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Abstract. Based on spatial analysis and content analysis of the texts derived from the website of the Conferences on Electronic Business in Tourism held from 2008 to 2015, this study identified three major issues concerning the development of electronic business (e-business) in tourism in China. According to the results, we suggest that building strong and integrated partnership networks between universities, tourism companies, and tourism administrations, balancing the regional development of the e-business in tourism, and highlighting more on the sustainable and people-focused issues would be beneficial to the future development of e-business in tourism in China.

Introduction

Since the 1980s, information and communication technologies (ICTs) have been transforming the global tourism industry. Developments in ICTs have undoubtedly changed business practices and strategies as well as industry structures [1]. The establishment of Computer Reservations Systems (CRSs) in the 1970s and that of Global Distribution Systems (GDSs) in the late 1980s, followed by the development of the Internet in the late 1990s, have dramatically changed the best operational and strategic practices in the tourism industry. This has also been the case in China.

To date, the development of e-business in China’s tourism industry can be divided into four stages [2]. China realized the importance of e-business in tourism (hereafter ‘EBT’) in 1996 and 1997, and started promoting this new business model in 1998. From 1999 to 2008, China underwent a period of rapid development in EBT. Since 2008, the development of China’s EBT has entered an advanced stage, stimulated by the Olympic Games hosted in Beijing. To facilitate the healthy development of China’s EBT in the future, we need to understand its status quo from both industrial and academic perspectives.

Research on EBT in China started in 2000, focusing mainly on two themes. The first is the situation analysis of and the policy recommendations for China’s EBT [3, 4], and the second pays attention to the specific areas relating to EBT, which include information technology (such as virtualization technology and mobile technology) and algorithm for EBT [5], electronization of tourism enterprises, travel websites, consumer behavior in tourism (especially consumer information search behavior) [6], the competition of tourism online platforms and the pricing strategies adopted by the companies owning these platforms [7]. The majority of these studies examined the first theme; little research, however, provides valuable insights into the real issues concerning the development of EBT in China [6]. The cause of this research dilemma centers on that most published research findings did not discuss the issues relating to EBT from the industry’s perspective. This study tries to address this problem by interpreting the longitudinal data on e-business directly provided by the tourism industry.
Methodology

This study used mixed methods to examine the texts published by the organizer of the Conference on E-commerce in Tourism (http://event.uuidea.com/), a high-level conference devoted to discussing the critical issues relating to ETB in China. Founded in 2008, the Conference held twice a year, and from 2008 to 2015, different municipal governments (a total of ten) hosted the Conference 15 times. Most of the participants attending these conferences came from various industries relating to ETB (including the tourism industry and other supporting industries) and were staff from local governments. These conferences had attracted almost all of the leading enterprises in China’s tourism industry, such as Chinese Youth Travel Agency, China International Travel Agency, Ctrip, TripAdvisor, Tencent Travel and Alibaba. Thus, the themes of and the speeches delivered at these conferences expressed the common concerns of these companies. Additionally, these conferences also demonstrated that the major concerns of these enterprises were gradually changing over time, providing a set of reliable longitudinal data for analysis.

Data collection, processing and analysis were divided into three stages. First, the texts on the website of the Conference were extracted, which include the location for each conference, the title and theme of each conference, and the titles and summaries of the keynote speeches delivered at these conferences. Second, spatial analysis was used to identify the development hotspots of ETB in China. Finally, the word frequencies of this text sample and the partnership networks of the actors participating in these conferences were counted using ROST CM.

Results

Locations

Six provinces and one municipality hosted the Conference (Figure 1). Jiangsu held the Conference nine times, and the cities were Nanjing (five times), Suzhou (two times), Changzhou (one time) and Zhenjiang (one time). Other provinces and municipality hosted one time respectively, with the hosting cities being Shaoxing, Jinan, Yichun, Kunming, Chengdu and Beijing. It should be noted that the organizer of these conference is located at Nanjing; thus, Jiangsu Province (Nanjing City) was the most popular location for these conference. This situation itself also demonstrated that Jiangsu is one of the most developed regions in China in terms of the development of ETB [6].

