Verification of a destination image influence model for Taiwan bicycle tourism blogs for Chinese tourists

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The impact of information technology increases day by day. The bicycle tourism industry in Taiwan has started to actively adopt internet applications in its development. The content of internet information in commercial behavior is an even more important development issue. This study constructed the following influence models: blog information recommendation, website experience, message trust, and destination image, and 388 Chinese residents that had visited Taiwanese bicycle tourism blogs in 2010 were used as research subjects. A structural equation model (SEM) was applied to test the model hypothesis. The results verified that blog information recommendation, message trust, and website experience all directly and positively influenced the destination image awareness of Chinese tourists. The study then discussed the research results and proposed several suggestions regarding the management aspect and research methods.

Key words: Bicycle, blogs, destination image.

INTRODUCTION

Taiwan’s tourism market is closely related to China’s. According to a study on Chinese tourists by the Taiwan Visitors Association (2010a), Chinese consumers considered trips to Taiwan for six to eight days, the most attractive duration, hoped for unrestricted Cross-Strait independent travel, and most desired participation in Taiwan’s ecotourism. In 2010, Taiwan’s bicycle industry presented Taiwan Cycling New Travel Routing at the International Travel Expo in Hong Kong. This presentation was popular with judges and consumers from Hong Kong, Macau, and China and was awarded the “New Travel Routing: Most Impromptu Tour” prize (Taiwan Visitors Association, 2010b).

“Information recommendation” is an already much researched subject. Herr et al. (1991) observed that consumers are more inclined to rely on word-of-mouth recommendation than related information on the product itself. Smith (1993) proposed that recommendations from people with use experience or related experience had considerable credibility. Only by overcoming issues of lack of confidence in a website can consumers become real consumers. Therefore, customers will repeatedly visit websites that have already built up high confidence levels (Dayal et al., 1999; Gefen, 2000). Trust is a social concept relying on various content, and related significant issues depend on the interactions of the environment (Ganesan, 1994), which include two factors, behavioral intentions and cognition. Ricci (2002) suggested that e-commerce websites can apply recommendation systems that assist in decision making to suggest products and provide customers with information. Websites can construct long-distance live experiences and fantasies for consumers, as well as an online experience process and Internet trust that directly influence the consumers’ purchasing intentions (Castro et al., 2007).

Bart et al. (2005) emphasized that the professionalism of the information source is a material element in internet
trust. Therefore, the expertise and impartiality of a website is essential. Information recommendations on blogs can provide adequate information and services and stimulate trust in browsers on related information on the blog. The higher the level of trust, the more impact the information recommendations have on the browsers' behavioral intentions. Blogs satisfy the needs of consumers searching for information related to travel destinations and induce formation of a destination image. Destination image is generally considered a key factor in the tourism decision process (Birgit, 2001; Castro et al., 2007; Chen and Tsai, 2007; Gallarza et al., 2002). Therefore, this study proposed:

H1: The degree of blog information recommendations positively and significantly influences message trust.
H2: The degree of blog information recommendations positively and significantly influences destination image.
H3: Message trust positively and significantly influences destination image.

Reichheld and Sasser (1990) asserted that in the future, marketing must be considered from the angle of "people", and create divergence in "experience". In this, experience becomes a continuous operational index vital to marketing products and services. In the past, many researchers have explained various behaviors of consumers through experience marketing or customer experience. For example, Pine II and Gilmore (1999) used economic development and evolution as the starting point and regarded consumer experience as an economic commodity giving priority to service. Jones and Sasser (1995) and Turner (2001) thought that experience referred to comprehension and feelings from the senses and psyche produced after personal participation and firsthand experience of certain objects or matters. In other words, consumer experience originates from personal mental state and eventive interaction, and consumers desire not the product, but the experience of satisfaction. Combining strategic experience marketing and product management can intensify the product communication patterns of consumers, which is conducive to enhancing comprehensive customer experience marketing, increasing product value, and creating a complete structure of brand value (Tsaur and Wang, 2006). Jarvenpaa et al. (1998) indicated that a consumer's perception of the reputation and scale of a website is an important factor influencing their trust in the website. Warrington et al. (2000) suggested that if a website's management was well-known and trusted by customers, it would be significantly beneficial to the website's appearance trust. The user interface and perceptual experience of a website play an important role; the methods of display and browsing will be important factors influencing consumers' trust in websites (Sultan et al., 2002).

