The Influence of Electronic Word-of-Mouth on the Decision-making of Online Travel Booking

Chunyan Wang
College of Business Administration, Jilin Engineering Normal University
No.3050 Kaixuan Road, Kuancheng District, Changchun City, China
wangchunyan9010@163.com

Abstract—In this paper, perceived value is used as an intermediate variable to test the impact of Electronic Word-of-Mouth (eWOM) on the tourists’ decision-making of online travel booking. It builds a conceptual model and carries out empirical research, on the basis of sample investigation, analyzes data by applying the structural equation. The research conclusion shows that the quality and credibility of eWOM has a significant promoting effect on the perceived value of tourists’ eWOM; the relevance, comprehensiveness and timeliness of tourists’ eWOM have significantly positive correlation with the perceived value of tourists’ eWOM; the attraction of tourists’ eWOM has a significant impact on the perceived value of tourists’ eWOM; the tourists’ perceived value of eWOM is positively correlated with online travel booking. On the basis of the above, some useful suggestions are put forward for the online travel agencies.

Keywords—Electronic Word-of-Mouth (eWOM); Online Travel Booking; Decision-making; Influence; Suggestion

I. INTRODUCTION

With the advancements of Internet technologies, increasing numbers of travelers are using the Internet to seek destination information and to conduct transactions online. According to “Research Report on China Online Travel Booking Market in 2014” released by China Internet Network Information Center (CNNIC) shows: the number of Chinese netizens who has booked flights, tickets, hotels, train tickets or package tours on the Internet reached 222 million by December 2014, up 40.96 million from 2013, the rate of growth was 22.7%, and the utilization rate of Internet users increased from 29.3% to 34.2%. Meanwhile, the number of users who book tickets, hotels, train tickets or package tours by mobile phone to reach 134 million, increased 88.65 million from 2013, the rate of growth was 194.6%, the usage rate of Internet users increased from 9.1% to 24.1% [1]. These data show that tourism e-commerce has been rapidly developed in China, relying on developing Internet technology, online travel booking has been accepted as a new type of e-commerce by consumers. Due to the characteristics of price and target population in the market of online travel booking, consumer groups are more likely to be affected by word-of-mouth when they choose the products. Concerned about the effect of eWOM, researched the factors which influences eWOM and these factors how to influence the consumer’s making-decision of online travel booking, all of these studies will have a profound impact on the rapid development of online travel booking marketing.

II. DEFINITION, THEORETICAL MODEL AND RESEARCH HYPOTHESES

A. Definition of Electronic Word-of-Mouth

Word of mouth (WOM) is the process of conveying information from person to person and plays a major role in customer buying decisions (Richins & Root-Shaffer, 1988) [2]. Electronic word-of-mouth (eWOM) can be defined as all informal communications are made by potential, actual, or former customers about the usage or characteristics of particular goods and services, or their sellers via the Internet. (Hennig-Thurau, Gwinner, Walsh,&Gronli, 2004; Goldsmith, 2006; Lazarfeld et al.,1944). Compared with the traditional word-of-mouth, eWOM mainly highlights the application of Internet media. It makes a lot of consumer’s word-of-mouth expressed in written form, so that it has a measurable.

B. Theoretical Model

Consumer’s decision-making behavior refers to all activities of consumers to purchase some goods for meeting certain needs, is the external manifestation of consumers’ psychology [3]. Davis (1989) researched the cognition and its relationship to emotion and technology use, and proposed TAM that believed the customer’s behavior of using the technology determined by behavioral intention [4]. Behavioral intention is also determined by the individual’s attitude to the using system and the usefulness of perceived information system, in order to explain and predict the impact of information technology use on behavioral intention of customer. With the development of Internet, the TAM and its related derivative models are often used to explore the consumer’s acceptance behavior of e-commerce, online shopping and so on. Sussman and Siegal (2003) integrated the elaboration likelihood model (ELM) and TAM [5], and proposed the information adoption model (Fig. 1).

![Fig. 1 The information adoption model](image-url)

They believed that the key affecting factor for the final adoption of eWOM information was the consumers’ perception of the value of eWOM information. For defining the basic framework of eWOM information adoption, the quality and the source credibility of eWOM are regarded as
the antecedent variable of consumers’ perceived value of eWOM. This research adopts some indicators to measure the quality of eWOM, such as comprehensiveness, timeliness and relevance, and to reflect the source credibility of eWOM by the indicators of professionalism, reliability and attractiveness.

