Tourism Prediction: Literature Review

Literature Review

Introduction

Tourism has been a very important aspect in the economy of most of countries. There are multiple Islandic countries (Caribbean Islands, Maldives, etc.) where people and government solely depend on tourism for their earning. Understanding tourism patterns has been an important goal for such people. People have trying to record visitor data using Flights/Boat arrival data and hotel data for many decades which can help them in preliminary visitor analysis. However, this data only provides visitor arrival count which doesn't help them in multiple things. Because of increasing modes of transportation and types of vacation rentals such as Airbnb, it has been challenging to get correct data.

Tourism data analysis can help us to understand our visitors. Which countries do they belong to, their ethnicity, their cultural belongings etc? Analyzing this data would help us to figure out the following: Our core visitor group, primary visitor countries and potential target market. Does visitor count defer in any specific climate or holidays/festive season? How can we increase visitor counts from the potential target market? Conventional methods of tourism data analysis may help us to get visitor count, their countries, number of days spent etc. but they would not help us in identifying and understanding core visitor groups and potential target markets. What type of food they want to eat or what type of shopping area they prefer? Would social media be best marketing channel for them or newspapers/tv can attract more people? Would they prefer luxury accommodation vs cheap hotels vs vacation rentals? Tourism analysis should also focus on identifying important tourist destinations in your area and

Since tourism is an important economic driver for many communities, most tourism-focused cities invest significant resources to collect visitor data to inform funding decisions for tourism development initiatives. Visitor data collection and analysis has traditionally been based on hotel data and survey data. This is a good starting point, but the options for tourism analysis have evolved significantly in recent years. The next generation of tourism market analysis uses consumer analytics based on either transaction data or mobile device data to go deeper. In this study we'll cover the latest tourism trends on the Hawaiian Islands and provide a series of graphics and summarized data to have a good idea of what's happening by the numbers. Also, it should give an idea of how many visitors (percentage-wise) are arriving/visiting each island. When viewing these statistics, we encourage visitors to keep the geographic size of the islands in mind. For example, the Big Island and Kauai have very similar trends in arrivals. However, the Big Island is significantly larger geographically speaking than Kauai (in fact, it is larger than all of the other islands combined) so these visitor numbers alone cannot tell the complete story. Kauai and the Big Island may very well have the exact same number of visitors any given month, but the size of the island will also determine how 'crowded' it feels.

One has to consider the tourism 'capacities' of the islands and how that will affect future trends. Maui and O'ahu likely reached their carrying capacity (for visitors) years ago, thus have few remaining competitive development opportunities and will not have the statistical fluctuations or

upside growth potentials seen on Kaua'i. In fact, due to growth in recent years, Kaua'i has now about reached its own carrying capacity pending completion of on-going development. If there are more visitor days and more money being spent annually over the long-term, the industry is healthy regardless of any other factors; such as mere arrival totals. The goal of many government planners is to increase 'days' and 'spending' while limiting (or even decreasing) arrival counts. Hawaii Tourism Authority Release (19-13), June 27, 2019.

Tourism Analysis Can Show You Who Your Visitors Really Are? Which markets are your primary source of visitors today? Do your top markets vary by season? Which markets aren't currently a primary source of visitors, but have high concentrations of households with the same consumer profile as your core visitors? Traditional tourism analysis methods may provide basic information on age range, income range, gender, and other key demographics, but these facts don't get to the heart of what makes your core visitor segments unique. What are your visitors' lifestyles? What are the best marketing channels to reach them? What types of shopping and dining options are they likely to enjoy? It will also focus on 1) identifying the most important experiences of inbound tourists as a destination; 2) identifying the preferences, likes, and dislikes of the tourists; and 3) to identify how those experiences and preferences affect satisfaction and future intention to return to Hawaii as a destination choice.