A study by Woodside et al. (2007) reported that in blogged events, the travel experience described by the bloggers also represented their most unusual and profound images of the destination. These stimulative events give advantage to the positioning of travel destinations; they can awake memories of previous trips in tourists and encourage word of mouth. Pan et al. (2007) pointed out that if blogs realistically presented travel experience, the browsers of the travel blog would be affected by the perspectives and feelings of the blogger tourist towards a travel location. These opinions would spread faster and more extensively through the Internet and virtually influence other people's impressions. Therefore, product information recommendations in blogs are easily accepted by internet browsers. They change original value cognition and transmit related messages, enhancing cognition and loyalty in related products. Therefore this study proposed:

H4: Website experience positively and significantly influences message trust.
H5: Website experience positively and significantly influences destination image.

The impact of information technology and the Internet increases day by day. Taiwan's bicycle tourism industry should start actively looking for business opportunities in this market. Understanding the related consciousness of Chinese tourists when they're browsing websites and blogs related to Taiwan's bicycle tourism industry can lay the foundation for increasing competitiveness in the Chinese market and in future marketing promotions. The range and structure discussed in this study focuses on how to employ blog information recommendation, message trust, and website experience to increase the number of Chinese tourists participating in bicycle tourism.

METHOD

Conceptual framework

This study proposed the following hypotheses and structures according to past studies and theories related to blog information recommendation, message trust, website experience, and destination image: (Figure 1).

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
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<tbody>
<tr>
<td>H1</td>
<td>The degree of blog information recommendations positively and significantly influences message trust.</td>
</tr>
<tr>
<td>H2</td>
<td>The degree of blog information recommendations positively and significantly influences destination image.</td>
</tr>
<tr>
<td>H3</td>
<td>Message trust positively and significantly influences destination image.</td>
</tr>
<tr>
<td>H4</td>
<td>Website experience positively and significantly influences message trust.</td>
</tr>
<tr>
<td>H5</td>
<td>Website experience positively and significantly influences destination image.</td>
</tr>
</tbody>
</table>

Participants

This study chose China as the area of research and implemented a survey by Internet questionnaire. In sampling strategy, stratified sampling was primarily used. Advertisement and questionnaire
filling-out was done in Chinese websites including sky, qq, and msn instant messaging platforms. Netizens also introduced others to fill out the internet questionnaire. After using IP addresses to eliminate repeat fill-outs and eliminating default questionnaires, the remaining questionnaires were statistically analyzed. The total number of valid questionnaires obtained was 338, of which 210 were from females (54.1%) and 178 were from males (45.9%). For education background, the majority of respondents were university graduates, totaling 222 (57.2%). The largest age group, 21 to 30 years old, had 255 subjects (65.7%), and the average monthly income group of RMB 1001 to 2600 was largest with 104 subjects (26.8%). 72.4% of subjects were single (281) and in terms of Internet usage, usage every day was the most common (184 subjects; 47.4%). Finally, for time spent online at any one time, 184 subjects (47.4%) went online for less than 30 min each time.

Instrument

This study adopted a structural questionnaire to obtain the required information to verify the study hypotheses. Based on the requirements of the study purpose, the content of the questionnaire was divided into five sections: personal information, blog information recommendation, website experience, message trust, and destination image. The five-point Likert scale was used for measurement in all the questionnaire items: strongly agree (=5), agree (=4), neither agree nor disagree (=3), disagree (=2), and strongly disagree (=1).

