



Chinese Individualist Travels in Taiwan: Must Go VS. Want to Go

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Abstract: This study examined the relationship between tourist attractions in Taiwan among backpackers from Mainland China. In particular, we collected itineraries shared online by backpackers. The collected data were analyzed using content analysis and SNA. Comparison of where they want to go and where they actually go reveals interesting insights that are helpful in order to examine preference and the decision-making process of Mainland Chinese backpackers. These results can assist tourism practitioners and policy makers to better understand the perception of Taiwan among Chinese backpackers. Managerial implications will be discussed.

Keywords: Backpacking, Tourist Experiences, Blogs, Self-Serve Travel, Individual Tour, Social Network Analysis

1. Introduction

Individualist travelers, or self-service travelers such as backpackers, differ from others who join travel tours in terms of planning the trip, since they need to consider factors such as travel routes and transportation on their own. This makes the research of self-service traveling very different from that of other forms of travel. To get the most of one's trip, individual travelers spend a lot of time searching on the Internet during the trip planning phase, reading others' comments and travel-related blogs.

Most previous studies on travel and tourism employed quantitative surveys to explore tourist attraction preferences, reduce bias, and increase "rigor" (Walle, 1997). Although survey data collected through self-reported questionnaires provide extensive information about tourist spots, they usually provide little information by which to analyze the relationship between these tourist spots. However, when planning an itinerary, the relationship between the tourist attractions, which include but are not limited to traits, distance, transport connections (Yang et al., 2009) and the best time to visit a spot are important details. This is especially true for backpackers with limited budget for travel expenses, who often thoroughly evaluate the relationship between the tourist attractions to get the best value (Ryan & Mohsin, 2001) and weigh and balance options before making

a decision on the final travel plan.

In sum, previous studies in the field of tourist attractions provide no systematic and comprehensive perspectives. This study, however, aims to explore the "network features" (Shih, 2006) between different tourist attractions through backpackers' actual travel blogs, which unfold overall impressions of the destinations (Banyai and Glover, 2012) via collected itineraries shared by backpackers.

We used the social network analysis (SNA) to explore the competitive, compensating, or interchanging relationship of different tourist attractions by collecting information from Chinese backpackers' travel blogs and observing their visiting sequences to these tourist attractions. Moreover, comparing the destinations of backpackers, the study also included content analysis to understand travelers' plans. Content analysis is widely used to classify textual material and make inferences from a text to create more relevant, manageable sets of data. A comparison of the results of SNA and content analysis provides interesting insight into the position of tourist attractions. For example, a tourist attraction can be a hot topic but may be rarely visited by backpackers. These findings can offer a systematic perspective on differences from the past and a more comprehensive assessment on the government's tourism policy making in terms of more diffused distribution of visit demand and consumption among tourist attractions (Shih, 2006).

2. Social Network Analysis in Tourism Industry

Travel is essentially the spatial movement of travelers (Yang et al., 2009). In a broader sense, it is a spatial change in activity locations, according to Lau & McKercher (2006). Many tourists simply follow a map to plan their itinerary, thus only considering the features, attraction, and facilities of the tourist spots, neglecting the relationship among those spots, including whether the tourist attractions are geographically adjacent, their features are similar or complementary, and the time is suitable or not to visit them (Yang et al., 2009). This approach may prevent a traveler from taking full advantage of the experiences available. Consequently, many tourism-related studies in recent years explore the relationship of different tourist attractions, utilizing a network perspective and a social network analysis. For example, Wang, Li, and Lai (2017) using social network analysis to test the core-periphery structure of Shanghai Disney Resort image.

SNA is a methodical analysis based on the assumption that the interaction among individual social members is relatively stable. In its core, network analysis is enhanced for the sociology field (Shih, 2006); it explores how people interact with and connect to each other and the interdependency of social members through one or multiple modes, such as values, kinship, and trades. This method analyzes the characteristics of a network and the position of the actors or objects of interest via relevant indicators (Shih, 2006). In the field of tourism industry, SNA is used to classify people into different groups. For example, Zhang and Thill (2017) using network analysis to detect individual-based activity-travel patterns. They found that SNA is an effective approach to detect cohesive communities by considering a set of trajectories in space and time. This way can provide the manager a different view of travel communities compared to many other clustering methods.

