Travel queries on cities in the United States: Implications for search engine marketing for tourist destinations

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ABSTRACT

Given the growing importance of search in online travel planning, marketers need to better understand the behavioural aspect of search engines use. Built upon a number of previous studies, the goal of this research is to identify patterns in online travel queries across tourist destinations. Utilizing transaction log files from a number of search engines, the analysis shows important patterns in the way travel queries are constructed as well as the commonalities and differences in travel queries about different cities in the United States. The ratio of travel queries among all queries about a specific city seems to associate with the "touristic" level of that city. Also, keywords in travelers' queries reflect their knowledge about the city and its competitors. This paper offers insights into the way tourism destinations are searched online as well as implications for search engine marketing for destinations.

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1. Introduction

Information technology (IT), particularly the Internet, has changed the way travel-related information is distributed and the way people search for and consume travel (Beldona, 2005; Buhalis & Law, 2008; Weber & Roehl, 1999; Werthner & Klein, 1999). In recent years, search engines have become a dominant source in consumers' use of the Internet to access travel products. For example, research conducted by the Travel Industry Association of America found that a substantial number of travelers use search engines for travel planning (TIA, 2005, 2008). Another study showed that search engines serve as the number one online information source for American families in the context of vacation planning (eMarketer, 2008). A series of reports by the Internet research firm Hitwise have documented the importance of search engines in terms of generating upstream traffic to hospitality websites, leading to direct bookings for these businesses (e.g., Hopkins, 2008; Prescott, 2006). As such, search engines can be seen as a powerful "gateway" for online consumers to access travel-related information as well as an important distribution channel for tourism destinations and businesses (Xiang, Wöber, & Fesenmaier, 2008).

Without doubt, the focus of the marketing and promotional efforts of tourism destinations has been steadily shifting toward the online world, particularly in the increasingly important domain of search (Buhalis, 1998, 2000; TIA, 2006; Wang & Fesenmaier, 2006; Werthner & Ricci, 2004). As a result, search engine marketing (SEM) has become one of the important strategic tools for tourism destinations and businesses to compete for consumers' attention on the Internet and engage direct conversations with their potential guests (Sherman, 2007; TIA, 2008). For example, tourism businesses have been using various forms of SEM programs and tactics including directory listing, keyword purchasing, meta tags, sponsored links, and search engine optimization (Google, 2006; Wang & Fesenmaier, 2006; Xiang & Fesenmaier, 2006). Especially, compared to traditional advertising channels SEM is growing much faster. For instance, advertisers in North America spent US$9.4 billion on search engines in 2006, showing a 62% increase from 2005 and 750% increase from 2002 (Elliot, 2006). There are also cases in which destination marketing organizations (DMOs) also successfully adopted SEM practices (Google, 2006).

SEM is a controlled communication process with online travelers. It requires a thorough understanding of travelers' needs and the ability to identify strategic responses in order to satisfy their needs. One of the conditions for search engine marketing is to understand search engine users' behaviour, particularly queries they use to search and contexts wherein these keywords are used (Moran & Hunt, 2005). For example, one of the strategies in SEM is to focus on what online consumers are searching for in order to make certain their websites are visible in response to search queries. However, little research with high relevance has been

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conducted on this emergent marketing practice to offer useful insights for the tourism industry.

Built upon a number of recent studies on travelers' use of search engines (Pan, Litvin, & O'Donnell, 2007b; Wöber, 2007; Xiang, Gretzel, & Fesenmaier, 2009; Xiang et al., 2008), the goal of this research is to provide an understanding of travelers' search behaviour by identifying general patterns in travel-related queries on cities in the United States. By doing so, it is hoped that this study will offer useful strategic insights in search engine marketing for tourist destinations. The rest of the paper is organized as follows: the Research Background section critically reviews relevant literature on travelers' use of search engines and travel queries; then, Research Questions are raised with respect to understanding general patterns in travel queries on cities; the Methods section explains the use of text mining techniques to extract and describe travel queries based on a number of search engine transaction log files; the Results section presents the findings of the study, followed by the section of Conclusions and Implications wherein the contribution of this study to our understanding of travel search behaviour and implications are discussed; finally, Limitations and Future Research directions are discussed.