The four items in the blog information recommendation section were based on the blog information recommendation scale proposed by Herr et al. (1991) and Pan et al. (2007) and Cronbach’s α was 0.84. For the website experience section, the five forms of experience designated by Schmitt (1999). Sense, feel, think, act, and relate, were modified for travel blogs into four items, with Cronbach’s α of 0.79. The message trust aspect primarily referenced the message trust scales in the studies by Mayer et al. (1995) and Gefen (2000). There were five items in this section with Cronbach’s α of 0.82. The destination image section was based on the formation process of destination image suggested by Gunn (1989) and Fakeye and Crompton (1991). There were three items in this section with Cronbach’s α of 0.68.

Data analysis

This study utilized SPSS12.0 (statistic package for social science) computer software to execute a descriptive analysis and comprehend the sample structure. Cronbach’s α reliability coefficient was used to estimate the internal consistency reliability. A structural equation model (SEM) was applied for confirmatory factor analysis, parameter estimation, and hypothesis testing.

RESULTS

This study applied SEM to analyze the co-variation between the variables. The SEM consists of a structural model and a measurement model. The structural model was used to describe the relationships between latent variables, and the measurement model was used to describe the relationships between latent variables and measured variables. This study constructed a destination image causal model in two stages. In the first stage, a confirmatory factor analysis was first applied to evaluate the appropriateness of the measurement model. In the second stage, construction of the model was implemented.

Measurement model analysis

An ideal and adaptive measurement model must conform to the following conditions: (1) each factor loading must be statistically significant; (2) the composite reliability (CR) of the latent variables must be at least 0.60 (Hatcher, 1994; Lee and Scott, 2006). The results of the research revealed that the t value of every measured variable was over the critical value of 2.56, indicating that these parameters all reached the significance level of 0.01 and that each factor loading was statistically significant.
Table 1. Estimations for model measurement.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Critical value</th>
<th>Factor loading</th>
<th>t-value</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blog information and recommendations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Are blog descriptions of specific scenic areas or tourist attractions valuable? (λx1)</td>
<td>0.63</td>
<td>0.75</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>(2) Do blog introductions to specific tourist attractions or scenic areas always arouse my interest? (λx2)</td>
<td></td>
<td>0.69</td>
<td>11.49**</td>
<td></td>
</tr>
<tr>
<td>(3) Would I consider visiting a tourist attraction or scenic area based on recommendations of this area in travel articles on blogs? (λx3)</td>
<td></td>
<td>0.69</td>
<td>11.49**</td>
<td></td>
</tr>
<tr>
<td>(4) Before visiting a tourist attraction or scenic area, would I refer to others' blog comments regarding this area? (λx4)</td>
<td></td>
<td>0.63</td>
<td>10.76**</td>
<td></td>
</tr>
<tr>
<td><strong>Website experience</strong></td>
<td>0.69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) When browsing websites, is it important for the websites to have audio-visual effects? (λx5)</td>
<td></td>
<td>0.69</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>(2) Is it important for the website content to be appealing? (λx6)</td>
<td></td>
<td>0.72</td>
<td>11.91**</td>
<td></td>
</tr>
<tr>
<td>(3) Is the degree of comfort and convenience important for arranging an itinerary? (λx7)</td>
<td></td>
<td>0.80</td>
<td>12.77**</td>
<td></td>
</tr>
<tr>
<td>(4) Are the trip arrangements important? (λx8)</td>
<td></td>
<td>0.67</td>
<td>11.21**</td>
<td></td>
</tr>
<tr>
<td><strong>Message trust</strong></td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Am I satisfied with the information provided by the website? (λy1)</td>
<td></td>
<td>0.75</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>(2) Do I believe the comments/recommendations on websites from mainland Chinese officials or business owners regarding tourist attractions or scenic spots? (λy2)</td>
<td></td>
<td>0.71</td>
<td>12.88**</td>
<td></td>
</tr>
<tr>
<td>(3) Do I feel that the creators and administrators of the websites want to provide accurate information? (λy3)</td>
<td></td>
<td>0.69</td>
<td>12.41**</td>
<td></td>
</tr>
<tr>
<td>(4) If the information and recommendations on a website seem to indicate that the interests of mainland Chinese are the site's prime considerations, does this make the website more reliable? (λy4)</td>
<td></td>
<td>0.56</td>
<td>10.08**</td>
<td></td>
</tr>
<tr>
<td>(5) Do I feel that the information on Taiwanese websites is accurate and honest? (λy5)</td>
<td></td>
<td>0.71</td>
<td>12.85**</td>
<td></td>
</tr>
<tr>
<td><strong>Destination image</strong></td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) After browsing related websites, blogs, and BBS, am I motivated to participate in cycling tours in Taiwan? (λy6)</td>
<td></td>
<td>0.66</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>(2) If browsing websites, blogs, and BBS arouses my interest to participate in cycling tours in Taiwan, would I take the initiative to search for more information regarding this event? (λy7)</td>
<td></td>
<td>0.75</td>
<td>10.03**</td>
<td></td>
</tr>
<tr>
<td>(3) Would the recommendations on websites, blogs, and BBS inspire me to invite my family and friends to participate in cycling tours in Taiwan? (λy8)</td>
<td></td>
<td>0.65</td>
<td>9.57**</td>
<td></td>
</tr>
</tbody>
</table>

