

# Which local policies increase revisit intention to Amami Oshima Island, Japan? Using Best–Worst scaling methodology

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## Introduction

Tourism is one of the largest and fastest growing industries worldwide. It provides local communities with important economic and social benefits. Especially on islands, it is a major source of communities' income. Since previous studies note that achievements of sustainable tourism rely heavily on repeat visitors (e.g., Darnell and Johnson 2001), it is necessary for such local governments depending on tourism industries to implement policies to encourage tourists to make repeat visits.

Recently, many studies have increasingly used and discussed the concept of revisit intentions. For example, Baker and Crompton (2000) have examined the relationship between revisit intentions and their satisfaction with travel. Chen and Gursoy (2001) have revealed the influence of past vacation experience on their revisit intentions. However, our previous studies conducted in Japanese recreational sites have shown that most tourists have expressed high revisit intentions. It seems difficult to identify which local policies increase revisit intentions of tourists using general questions (e.g., 5-point Likert scale questions).

Based on the above backgrounds, the present study used Best–Worst Scaling (BWS) methodology to examine which local policies encourage tourists to revisit the destination. The advantage of BWS over general rating questions is to easily elicit relative importance of items such as policies for respondents because they choose one most and one least preferred item in each choice set. This advantage can give decision makers facing budget constraints useful information about local policy priorities for sustainable tourism.

## Materials and Methods

### *Research Site*

Amami Oshima Island, our study area, is located southwest of the Japanese archipelago. The island, with an area of 712km<sup>2</sup>, is the second largest island in the Nansei Islands of Japan. Because the island has rich and endemic ecosystems, it is expected that a part of the island become a national park and the World Natural Heritage Site. On the Amami Oshima Island, tourism with nature and culture is one of the most important industries. The annual number of tourists visiting the island was about 400,000 in 2014. Also, until recently, the number has continued to gradually

increase because media exposure of Amami Islands has increased and low-cost carriers have been in service in July 2014. Based on these backgrounds, there is a growing necessity to design new policies to balance nature conservation and sustainable tourism development in the island.

### *Best-worst scaling approach*

In this study, we implemented BWS to evaluate tourists' preference for the policies. BWS was developed by Finn and Louviere (1992) and became popular in a number of academic fields. Although application to tourism management has been still limited, Crouch and Louviere (2007) have revealed the relative importance of convention site selection factors using BWS. To our knowledge, this is the first study regarding the concept of revisit intentions. BWS is classified into three types: the object case, the profile case, and the multi-profile case (see Flynn 2010, for detail). Since this study used the object case, we will mainly focus on the object case here.

### *Questionnaire design*

Based on the discussion with decision makers in the Amami Oshima Island, this study have selected five related policies included in the BWS design: policies for 'improvement of infrastructure in the island', 'building new facilities for wildlife viewing', 'conservation of endangered species', 'landscape conservation', and 'preservation of traditional cultures'. To construct choice sets using the five policies, we employed a balanced incomplete block design (BIBD); we created five series of choice sets that contain different combinations of four policies. The respondents were asked to choose from each choice set the policy they most highly evaluate if they made repeat visit the island and the policy they least highly evaluate.

### *Counting analysis*

This study used counting analysis, which was one of the simplest and most practical analyses. We subtracted the number of times each one was chosen as least important from the number of times it was chosen as most important in each choice set. BW scores are divided into two categories: individual level (disaggregate) BW scores and aggregate level BW scores. In this study, we show the findings from a hierarchical cluster analysis using individual level BW scores to consider respondents' heterogeneity along with aggregate level BW scores.

### *Sampling procedure*

Data was collected by conducting a questionnaire survey to the tourists on the Amami Oshima Island in holidays in May (i.e., Golden Week), 2015. Questionnaires were distributed to 1,200 tourists at the Amami Airport. A total of 245 questionnaires were returned. For this analysis, we have used the data of 180 respondents who answered all relevant BWS questions.

## Results and discussion

Aggregate level BW scores indicate the preference of an average respondent. Among the five policies, ‘landscape conservation’ had the highest BW score, followed by ‘conservation of endangered species’, ‘building new facilities for wildlife viewing’, ‘preservation of traditional cultures’ and ‘improvement of infrastructure in the island’. That is, based on average preference, landscape conservation was the most effective policy to encouraged current tourists to revisit the island.

In addition, a hierarchical cluster analysis using individual level BW scores identified three groups of respondents with significantly different preference for relevant policies. As shown in Figure 1, there was indeed some preference heterogeneity among groups. The infrastructure improvement was the worst policy for two thirds of the current tourists although it was the second best for the others. It could pose conflicts between them.

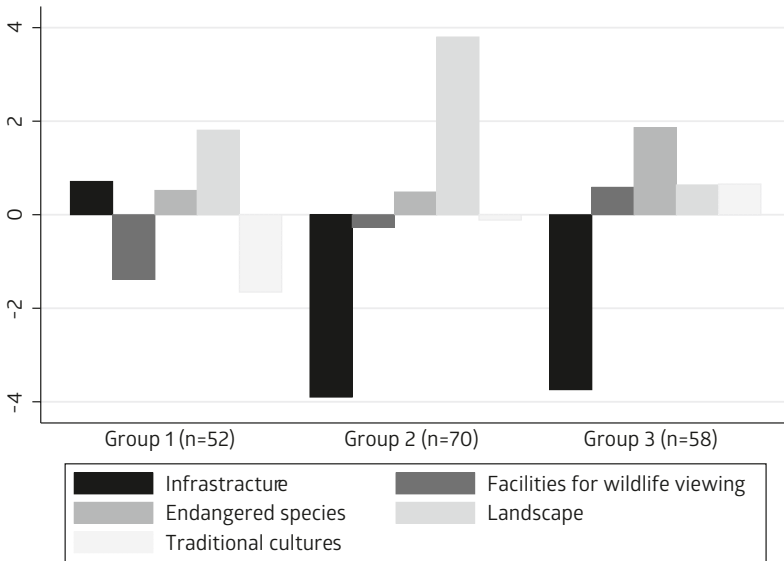


Figure 1. Comparison for BW scores among three groups

## Conclusion

To achieve sustainable tourism, it is necessary to consider how to make current visitors revisit. Policies concerning landscape conservation is one of the important policies to increase current visitors’ revisit intentions. In addition, a rise in tourists leads to an increase in demand for improvement for infrastructure within the areas. However, we need to understand the risk that improvement of infrastructure can deprive the current tourists of their revisit motivation.



- Baker, D. A., & Crompton, J. L. (2000). Quality, satisfaction, and behavior intentions. *Annals of Tourism Research*, 27(3), 785–804.
- Chen, J. S., & Gursoy, D. (2001). An investigation of tourists' destination loyalty and preferences. *International Journal of Contemporary Hospitality management*, 13(2), 79–85.
- Crouch G. I., & Louviere J. J. (2007). *International Convention Site Selection: A further analysis of factor importance using best-worst scaling*. Queensland: CRC for Sustainable Tourism.
- Darnell, A. C., & Johnson, P. S. (2001). Repeat visits to attractions: A preliminary economic analysis. *Tourism Management*, 22, 119–126.
- Finn, A., & Louviere, J. J. (1992). Determining the appropriate response to evidence of public concern: The case of food safety. *Journal of Public Policy and Marketing*, 11, 19–25
- Flynn, T. N. (2010). Valuing citizen and patient preferences in health: Recent developments in three types of best–worst scaling. *Expert Review of Pharmacoeconomics & Outcomes Research*, 10(3), 259–267.