but the relationships among the other factors are relatively low. All items are highly important, including transportation accessibility and climate. It is clear that respondents are currently deciding on their travel destinations based on a number of factors, including the attractiveness of the tourist destination, transportation convenience, weather, and cost of living.

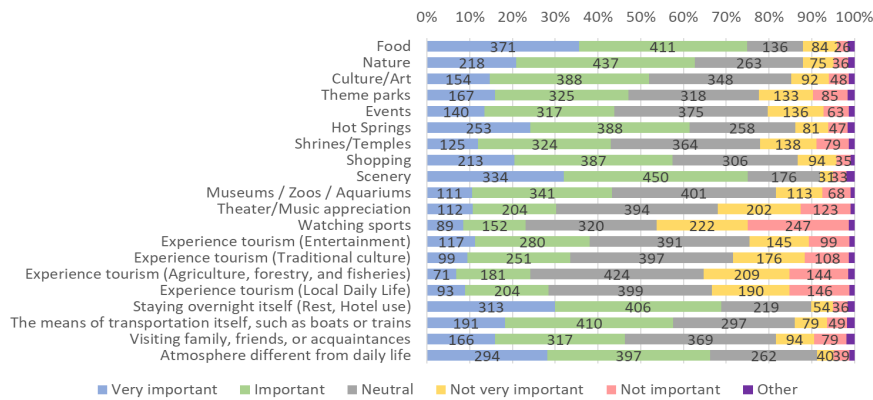


Figure 1: Importance of tourism purpose and attractions.

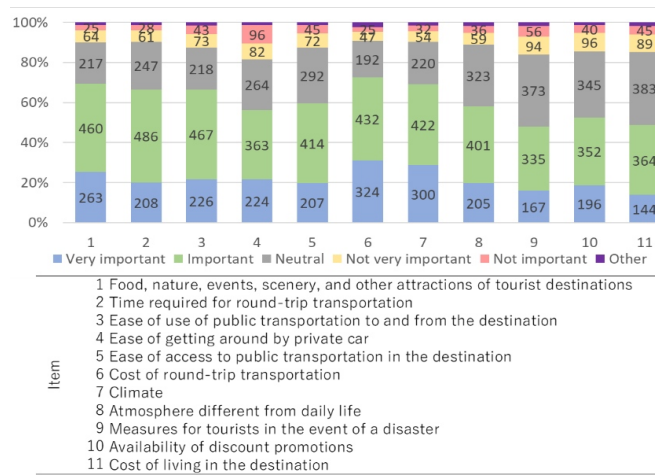


Figure 2: Factors determining destination.

INFLUENCE OF IMPORTANCE OF FACTORS DETERMINING TOURIST DESTINATION ON BEHAVIOR

In deciding on a tourist destination, it became clear that people consider many factors in addition to the purpose and attractiveness of the destination, such as transportation convenience to the destination, convenience at the tourist site, and an atmosphere different from that of everyday life. Based on this, we will quantitatively clarify the influence of people’s awareness on their tourism behavior by clarifying what factors they evaluate and decide on when selecting a destination.

Factor Analysis of Tourism Factors

In order to elucidate the structure that leads to the decision and action on tourism destinations, a factor analysis is conducted. The results of the factor analysis of tourism importance are shown in Table 2. For the factor extraction method, the maximum likelihood method was applied, and for the rotation method, the Promax method with oblique rotation was employed. In this case, $\chi^2 = 1,382$, with a significance probability $p < 0.0001$. From the pattern matrix of the factor analysis, the first factor consists of

transportation convenience and availability of discount campaigns. It can be interpreted as a factor representing “convenience and efficiency/atmosphere” because it includes items for climate and atmosphere, which are different from residence. The second factor is interpreted as representing “experience and activity”, the third factor is interpreted as representing “art, culture and calmness” and the fourth factor is interpreted as representing “active”. Furthermore, the fifth factor is interpreted as a factor representing “extraordinary/restful” because it is composed of indicators that represent relaxation away from daily life.

Table 2. Results of factor analysis of tourism importance.