C. Research Hypotheses

At present, major tourism websites and some official websites of tourism enterprises have set up the function of online booking, and also allowed their members and customers to publish some related evaluations and references about their tourism products. Due to the intangibility, inseparability, variability and perishability of tourism products, customers can not experience the products in advance of purchasing them. Therefore, the behavior of customer’s travel booking have high risks, which also make the customer’s booking intentions affected easily by other consumers’ consumption experience.

1) Quality of eWOM: The quality of eWOM refers to the value of eWOM information that the recipient can feel, and represents the convincingness of arguments and opinions in the information of eWOM. The eWOM information recipients search for relevant information to read in the web, to determine the quality of eWOM information by the content of it, and then from a new perceived value of eWOM. Therefore, we put forward to the hypothesis:

H1: the quality of eWOM information is positively correlated with the customers’ perceived value.

According to an empirical research on the website satisfaction model by McKinney [6] and others, its conclusion is that the most important three dimensions of eWOM information are accuracy, timeliness and relevance. Therefore, this study selects them as the main dimensions to assess the quality of eWOM information. So this research proposes the hypotheses:

H1a: the relevance of eWOM information is positively correlated with the customers’ perceived value.
H1b: the comprehensiveness of eWOM information is positively correlated with the customers’ perceived value.
H1c: the timeliness of eWOM information is positively correlated with the customers’ perceived value.

2) Credibility of eWOM: As a lot of eWOM spread anonymously, tourists often judge the reliability and professionality of eWOM firstly when they consider adopting the eWOM. When they believe that the eWOM information is published by the high credibility publishers, they will have a strong sense of perceived value on it. So the hypothesis is posed:

H2: the source credibility of eWOM information is positively correlated with the customers’ perceived value.

H2a: the source reliability of eWOM information is positively correlated with the customers’ perceived value
H2b: the professionality of eWOM information is positively correlated with the customers’ perceived value
H2c: the attractiveness of eWOM information is positively correlated with the customers’ perceived value

3) Tourist’s Perceived Value of eWOM and Tourist’s Intention of Online Travel Booking: Perceived value of eWOM refers to the perception that recipient can enhance or improve the utility after reading the word-of-mouth. The eWOM information of those tourist attractions can trigger the tourists’ perceived value and help them make better travelling decision. When tourists feel that the eWOM information is especially useful for them, they will have a strong willingness to adopt it and to promote their online travel booking behavior. Therefore, the research puts forward to the hypothesis:

H3: the tourist’s perceived value of eWOM is positively related to the decision-making of online travel booking.

In summary, this research constructs the model about the influence of eWOM information on customer’s decision-making of online travel booking, as shown in Fig. 2.

Fig. 2 The model about the influence of eWOM on online travel booking decisions

III. RESEARCH DESIGN AND DATA ANALYSIS

A. Questionnaire Design and Investigation Method

The main variables of research and the source of the items are shown in TABLE I.

<table>
<thead>
<tr>
<th>Research variables</th>
<th>Cronbach’s Alpha</th>
<th>KMO</th>
<th>Items source and references</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of eWOM</td>
<td>0.852</td>
<td>0.731</td>
<td>Citrin [7]</td>
</tr>
<tr>
<td>Relevance of eWOM</td>
<td>0.764</td>
<td>0.724</td>
<td></td>
</tr>
<tr>
<td>Comprehensiveness of eWOM</td>
<td>0.753</td>
<td>0.653</td>
<td></td>
</tr>
<tr>
<td>Timeliness of eWOM</td>
<td>0.916</td>
<td>0.686</td>
<td></td>
</tr>
<tr>
<td>Credibility of eWOM</td>
<td>0.721</td>
<td>0.702</td>
<td>Wixom &amp; Todd [8]</td>
</tr>
<tr>
<td>Source of eWOM</td>
<td>0.874</td>
<td>0.711</td>
<td></td>
</tr>
<tr>
<td>Professionality of eWOM</td>
<td>0.865</td>
<td>0.760</td>
<td></td>
</tr>
<tr>
<td>Attractiveness of eWOM</td>
<td>0.768</td>
<td>0.615</td>
<td></td>
</tr>
<tr>
<td>Tourist’s perceived value</td>
<td>0.876</td>
<td>0.793</td>
<td>Wu &amp; Shaffer [9]</td>
</tr>
<tr>
<td>Tourist’s intention of online booking</td>
<td>0.860</td>
<td>0.803</td>
<td>Bailey &amp; Pearson [10]</td>
</tr>
</tbody>
</table>