** p< 0.01.

From this, it can be verified that these measured variables can reflect their corresponding latent variables. Table 1 also shows that the values of composite reliability in all four latent variables are over the
critical value of 0.60. In conclusion, the measurement model of this study is acceptable.

**Structural model analysis**

**Full model-fit evaluation**

The suitability indexes of full model-fit results were: $\chi^2 = 113.40$ (df = 98); RMSEA (0.02) and RMR (0.06) were both under 0.08; NFI (0.97), NNFI (0.98), CFI (0.98), GFI (0.96), and AGFI (0.95) were all over 0.90; $\chi^2 / df = 1.16 < 3$. The results indicated that the model was acceptable.

**Linear structural relationship analysis**

The results of this study revealed that website experience, blog information recommendation, and message trust all positively and significantly influenced destination image. The direct effects of blog information recommendation, website experience, and message trust on destination image were 0.22, 0.26, and 0.25, respectively (Figure 2).

**DISCUSSION**

**Relationship analysis**

**Analysis of relationship between blog information recommendation and message trust**

The results indicate that blog information recommendation positively influences message trust, which supports the $H_1$ of this study. A further analysis showed that blog browsers also generate positive message trust in the travel blog website from the introductions, descriptions, and recommendations. This is in accordance with the study of Woodside et al. (2007); the travel experience described by the bloggers also represented their most unusual and profound images of the travel destination. This is advantageous in the positioning of the destination and arouses previous travel images in tourists or constructs related images. Therefore, destination images or evaluations of tourists are influenced by the experience and recommendations of past tourists. However, sources, professionalism, and good intentions are the basic conditions of internet trust (Bart et al., 2005). Hence, establishment of credibility and brand in websites related to Taiwan’s bicycle tourism market are essential.

**Analysis of relationship between blog information recommendation and destination image**

The results indicate that blog information recommendation positively influences destination image, which supports the $H_2$ of this study. This shows that blog browsers trust blog content, travel destination recommendations, activity introductions and descriptions, etc. That is to say, blog browsers personally generate trust in blog recommendation content when it satisfies their informational needs. This corresponds to the opinions expressed by Shek et al. (2003); website visitors evaluate credibility with standards such as the source of the endorsement, the relevance of the provided information, and the content of the product and service. The study results and
the content of the questionnaire items show that the professionalism, diversity, and credibility of blog content are important factors influencing Chinese people to come to Taiwan and participate in bicycle tourism. Pan et al. (2007) suggested that if blogs realistically presented travel experience and provided tourists with related experiences and images, they could deeply influence the cognition and value of browsers. This blog information may spread rapidly and extensively through the internet and imperceptibly influence the impressions of user groups. Therefore, the more professional, diverse, and credible the content of a blog, the more the message recipients will trust it, which improves the brand image, loyalty, and development of Taiwan's bicycle tourism market (in this particular case).