SNA examines the relationship (also referred to as edge, arc, tie, relation, links, and connection and is represented by lines) between actors (which are also referred to as nodes and vertices and are displayed by points) which might be indefinite in numbers and characteristics and draws a structural graph of the patterns of these relations among them (Baggio, 2008; Freeman, 2004). Actors, as the most essential element of the social network, could be people, matters or objects, organizations, and places. When forming relationships, actors have to form direct or indirect relationships through paths. SNA considers the structure and location of these relations to analyze the behavior of one actor or graph as a whole (Baggio, 2008). The closer the relationship is, the stronger (Baggio, 2008) the tie between the two actors is.

The most commonly used indexes in SNA include degree, density, clique, closeness centrality, betweenness centrality, and clustering coefficient (Baggio, 2008; Martino & Spoto, 2006). This study aims to understand the relationship among tourist attractions, which can be illustrated with two measures: "degree centrality" and "betweenness centrality."

Some central or main tourism destinations can be illuminated through the comparison of different centrality measures (D'Agata, Gozzo & Tomaselli, 2013). Degree centrality locates a certain actor and analyzes the number of nodes to which a particular node connects via links (Freeman, 1979). Two separate measures of degree centrality are demonstrated; namely, in-degree (the in-degree centrality measuring node's dependence) (Shih, 2006) and out-degree (the out-degree centrality measuring node's conductivity). These measures facilitate the comparison of each destination, referred to as beginning, core, or terminal nodes of tourist routes (D'Agata, Gozzo & Tomaselli, 2013). In contrast, the concept of betweenness centrality measures the importance or influence of a single destination pattern (D'Agata, Gozzo & Tomaselli, 2013). It examines the location of a node and a certain set of the shortest paths among node pairs from each edge to others, which gets through the particular node of interest (D'Agata, Gozzo & Tomaselli, 2013). It is useful to recognize the importance of a node as a corner that intersects pairs of other nodes in the network (Shih, 2006).

3. Research Method

This study used an SNA to explore the relationship among the tourist spots by following Chinese backpackers' itineraries in Taiwan. So-called tourism spots will be accepted as nodes, and Chinese backpackers' itineraries will be displayed by a series of lines. SNA is considered an appropriate method via its graphs that show the routes among tourist spots to understand the structural characteristics of itineraries (Shih, 2006).

This study searched for the travel blogs of Mainland Chinese backpackers who went to Taiwan. The most popular 40 travel blogs were selected from the biggest travel search engine in China – CTRIP. All texture data were inputted into an online Chinese texture analysis system. The key feature of this system is its ability to generate word frequencies for each attraction.

Moreover, we read each travel blog and scrutinized the contents manually, and we entered the information into the self-travelers' itinerary records. We also collected the longitude and latitude for each tourist attraction. All data were combined and organized using an Excel table to create a relationship network with the matching starting and ending tourist attractions.

Compilation of the collected information was very difficult, as each blog article provided a different level of detail. Some articles thoroughly depicted an attraction, whereas others provided such brief entries that only the names of the cities were mentioned. In order to combine all itineraries into a consistent scale, we settled on a guideline regarding whether the backpackers had to use public transport to move to another tourist attraction. The collected tourist attractions were consolidated into one tourist attraction if they were within walking distance. The arranged tourist attraction data were then entered into Gephi and NodeXL software for analysis.

4. Results

4.1. Hottest Attraction People Talk About

Before counting word frequencies, all blog articles were combined into a single file with a total of 503,540 words. The file was uploaded to a Chinese texture analysis system, and 6,074 different words were extracted. After manually deleting words unrelated to tourist attractions, 314 attractions were

collected. Table 1 lists the 20 most popular attractions. The results of the content analysis demonstrate that Kenting is the most popular spot, followed by Alishan, Jiufen, Tamsui, and Sun Moon Lake. The top five hot attractions account for more than 25 percent of the total attraction frequencies. The most popular 20 attractions account for more than 55 percent (3,348 times) of the attractions discussed.