![Figure 1. Provinces that Hosted the Conference from 2008 to 2015.](image)

Two development hotspots of ETB were identified. The first one was located at Eastern China, where overall economic and social development and the development of the tourism industry have reached an advanced stage. The second hotspot was Southwest China, where tourism resources are sufficient and the tourism industry has become the top priority of local governments.

513
**High-Frequency Words**

The high-frequency words of the sample demonstrated the major concerns expressed by the actors attending the conferences. Because many participants came from the leading enterprises in China’s tourism and e-commerce industries, these concerns reflected the critical issues and challenges relating to the development of ETB in China. Table 1 lists the words that appeared ten or more times. We identified five dominant themes according to these words: 1) The actors tried to use the mode of e-business (informatization, Internet, mobile app, search engine and smart tourism) to improve tourism marketing, and finally, to facilitate the development of the whole tourism industry. 2) The most enthusiastic participants were those coming from travel platforms, destinations, travel agencies, scenic areas, hotels and airlines. 3) In general, the leader responsible for e-business of a travel company was the deputy general manager, and the general manager also appreciated the importance of the company’s e-business. 4) The actors highlighted the operation and practice of ETB, paying attention to cooperation, integration, optimization, payment, distribution, sales, interacting with consumers and attracting international tourists. 5) Departments of tourism administration at different levels demonstrated their aspiration towards building a platform for the development of ETB.

<table>
<thead>
<tr>
<th>Frequency range</th>
<th>Words (Frequency)</th>
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<tbody>
<tr>
<td>30 and above</td>
<td>Tourism (417), Marketing (163), E-commerce (128), Convention (86), Website (84), Destination (81), Travel agency (62), Deputy general manager (57), Scenic area (51), China (42), Center (41), Operation (41), Experience (31), Construction (30), Cooperation (30)</td>
</tr>
<tr>
<td>20 to 29</td>
<td>Interactive (28), General manager (27), Smart (26), Tourism bureau (25), Director (24), Informatization (23), Practice (21), Tourist (21), Development (21), Platform (21), Search engine (20), Manager (20), Airline ticket (20), Head (20)</td>
</tr>
<tr>
<td>10 to 19</td>
<td>Application (19), Integration (18), Management (18), Distribution (18), Internet (18), Optimization (18), Exchange (17), Promotion (16), Trend (15), Tactic (15), Inbound (15), Skill (15), Technique (14), Travel (14), CITS (14), Services (13), Mobile (13), Enterprise (13), Reservation (13), Institution (13), Scheme (13), Cases (13), Selection (13), Channel (12), Market (12), Media (11), Sales (11), Resources (10), Tencent (10), Hotel (10), Advertisement (10), Excellent (10), Bloc (10), Payment (10)</td>
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**Partnerships between Different Actors**

Three level of partnerships were identified (Figure 2). The first level was a partnership between industries and governments and that between industries and academia. The second level was a partnership between the tourism industry and the sectors supporting ETB. The third level was a partnership between different sub-sectors of the tourism industry.

First, cooperation between industries and governments was strong (represented by the thick solid line in the figure), because local governments and tourism departments hosted the conferences or provided the organizer with adequate support. Furthermore, starting from the sixth session of the Conference held in Beijing in 2010, some officials from the tourism bureaus at different levels were invited to deliver keynote speeches. However, the relationship between industries and academia was weak (shown by the dotted line), with only three researchers delivering speeches at the conferences. This situation is consistent with the research dilemma about ETB in China [6]. At the second level, the partnership between the IT industry and the tourism industry was close, and that between the advertising and media industry and the tourism industry was relatively close. The financial sector and consulting firms had relatively weak relationship with the tourism industry. This demonstrates that the whole industry paid more attention to boosting effective and efficient operation to gain economic benefits. At the third level, tourism websites, destinations and travel agencies were keener on ETB than the hotel sector and airlines. The reason may be that the competition between tourism websites
new actors) and travel agencies (traditional actors) was intense; meanwhile, in addition to facing competition with their counterparts, destinations also need to manage tourist flows by information technology. On the contrary, the hotel sector and airlines promoted e-business earlier than the other sub-sectors in the tourism industry, and now they can distribute their products (rooms or tickets) on tourism websites.