**Analysis of relationship between message trust and destination image**

The results of this study support our $H_3$. The message trust of a blog significantly and positively influences destination image. This indicates that if travel blog browsers trust the content of a blog, the blog easily influences their destination image. This corresponds with Gefen's (2000) ideas that in commercial behavior of e-commerce today, credit evaluation of websites is the foundation of e-commerce development as well as consumer behavior. However, it is worth noting that from the item contents of the questionnaire, Mainland Chinese still pay considerable attention to the recommendations of Chinese authorities and local industry. This has indirect impact on the image of participating in Taiwan's bicycle tourism. This perspective is consistent with Kelley and Thibaut (1978); when facing social complexity, individuals will restrain themselves and predict related social phenomenon and behavior by their original familial and social standards. Trust is used as the foundation to predict relations when rules and customs differ. Therefore, building up the word of mouth and brand image of Taiwan's bicycle tourism to actively promote related travel schemes and complementary administration measures with official Chinese tourism organizations is the groundwork that needs to be done to develop Taiwan's bicycle tourism market.

**Analysis of relationship between website experience and message trust**

The study results support the $H_4$ in this study, in which website experience significantly and positively influences message trust. A further analysis revealed that in addition to viral appeal, audio-visual effects, and enjoyment value being the main influences on destination image themselves, they also have impact on the image, motive, and interest of bicycle tourism in Taiwan. Gunn (1989) was the first to suggest that destination image consisted of organic image, induced image, and complex image. Destination image is considered as possessing many aspects, including the cognitive image, the emotional aspect, and the overall image (Bigné S’anchez, and S’anchez, 2001). Therefore, destination image is deeply influenced by promotions, reputation, tourist management opinions, and comparisons within the trade in the past. Individual cognitive beliefs also determine whether or not there is satisfaction towards the travel destination, and these expectations further decide the further behavior of the tourists (Pearce, 1982). On these grounds, website experience can stimulate more related images using experiences such as viral appeal, audio-visual effects, convenience of the overall design, and the attraction of the subject so as to embed the information in the cognition and psyche of browsers.

**Suggestions**

The verified results of this study indicate that the descriptions, process participation, and recommendation of travel destinations on Taiwanese bicycle travel websites and blogs can effectively influence the destination image and message trust of the browsers, but still require improvements in the management aspect and research methods. Aiming at the problems mentioned, this study proposes concrete strategies and suggestions for future research.

**The blog information recommendation aspect**

The results of the overall behavior model show that blog
information recommendation is the strongest element influencing message trust. Thus, for the blog information recommendation aspect, this study proposes the following strategies:

1. Implement classification management of the people doing the recommending; aim separate explanations towards recommenders from China and those from other countries, and enable browsers from the China area to clearly and conveniently view recommendation content from different groups according to their own individual trust in Taiwan’s bicycle tourism market. Chinese browsers can learn about Taiwanese culture and related travel routes through recommendations from different countries, which can reduce mistrust and improve objectiveness to increase the needs and motives of Chinese browsers.

2. Develop recommendation system software; with the swift development of technology, completing purchasing decisions in seconds is a contemporary social trend. How to apply diverse, simple, and easy-to-use recommendation systems and enable browsers to quickly understand the present status of the recommendations in short periods of time is unmistakably a new direction. Therefore, Taiwanese bicycle tourism websites and blogs should actively develop multimedia data systems to complete classification and graphics showing multiple recommendation indexes. They should provide simple Chinese services, market using keywords, and solicit more communities and organizations to construct complete basic customer bases and market entry strategies.