Table 1. Top 20 popular attractions.

Rank	Attractions	Frequency	Rank	Attractions	Frequency
1	Kenting	420	11	Taroko National Park	135
2	Alishan	382	12	Beitou Dist	115
3	Jiufen	284	13	Tunghai University	102
4	Tamsui	270	14	Lu-Kang	96
5	Sun Moon Lake	225	15	Anping Fort	93
6	National Palace Museum	221	16	Fangliao	86
7	Shilin night market	157	17	Eluanbi Park	85
8	Yehliu Geopark	157	18	Green Island	84
9	National Chiang Kai-shek Memorial Hall	146	19	Chihsingtan Beach	77
10	Ximen Shopping Area	136	20	Ruifang	77

4.2. Backpackers' Itinerary

The following geographic diagram is the travel footprint map of the Chinese backpackers in Taiwan. The density of the lines represents the tourists' movement between different tourist attractions. The thickness of the lines represents how many times the tourists travelled along the routes. The diagram suggests that Chinese backpackers have various itineraries ranging from north to south and from plains to mountains. At least ten groups can be identified in the diagram. It is obviously that almost every Chinese backpacker will visit Taipei.

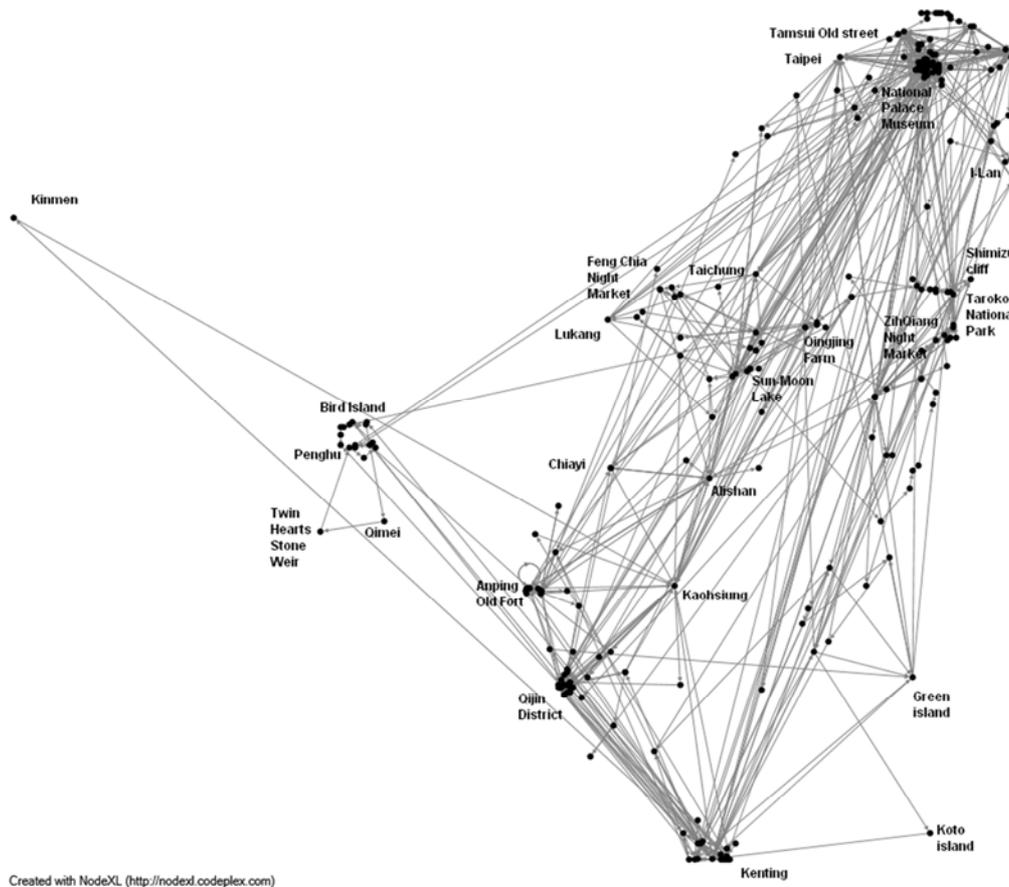


Figure 1. The travel footprint map of the Chinese backpackers.