![Figure 2. Partnership Networks of E-business in China’s Tourism Industry.](image)

Notes: I: Industries; G: Governments; A: Academia; WS: Tourism websites; DS: Destinations and Scenic areas; HG: Hotel groups; TA: Travel agencies; AL: Airlines; IS: IT support; AS: Advertising and media support; FS: Financial support; SS: Strategic support.

**Discussion**

The above results demonstrate to some extent the situation of the ETB in China. From a macro perspective, it can give us the development direction of China’s ETB; meanwhile, from a micro angle, it can explain why the Conference on E-business in Tourism was stopped and what the conferences focusing on ETB should do in the future.

**Building Strong and Integrated Partnership Networks**

Although the Conference on E-business in Tourism reflected the key concerns of the tourism industry, it stopped in 2015. We believe that two possible reasons can explain this result. First, the organizer with an official background may not be able to continue to afford the cost of hosting the Conference. Second, without the participation of academic researchers, the Conference cannot find new topics that will attract attendees interested in ETB. Thus, strong and integrated partnership networks between government officials, practitioners in the industry and researchers relating to ETB should be built in the future.

First, it helps to solve the problem of meeting expenses. Future conferences on ETB can form an organizing committee with the participation of universities, tourism companies, and tourism administrations. Co-funding and taking turns hosting conferences not only help alleviate the pressure on conference funding, but also help to recognize the concerns of different actors at close range.

Second, the participation of researchers in the conference on ETB will provide new ideas and human resources for the conference, solving problems for tourism bureaus at different levels of government and the tourism industry. Researchers interested in ETB can play the roles of promoting the development of ETB in three areas: 1) strategically diagnosing the challenges and opportunities from a comprehensive perspective, 2) changing the teaching and learning mode to cultivate more talents for ETB, and 3) developing innovative and operational methods for addressing the practical problems encountered by the industries and providing insightful research results for improving the operation of ETB. To achieve these objectives, it is necessary for researchers in the field of ETB to establish a direct and regular contact with the industries relating to ETB. Meanwhile, the organizer of
the conferences on ETB should invite more researchers (especially young researchers) to deliver speeches at the conference, which would contribute to mutual exchanges between enterprises and academia.

**Balancing Regional Development by Sharing New Knowledge**

Northeast and Northwest China are the less developed regions in terms of ETB. Unbalanced regional development provides both challenges and opportunities for the industries relating to ETB. In the near future, the most important thing for the tourism industry to conduct is to change people’s thinking about ETB in these regions. Conferences such as the Conference on E-business in Tourism can play an important role in disseminating the up-to-date information on ETB in these regions. The new partnership networks suggested above will help resolve such regional imbalances and promote the development of ETB in the Northeast and Northwest.

**Exploring New Themes and Issues on ETB**

We suggest that in addition to economic and technological issues, the industries relating to ETB should pay more attention to sustainable and people-focused themes in the future. From a macro perspective, the leaders in the ETB field should highlight the strategic issues about the sustainable development of ETB in China, create an atmosphere for innovation in e-business modes, and finally, enhance the competitiveness of China’s tourism industry in the world market. From a micro angle, fostering an employee-focused culture and a tourist-focused culture in a tourism organization in the context of informatization would improve the organization’s competitiveness. This, in turn, would enhance the sustainable development of China’s tourism industry.

**Summary**

In this paper, we identified the major issues faced by the industries relating to ETB in China and suggest that in the future, balancing the regional development, focusing on sustainable and people-focused issues, and building a strong relationship between government staff, industrial practitioners and researchers would benefit the development of ETB in China. Finally, due to the limited texts provided by the website of the Conference, we could not conduct a more comprehensive examination of the issues concerning development of e-business in China’ tourism industry. In-depth interviews with the leaders in the industries relating to ETB would partially overcome this limitation.

**References**