

Analysis of tourist behavior trend and a case study tourists flow using mobile positioning data in Okinawa

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Abstract

Okinawa prefecture is full of rich tourism resources such as its unique culture, cuisine and one of the best sea resorts in Japan. Tourism industry of Okinawa accounts for a large share among local industries. To make the profit from tourism for the prosperity of local society, the local government of Okinawa prefecture has carried out various kinds of tourism surveys for over forty years and continued to develop its scheme.

It launched a domestic visitor survey in 1972, followed by a regional tourism economic impact research and a tourism industry survey. These surveys are conducted on a regular basis, and foreign visitor survey then started in 2010 due to rapid growth of foreign visitors.

We analyze the tourist behavior trend using these stored data. One of the findings obtained is the importance of repeaters in the domestic market. Many of them visit Okinawa every few years. The problem is that the number of visitors may taper off in the near future as the age of repeaters gets higher. It is necessary to attract new visitors to expand the market.

On the other hand, the number of foreign visitors is rapidly increasing in recent years and further growth is expected. Analysis of foreign visitor survey shows their high satisfaction about Okinawa as well as their high average expenditure, though some improvements are required such as multilingual service and free WiFi access.

We also attempt to understand the current situation of regional tourism using several tourism statistics with both traditional and innovative methods. The analysis is carried out using mobile positioning data of a biggest mobile carrier in Japan. The result shows different patterns of tourist flow of each area as well as the estimated number of visitors of an event.

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