Variables	Factor1	Factor2	Factor3	Factor4	Factor5
Cost of round-trip transportation	.757	-.091	-.065	-.056	.063
Cost of living in the destination	.717	.058	-.052	.055	-.141
Ease of use of public transportation to and from the destination	.699	.008	-.091	.001	.055
Time required for round-trip transportation	.691	-.087	-.026	.025	.049
Ease of access to public transportation in the destination	.652	.099	-.092	.022	.084
Climate	.635	-.098	.094	-.050	.039
Measures for tourists in the event of a disaster	.623	.068	.192	-.023	-.120
Availability of discount promotions	.621	.023	-.027	.052	.006
Ease of getting around by private car	.496	-.009	.115	.012	-.072
Atmosphere different from residential areas	.473	.031	.121	-.101	.139
Experience tourism (Agriculture, forestry, and fisheries)	-.033	.961	-.006	-.078	-.003
Experience tourism (Traditional culture)	-.023	.873	.116	-.144	.039
Experience tourism (Local Daily Life)	-.005	.864	-.014	-.095	.094
Experience tourism (Entertainment)	-.002	.659	-.107	.119	.178
Watching sports	.004	.561	.042	.255	-.207
Theater/Music appreciation	.035	.391	.161	.328	-.219
Culture/Art	.041	.087	.708	.017	-.088
Nature	.012	-.034	.695	-.120	.130
Shrines/Temples	-.024	.178	.661	-.068	-.051
Scenery	-.031	-.096	.546	-.036	.408
Museums / Zoos / Aquariums	.004	.158	.402	.229	-.041
Hot Springs	-.012	.033	.306	.051	.296
Events	-.033	.022	-.068	.826	.078
Theme parks	.009	.018	-.084	.786	.068
Shopping	-.006	.063	.131	.314	.239
Visiting family, friends, or acquaintances	.068	.108	.046	.268	.235
Staying overnight itself (Rest, Hotel use)	-.004	.035	-.118	.017	.758
Atmosphere different from daily life	.047	-.003	.106	-.002	.639
The means of transportation itself, such as boats or trains	.094	.214	-.089	.055	.519
Food	-.013	-.199	.217	.102	.438
Factor contribution	6.686	6.552	5.977	5.423	5.347
Factor contribution rate	22.29	21.84	19.92	18.08	17.82
Cumulative contribution	22.29	44.13	64.05	82.13	99.95
Correlations of the primary factors					
Factor1	1.000	.387	.465	.427	.571
Factor2	.387	1.000	.569	.633	.342
Factor3	.465	.569	1.000	.482	.500
Factor4	.427	.633	.482	1.000	.388
Factor5	.571	.342	.500	.388	1.000

Influence of Tourism Factors on Behavior

How do each of the factors in determining the tourism destination affect the behavior of actually sightseeing? In order to clarify this, we assume the following basic binomial logit model for domestic tourism, with whether or not one actually visits the destination as the explained variable and the factors including the above five factors as the explanatory variables. In the equation, x_i is an explanatory factor such as a factor or attribute, and Y is the explained variable indicating whether to travel or not.

$$\log \left(\frac{p(Y = 1)}{1 - p(Y = 1)} \right) = \beta_0 + \sum_i^n \beta_i x_i \quad (1)$$

The results of the regression analysis are shown in Table 3. The results indicate that in addition to gender and age, the factors that influence tourism behavior are the “convenience and efficiency/atmosphere” factor, the “experience/activity” factor, and the “unusual/restful” factor. Our lives have changed dramatically since the COVID-19 pandemic. This is not only in terms of behavioral restrictions in the midst of the spread of infection, but also in terms of our lifestyles and the way we spend our time. This suggests that factors such as the need to spend time away from one’s daily routine and to relax may have had an impact.

Table 3. Binomial logit model estimation result.

Variable	Estimation Results			Statistic			
	Coefficient	Standard error	p-value	Mean	σ	Min.	Max.
Domestic Travel	-			0.76	0.43	0	1
Gender (Male=1, Female=2)	-0.420	0.155	.007 **	1.50	0.50	1	2
Age group (7 categories)	-0.246	0.054	.000 **	4.21	1.90	1	7
Area (8 categories)	0.070	0.049	.150	4.02	1.77	1	8
Occupation (11 categories)	-0.147	0.029	.000 **	7.11	3.05	1	11
Marital status (Unmarried=1, Married=2)	0.756	0.244	.002 **	1.43	0.50	0	2
Presence of children (With=1, Without=2)	-0.094	0.247	.704	1.63	0.48	1.00	2.00
Factor1	-0.342	0.130	.008 **	-1.46577E-16	0.94	-3.12	3.70
Factor2	0.273	0.136	.044 *	-9.22765E-17	0.96	-3.06	2.14
Factor3	-0.205	0.128	.111	7.49831E-17	0.92	-3.02	3.20
Factor4	0.016	0.127	.897	5.23375E-17	0.92	-2.90	2.53
Factor5	-0.384	0.125	.002 **	-1.40607E-16	0.91	-2.55	3.86
Constant	-2.815	0.861	.001 **	-			

N=1,032

** $p < .01$, * $p < .05$, + $p < .10$

CONCLUSION

The purpose of this study was to clarify the behaviors that lead people to decide to visit a destination and to actually visit it, as well as their awareness of tourism. Regarding the importance of the purpose and attractions of tourism, the results showed that the importance of the original local attractions of the destination, such as food and nature, as well as the ability to

relax and get away from daily life through travel, were highly important. In addition to these attractions and purposes, the respondents also considered a wide range of other factors, such as transportation convenience and climate, when visiting a tourist destination. The importance of tourism factors was categorized into five factors, including “convenience and efficiency/atmosphere,” “experience and activity,” and “extraordinary/restful. Using these factors, we clarified the influence of tourism awareness on actual tourism behavior. Based on these results, we will further develop a model that can be used for simulation.

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