However, it is difficult to identify the core tourist attractions on the diagram. This study computed three measures: in-degree centrality, out-degree centrality, and betweenness centrality. In-degree centrality denotes how many times the backpackers came to the tourist attractions from other attractions. Out-degree centrality, in contrast, indicates how many times the backpackers travelled to other tourist attractions from this attraction. Betweenness centrality indicates the importance of an attraction in terms of connectivity within a trip.

As indicated by in-degree centrality, attractions such as Tamsui, the Ximen Shopping Area, National Palace Museum, the Shilin night market, and Sun-Moon Lake are frequently visited. Five out of the top seven attractions are located in

Taipei city. Concerning with out-degree centrality, those with high in-degree centrality usually ranked high in this index, too. Sun-Moon Lake and Kenting are two main attractions that backpackers visit outside Taipei city and stay at least one night. Therefore, those attractions rank high in both indexes.

Since backpackers arrange their own transportation plans, they rely heavily on public transportation. Betweenness centrality indicates the number of shortest paths going through a given attractions. When an attraction is high in betweenness centrality, it lies between many of the attractions via their shortest paths and thus has great influence over where backpackers will go. As shown in Table 2, Kenting, Taroko National Park, and Tamsui are all very important interchanging tourist attractions for backpackers.

Table 2. In-degree, out-degree, and betweenness centrality.

Rank	In-degree Centrality	Out-degree centrality	Betweenness centrality
1	Tamsui	Tamsui	Kenting
2	Ximen Shopping Area, National Palace Museum	Shilin night market, Jiufen	Taroko National Park
3	Shilin night market, Sun-Moon Lake	Ximen Shopping Area, Sun-Moon Lake	Tamsui
4	Kenting	Kenting	Shilin night market
5	Chiang Kai-shek Memorial Hall	National Palace Museum, Anping Fort	Anping Fort

4.3. Comparative Analysis

Comparing the results of content analysis and that of SNA, we found that Kenting, Tamsui, Sun-Moon Lake, and Jiufen are important attractions for Chinese backpackers. However, although Alishan had been cited by Chinese backpackers up to 382 times, it is not within the top ten hot attractions according to in-degree, out-degree, or betweenness centrality. Yehliu Geopark ranked 8th in content analysis, which means Chinese backpackers mentioned this attraction many times online. However, it was only the 20th most visited attraction in terms of in-degree centrality. Anping Fort is an important interchanging tourist attraction in SNA analysis; however, Chinese backpackers mentioned it only 93 times in their blogs. Comparative analysis shows that some attractions are discussed by backpackers but do not draw many visitors. For example, Alishan is considered worth visiting but is far from major cities. In contrast, a place may not be mentioned often but is very important to a backpacker. Anping Fort, for example, receives moderate attention online but is an important interchange in a backpacker's trip.

5. Conclusion

This study examined the network relationship between tourist attractions by observing routes taken by backpackers by using SNA. Moreover, by counting the word frequencies of attractions, we can understand which attractions trigger more conversation. This study is important for at least two reasons. First, we demonstrate the importance of a network analysis for tourist attractions. For tourist attractions with high out-degree centrality, provision of travel information is important to match its starting-point attribute. Better accommodation services can be provided for tourist attractions with

ending-point attributes. Attention should be given to transportation planning considering tourist attractions with a higher degree of betweenness centrality and thus interchanging attributes.

Second, people's conversations are not necessarily indicative of where they will go. This is especially true for backpackers. Some places may not be hot destinations in tourist accounts, but they are essential spots for backpackers to connect to other tourist attractions. Comparing content analysis and SNA can help us to better understand the role of an attraction within the whole perspective of the visit.

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