The message trust aspect

The results of the overall behavior model show that website experience and blog information recommendation influences destination image using the medium effects of message trust. Therefore, this study proposes the following strategies for the message trust aspect:

1. Accelerate the promotion of inter-city connection and cooperation; in order for Taiwan’s bicycle tourism market to penetrate the China area, it can first start through cooperation with provincial and autonomous region tourism bureaus in cities. By promoting bicycle tourism as well as related cultural camps and activities, the connected development of bicycle tourism and sightseeing tourism can be understood. This can reduce the obstacles for Chinese citizens to participate in Taiwan’s bicycle tourism in future years.

2. Set up interactive message boards on websites; actively listen to the questions and needs of Chinese consumers and voluntarily provide added value. Only through this can opportunities to advance market development of message trust of customized services be increased. Secondly, periodic questionnaires should be implemented to understand market conditions and the mindset of consumers. Exclusive and limited quality goods can be given in the process of product placement and to stimulate more opportunities for participation and brand loyalty.

The website experience aspect

The results of the overall behavior model show that website experience is the strongest element influencing destination image. Therefore, this study proposes the following strategies for the website experience aspect:

1. In product design: planning the market orientation of exclusive tourism routes is the key to establishing a brand. First, design a unique feature exclusive to Taiwan’s bicycle tourism market. This will enable Chinese bicycle tourist consumers to place trust in the uniqueness of Taiwan’s bicycle tourism market advantages and the irreplaceable experiences it provides. For example, attractions with Taiwanese cultural features and special food culture can be chosen for Chinese bicycle tourist consumers to experience different life styles. Also, categorize the backgrounds of Chinese people participating in bicycle tourism. Designing routes with different levels of diversity, excitement, and prices can provide different consumer classes with the chance and choice to participate. This satisfies the needs of consumers and improves their satisfaction and loyalty towards the market.

2. In marketing: increase the use of multimedia applications. Using 3D technology, sound effects, video, and animation to display an interactive and two-way behavior model can strengthen sensory experience and create a new method of communication. Additionally, websites should increase the application abilities of information technology. As information technology has progressed from PCs, Wintel, NB, netbooks, and e-books to cloud computing technology, it has quickly changed the lifestyles of consumers, such as their consumption patterns and reading methods. Therefore the browsing and functions of websites should also coordinate with this to enhance market opportunity and development.

Future research aspects

Schmitt (1999) pointed out that consumers make emotional and rational policy decisions after experiences. The decisions, however, depend on the complete consumption environment and not any singular situation. Therefore, in the future, categorized explanations should be used in the experience aspect to clarify the important related elements and indexes of the experience process, such as browsing experience, participation experience of online events, website function experience, and experience of travel participation behavior. Specific analyses of the cognitive experience and strength in different
aspects can allow the precise understanding of the type of consumer participation and consumer behavior models. Hawkins et al. (2001) addressed the concept of social belonging to describe the interactions and group behavior between society and individuals, which form the important factors of attachment, loyalty, solidarity, and preference. This is in accordance with this study; Chinese browsers give precedence to recommendations by the Chinese authorities, industry, and citizens or the consideration of their own needs and benefits. Only after gaining their trust will direct influence be brought to bear on the image and motive of bicycle tourism in Taiwan. Hence, future questionnaire items in the blog information recommendation aspect can extend to analyses related to the concept of social belonging. Finally, McKnight et al. (1998) divided trust into two dimensions: trusting intentions and trusting beliefs. Future questionnaires can design items oriented towards the interpretation and analysis of these two dimensions, such as “the credibility of this website is good, so I believe all the content” or “I only believe the recommendations of my compatriots”. From this it can be understood whether the level of trust in consumers originates actively or passively, which is an important index in the influence of website experience, blog information recommendation, and destination image.

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