In order to ensure the scientificity and rationality of questionnaire, at beginning of survey, 100 college students
were investigated with the random sampling method as the preliminary research, obtained 94 valid questionnaires, and analyzed the validity and reliability of questionnaire. According to the feedback information and its analysis results from questionnaire, we revised and adjusted the questionnaire. The formal investigation is a combination of field survey and e-mail survey. The main objects of this survey were the tourists who had the experience of online travel booking or had the intention to online travel booking. In principle, they had the experience of reviewing the tourist’s eWOM. The work of investigation began from September 16, 2015, which lasted 30 days. 320 questionnaires were issued and 237 were taken back among which 203 were valid. The basic information of respondents is shown in TABLE II.

TABLE II
BASIC INFORMATION OF RESPONDENTS

<table>
<thead>
<tr>
<th>Measuring items</th>
<th>Classification</th>
<th>Number of people</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>93</td>
<td>45.8</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>110</td>
<td>54.2</td>
</tr>
<tr>
<td>Age</td>
<td>&lt;18</td>
<td>30</td>
<td>14.8</td>
</tr>
<tr>
<td></td>
<td>18~25</td>
<td>81</td>
<td>39.9</td>
</tr>
<tr>
<td></td>
<td>&gt;25</td>
<td>92</td>
<td>45.3</td>
</tr>
<tr>
<td>Educational level</td>
<td>Below bachelor’s degree</td>
<td>72</td>
<td>35.5</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s degree or above</td>
<td>131</td>
<td>64.5</td>
</tr>
</tbody>
</table>

After collecting the questionnaires, the invalid questionnaires were eliminated firstly, and then the reliability and validity of questionnaire were analyzed. The detailed reliability and validity test of the variables are shown in TABLE I. From the internal validation results of the model measure, the cronbach’s alpha coefficient was 0.7 or above, that means the internal consistency was good. We made the Bartlett’s test, and the KMO statistical value was over 0.6. The reliability and validity of questionnaires were good.

B. Data Analysis and its Results

The data analysis and statistics were made by using the software of SPSS20.0 and Amos 16.0. The overall well-fitting validation data of model measure are shown in TABLE III. Generally, if RMSEA is less than 0.1, which indicates that the fitting is better, and if RMAES is less than 0.05 that the fitting is very well. When the absolute well-fitting goodness index GFI, AGFI, IFI, TLI and CFI is more than 0.9 respectively, it is generally considered that the fitting effect of this model is better; if the values of these indexes are between 0.8 and 0.9, it is considered that the fitting effect can be acceptable. From the fitting results of model, RMSEA is 0.023, which shows that the well-fitting goodness of model measure is very good; the index GFI, AGFI, IFI, TLI and CFI also show that the measure model can be accepted.

TABLE III
MAIN FIT INDEX OF MODEL

<table>
<thead>
<tr>
<th>Overall model</th>
<th>GFI</th>
<th>AGFI</th>
<th>IFI</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fit index</td>
<td>0.901</td>
<td>0.867</td>
<td>0.923</td>
<td>0.834</td>
<td>0.812</td>
<td>0.023</td>
</tr>
</tbody>
</table>

The fitting results of the structural equation can be analyzed and tested hypotheses in the model, and the detailed results are shown in Fig. 3.