2. Research background

The primary task in tourism businesses' marketing and promotional efforts is to ensure relevant information is made visible and accessible to potential visitors (Buhalis, 1998; Werthner & Klein, 1999). Within the context of online information search, search engines serve as an important tool that bridges the traveler and the tourism industry online. Like any other marketing practices, the success of search engine marketing, then, requires the marketer to have a good understanding of consumer behaviour in order to provide the information desired by these consumers. As such, it is argued that understanding how search engines work and how travelers use these tools provides one of the keys to successful search engine marketing programs for tourist destinations. This section reviews past literature on travelers' use of search engines for travel planning as well as the nature of travel queries. Limitations of past studies are discussed to provide the rationale for the present study.

2.1. Travelers' use of search engines and search engine marketing for destinations

The use of search engines to access a repository of information has long been studied in fields such as information science, information retrieval, computer science, as well as human–computer interaction (Marchionini, 1997). In general, the process of using a search engine can be understood as consisting of three steps (Kim & Fesenmaier, 2008): first, the user enters a query into the interface. Research has shown that three factors determine query formulation and include the user's understanding of how search engines work, his/her knowledge of the domain, as well as the search task itself; second, based upon the query, the search engine retrieves and returns a number of search results that "match" the search query and displays them in a pre-defined format; lastly, the subsequent interaction with a search engine involves the user's reading and understanding of the search results and then navigating back and forth between the result page and the following websites originated from those results. This implies, then, that the user makes a series of decisions based on the relevance of search results in relation to the information-seeking task at hand.

Given the growing important role of search engines in bridging the online consumers, especially travel information searchers, a subject has recently emerged with the emphasis on understanding the travelers' behaviour in the use of search engine. Following from the literature in fields such as information science, travelers' use of search engines can be seen as the interaction between travelers' information needs and the online tourism domain, which is facilitated and mediated by the technological interface (Pan & Fesenmaier, 2006; Xiang et al., 2008). A number of interesting models have been raised with respect to this interaction. For example, Pan and Fesenmaier (2006) argued that the congruence between the traveler's mental model and the online tourism domain is an important indicator of the "fitness" between the traveler's information needs and the information being searched. Xiang and Fesenmaier (2006) argue that travelers' use of search engines can be seen as the initial step in the persuasion process for tourism organizations and destinations, and the effectiveness of their marketing and promotional programs depends upon the persuasiveness of the messages they deliver through search engines. Further, Kim and Fesenmaier (2008) posited and empirically tested that the use of search engines can have a significant impact on the formation of one's first impression toward, and subsequently the overall evaluation of, a destination marketing organization's website.

As such, search engines have the potential to influence an online traveler's impression, intention, as well as attitude toward the website owned by a tourist destination and its tourism-related businesses, or the destination and businesses themselves. Generally speaking, when exposed to a list of search results, a number of factors can influence the traveler's evaluation and selection of search results. Particularly, the ranking of a specific search result link along with its relevancy to the search query is widely recognized as the most important factor in influencing the travel information searcher's behaviour. For example, the majority of search engine users do not look beyond the first three pages of search results (Henzinger, 2007). Also, the rank position of a specific search result has been shown to determine whether it will be reviewed and evaluated by an information searcher (Pan et al., 2007a).

Search engine marketing, or SEM, is a form of Internet marketing that seeks to promote websites by increasing their visibility in Search Engine Result Pages (SERPs) (Moran & Hunt, 2005). In fact, search engine marketing encompasses a number of techniques or strategies to improve and enhance the Website's visibility in SERPs (Moran & Hunt, 2005), including: 1) search engine optimization involves adopting methods with the focus on organic search that improve the ranking of a website when a user types in relevant keywords in a search engine. These include creating an efficient website structure, providing appropriate web content, and managing inbound and outbound links to other sites; 2) paid inclusion involves paying search engine companies for inclusion of the site in their organic listings; 3) Search engine advertising, or paid placement, refers to buying display positions at the paid listing area of a search engine. Google AdWords or Yahoo! Precision Match are the two most popular programs, wherein paid placement listings are shown as "Sponsored Links"; and, 4) Directory listing refers to the submission of the website to a directory-based search engine (e.g., Yahoo! Directory) to be shown under its subject category list. The success of all these endeavors requires a thorough understanding the way consumers use search engines for travel-related information.

While search engines are becoming increasingly important for online travelers, studies have shown that the visibility of many tourism business's websites to prospective visitors is diminishing. Recently, for example, Wöber (2006) found that many tourism businesses were ranked very low among the search results for travel-related queries. This makes it extremely difficult for users to directly access the individual tourism businesses and properties through search engines. In another study conducted by Xiang et al.