

Requirements and System Architecture of Tour Planning Support for Local Revitalization

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Abstract

An aging society has evidently had effects such as the recent depopulation, the increase in abandoned farmland, and so on in Japan. Therefore, realizing local revitalization is of the utmost importance, and there are many countermeasures in place to guard against the effects of an aging society. In particular, tourism is one of the most effective countermeasures, and each region tries to introduce it with a combination of local resources. Although it is common knowledge that local revitalization has a positive effect in an affected area, it is difficult to maintain revitalization activities over the long term. Therefore, this paper discusses a framework for maintaining local revitalization based on the classification of sightseeing resources and a chain of them. Moreover, tour planning is essential in order to stimulate tourism and to maintain a supply of sightseeing resources. Therefore, the requirements and system architecture for tour planning support are introduced as the first step.

Keywords: Tour planning, local revitalization, system architecture, sightseeing chain management.

1 Introduction

According to the population census of Japan, the Japanese population will decrease to 90 million in 2050 [1]. The birth rate in Japan has been in decline for the past decade, which has accelerated the aging of the population. New issues are emerging in every field, such as pension, medical care, standard of living, employment, and so on. Primary industries especially are seriously affected by the aging of society. For example, because of the decrease in the number of laborers, farmers have difficulty managing their own farmlands; the total area of abandoned farmlands has recently increased. About 420 kilo hectare farmland was lost due to abandonment in 2015 [2]. This phenomenon is caused by an influx of youth to cities and aging society. Other evidence includes the many vacant stores and deserted streets, some even in the center of cities. Moreover, this downward trend interrupts the provision of public transportation such as train and bus for local residents.

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- Constraints by local governing body (e.g., subsidy)
- Consumption tax rise

The recent trend of visitors is shown in Table 1. The number of lodgers has decreased from 2012 to 2014, while the number of day-trippers has been increasing. This might be related to the road improvement that has taken place around the Oga area. A comfortable drive can induce many day-trippers to visit these areas from nearby cities. However, visitors usually think that a short trip is enough. Therefore, the amount of per person spending has recently been decreasing.

Table 1: Trend of visitors [15]

	2012	2013	2014
Number of lodgers	168,626	161,117	141,668
Number of day-trippers	1,904,345	2,326,155	2,718,886
Total number	2,072,971	2,487,272	2,860,554
Total amount of spending (1,000 yen)	6,367,682	7,311,105	6,927,034
Spending per person (yen)	3,072	2,939	2,422

3.2 Sustainable framework of local revitalization

According to the analysis based on previous discussions, we construct a framework for a sustainable local revitalization system applying the cause-effect relationship as shown in Figure 2. Although it takes a long time of revitalizing, the goal of local revitalization is to increase the number of permanent settlers and to provide sufficient jobs inside the area. It is firstly important to aware the land for many people. Therefore, increasing the number of visitors is the first target. If these visitors aware the land well, we try to make them repeat visitors as the next step. If the number of repeat visitors grows, they give effect on the other people by word-of-mouth and positive feedback will work for more visitors. Furthermore, the jobs related to sightseeing will be produced for taking care of huge amount of visitors. If the jobs are stable, some people are expected to come to work as permanent settlers as the final step. Thus, such feedback cycle is considered to be a sustainable local revitalization system in this study.

This study especially focuses on the first step, i.e., what the countermeasures are for increasing the number of visitors.