The load factors that output from the structural equation can test hypothesis that was previously proposed. The quality of tourist’s eWOM and the tourist's perceived value has significantly positive relationship (fitting factor is 0.77); the credibility of tourist’s eWOM is positively related with the tourist’s perceived value (fitting factor is 0.43), so H1 and H2 are supported. The relevance, comprehensiveness, timeliness of tourist’ eWOM information is positively related with the quality of tourist’s eWOM (fitting factors are 0.33, 0.66 and 0.60 respectively), and have a significant positive relationship with tourist’s perceived value (fitting factors are 0.33 * 0.77, 0.66 * 0.77 and 0.60 * 0.77), hence H1a and H1b are supported. The reliability and professionalism of tourist’s eWOM has no significant effect on the credibility of tourist’s eWOM, due to the fitting factors of are respectively 0.07 and 0.09. At the same time, The reliability and professionalism of tourist’s eWOM has no significant effect on the tourist’s perceived value of eWOM, the influence factors are 0.07 * 0.43 and 0.09 * 0.43 respectively, so that H2a and H2b could not be supported by the results. From a theoretical point of view, H2a and H2b should be supported, but the empirical results have failed to support. Through deeply analyses the questionnaires, we found that it is not very easy to judge and identify the source reliability and professionalism of eWOM for the tourists. At present, the supervision of eWOM is not very mature. Some eWOM information is true expression, but some of them may be competitive exclusion and venting their anger, so that the visitors are difficult to distinguish clearly them, eventually H2a and H2b are not supported by the results. The attractiveness of tourist’s eWOM information has significant effect on the credibility of tourist’s eWOM, its fitting factor is 0.54, while he attractiveness of tourist’s eWOM information has significant effect on the tourist’s perceived value of eWOM, its fitting factor is 0.54 * 0.43, so H2c is supported. The tourist’s perceived value of eWOM is significantly positive correlated with the tourist’s intention of online travel booking, so H3 is supported.

IV. DISCUSSION AND APPLICATIONS

The eWOM has a strong influence on tourist’s behavior of online travel booking, while the spread of eWOM information is almost no cost. Thus, when the online travel enterprises
carries on the marketing for their tourism product, they should pay more attention to the strong influence of the eWOM on the tourist’s booking behavior.

A. Focus on the Dissemination Effect of Tourist’ eWOM

According to the literature reviews and research results, we believe that eWOM has a great influence on the decision-making of online travel booking. After searching the target product, in addition to the properties of commodity, the network users also browse the comments and other eWOM information. The eWOM is a double-edged sword that can quickly enlarge the positive or negative effects. Tourism products with good eWOM are often favored by tourists, and the negative eWOM will greatly reduce the purchase intention of tourists. Therefore, the tourism enterprises should do their services well, to enhance the quality of their eWOM, and thus to improve the tourist’s perceived value of eWOM and win a positive eWOM.

B. Improve the Quality of Tourist’s eWOM

The credibility of tourist’s eWOM has a significant effect on the tourist’s perceived value. Therefore, online tourism enterprises should pay attention to all kinds of real-time negative eWOM information, make an explanation timely on the trusted websites, such as the Ctrip, Qunar and other well-known websites. For the false eWOM information, the online travel enterprises should timely publish the truth to prevent some misunderstanding; for the incomplete or partly untrue eWOM information, they should public the comprehensive information timely. For these negative eWOM, firstly online travel enterprises should respect the rights of tourists to release the eWOM information about “dissatisfaction”, and the eWOM information of criticism and questioning should be regarded as the basis for improving the quality of services.

C. Establish the Evaluation System of Tourist’s eWOM Information

The quality of eWOM information is the source of consumer’s perceived value and is also the key factor that affects the consumer’s behavior of online travel booking. Domestic online travel business website can learn the successful experience from Ctrip, by establishing the systematic evaluation mechanism of comments, and to manage effectively the quality of eWOM information. In addition to set the publisher’s qualification, the website also should allow viewers to cast an affirmative or a negative vote for eWOM. In general, the more the affirmative votes get, the better the quality of eWOM information is. The eWOM information can also be further subdivided and processed by the tourism business websites. For example, on the web page of tourism product, positive eWOM and negative eWOM should be displayed separately, so that they can be browsed and managed conveniently, while this pattern of displaying eWOM can effectively restrict unethical corporations to make the secret operation.

D. Enhance the Perceived Value of eWOM Information

The marketing staff should collect the information about tourist’s eWOM of tourism products and services, study the characteristics of tourists, and explore the tourist’s value orientation. According to the tourist’s perceived value, they can make the network marketing strategy in line with tourist’s preferences, develop the products and services which meet the tourist’s demand, and make a brand promotion accurately. All of above activities can make the tourists feel the true value of product that will promote the formation of tourist’s online travel booking intention. The online travel enterprise win the trust of the tourists only by excellent quality and tourist’s perceived value.

V. CONCLUSIONS

There is still much to do in this area, and therefore the discussion in this article concludes with a call for further research drawing on a variety of perspectives to create a more complete picture of online consumer’s behavior. Online travel booking has become an increasingly popular form of travel booking. It is conductive to tourism enterprises to win more customers by studying the impact of eWOM on customer’s behavior.

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