A descriptive study was conducted by Shapoval V. (2017) to analyze the behaviour of inbound tourists for the purposes of effective future destination marketing in Japan by using a data mining tool, namely, decision trees. The research results of approximately four thousand observations show the main motivation for visitors' future return is not driven by experiences had during their most current visit but rather by anticipated experiences in the future, such as experiencing hot springs or immersing themselves in beautiful natural settings. Historically, destinations have been considered to be specific geographical locations, such as cities or countries (Hall, 2000). On the other hand, there is a new trend in defining a destination as a concept that can be subjectively interpreted by 2 tourists based on their purpose, culture, past experiences, etc. (Buhalis, 2000). It is increasingly recognized that the core of any destination's successful performance is determined by satisfied tourists who intend to return in the future and who will recommend this destination to their friends and families (Chi & Qu, 2008; Assaker, Vinzi, & O'Connor, 2011; Valle et al., 2006).

The data mining method largely excludes the possibility of the intrusion of researcher subjectivity and is conducive to useful discoveries of certain patterns with large visitor data sets, providing governments and destination marketing organizations with additional tools to better formulate effective destination marketing strategies. Since this study is looking into destination experiences and attributes, we will use a definition of tourist satisfaction proposed by Pizam et al. (1978): tourist satisfaction is the result of interaction between a tourist's experience at the destination and the expectations he or she had about that destination.

Jingjing L., Lizhi X. (2018) discussed that the tourism-related big data fall into three primary categories: UGC data (generated by users), including online textual data and online photo data; device data (by devices), including GPS data, mobile roaming data, Bluetooth data, etc.; transaction data (by operations), including web search data, webpage visiting data, online booking data, etc. Carrying different information, different data types address different tourism issues. For each type, a systematical analysis can conduct from the perspectives of research focuses, data characteristics, analytic techniques, major challenges and further directions.

As an essential part of the travel industry, airports should also integrate analytics into their processes. Here, Big Data Analytics can be used to predict and optimize a large number of problems, like load distribution during peak hours, fraud and malpractice detection, route allocation or even intelligent reporting on the airports' general performance. Amsterdam's Schiphol Airport has reportedly fared well when it comes to customer satisfaction. The Schiphol Group, which operates the airport has invested in data science packages and a team of analysts fluent in R and Python to analyze, report and visualize the constant influx of data. They then use heat maps to gain insights on how travellers travel through the airport, even calculating how far they tend to stray from their departure gate Srishti Saha (2018). Tourists generate incredible amounts of information, before, during and after their trips. Consequently, tourism is an economic activity in which decision-making entails managing an increasing quantity of information without economic, political, social, or physical boundaries on both the supply and the demand side (Lemmetyinen & Go, 2009; Shaw & Williams, 2009).

A study was conducted by Eugeni A. (2017), In order to answer the questions - which is the best customer profile? Which are the greatest tourists for resorts? Which tourists show a higher level of expenditure? They used survey data from an expenditure survey that was carried out at the Palma de Majorca airport during summer 2009 when the visitors were leaving the island. Following these considerations, a total number of 1300 personal surveys were carried out that become in a final sample of 1217 observations once missing data and survey errors suggested the rejecting of 83 questionnaires.

References:

1. Big Data in Tourism: How Big Data Analytics can Help the Travel and Tourism Industry Grow Srishti Saha (2018)
2. Lemmetyinen, A. & Go, F.M. (2009). The key capabilities required for managing tourism business networks. Tourism Management, 30 (1), 31-40
3. Mak, J., Moncur, J., & Yonamine, D. (1977). Determinants of Visitor Expenditures and Visitor Lengths of Stay: A Cross-Section Analysis of U.S. Visitors to Hawaii. Journal of Travel Research, 15(3), 5–8.
4. Pizam, A., Neumann, Y., & Reichel, A. 1978. "Dimensions of tourist satisfaction with a destination area." Annals of Tourism Research, 5(3): 314-322.
5. Shapoval V., Wang., C. Hara T., & Shioya, H. (2017) Data mining in tourism data analysis: Inbound visitors to Japan. Journal of Travel Research.
6. Hall, C. M. and Hall, M., Tourism planning: policies, processes and relationships. Upper Saddle River, NJ: Pearson Education, 2000.
7. Buhalis, D. 1997 'Information technology as a strategic tool for economic, social, cultural and environmental benefits enhancement of tourism at destination regions.' Progress in tourism and hospitality research 3 (1): 71-93.
8. Chi, C. G. Q., & Qu, H. 2008. Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An integrated approach. Tourism Management, 29(4): 624-636.