The Effect of Social Media on Tourism Consumer Adoption Intention: Evidence from Urumqi

Qian Cao, Bin Yu* and Xiao-Xia Tian Tian
Nankai University, TianJin, China

Abstract
Social media provide tourism consumers with a two-way communication and interaction platform. They can not only search and adopt tourism evaluation information of others when making travelling decisions, but also instantly share tourism experience and satisfaction when travelling. We randomly survey 1100 tourism consumers in Urumqi of China to test the effect of characteristic of social media on tourism consumer adoption intention, as well as explore individual heterogeneity. The result shows: interactivity, service quality, information effectiveness, convenience and participation have a significantly positive influence on tourism consumer adoption intention; the higher is tourism consumers’ education level, the more they pay attention to sharing and connectivity; the higher is tourism consumers’ income level, the more they pay attention service quality and information effectiveness. In addition, the frequency of using social media and engaging in tourism activities has a positive effect on adoption intention.

Keywords: Social media; Tourism consumer; Adoption intention; Urumqi

Introduction
With the progress of computer and Internet technology, especially the emergence of Web 2.0 and mobile Internet, social media have sprung up and been widely used. In recent years, the number of social media users has been an explosive growth in China; according to the "China Internet Network Development State Statistical Report" released by China Internet Network Information Center (CNNIC), the number of Chinese Internet users reached 710 million people and the Internet penetration rate reached 51.7% until the end of June 2016, of which more than 90% have used social media, and more than 60% of these users log on social media platform at least once a day.

Compared with traditional media, such as magazine and newspaper, the emergence of social media is not accompanied by some new inventions or technologies. Social media is an information transmission tool based on hyperlink and hypertext; it increases the engagement and interactivity of Internet users by allowing them to create contents themselves and changes the traditional mass media of single-way to the stage of two-way communication and interaction; so it has a more significant effect on society than any other traditional media. The Internet users are no longer passive one-way information receivers; they can communicate with information publishers and other Internet users. As Clay Shirky said in his book of "Future is Wet", "we overestimate the value of the computer networking and underestimate the value of social networking in history'. User engagement primarily guarantees the flow, income and development of social media platform. The effect of social media application directly depends on the user data, which mainly comes from the depth and breadth of user engagement. It is critical that participation of consumers build up the social capital of social media. People will spend a third of their work time using social media platform on average [1].

The extant literature about social media mainly focuses on the types and characteristics of social media [2], the influence of social media on corporate assets and the consumers' behavior [3], and the role of social media as a medium in consumer information searching. For example, Saravanan kumar and Sugantha lakshmi summarize the characteristics of social media as reciprocity, information openness, cooperation, interactivity, participation, creativity, connectivity and sharing. Hu puts forward three key characteristics of social media, namely, interactive, multimedia and hypertext, which distinguishes the concept of social media from traditional media and new media. Jansen et al. [4] find that the purpose of bloggers to post related issue of product brand is to share information or advice; nearly 20% of the content in micro blogging includes emotional expression about the brand, of which more than 50% is positive while 33% are negative. Yuan Gong [5] develops consumers' behavior pattern of travel information searching in social media environment through analyzing questionnaire data with the method of second order clustering.

However, research about the potential influence of social media on adoption intention and decision making of tourism consumer is spare. For tourism, social media is very favored by tourists; and the tourists from all over the country can take part in communication and the discussion about the travel information anytime and anywhere with the help of the social media platform, thus behavior and habit of the tourism consumers may be subtly changed. Social media gives tourism consumers a two-way communication and interaction platform, and they can share their tourist experience and satisfaction instantly, and such evaluation may be likely adopted by other tourism consumers, and affect their travelling decisions.

In this paper, we examine the effect of social media on tourism consumers’ adoption intention and analyze the heterogeneity of tourism consumer by investigating tourism consumers of Urumqi, the capital city of Xinjiang Autonomous Region in China. The basis of our theory is the eight characteristics of social media (service quality, interactivity, connectivity, information effectiveness, participation, information openness, sharing, and convenience). The results show that social media characteristics of service quality, interactive, information

*Corresponding author: Bin Yu, Nankai University, TianJin, China, Tel: 86 (22) 2350-8785, 23502427; E-mail: 195524842@qq.com

Received January 29, 2017; Accepted February 04, 2017; Published February 14, 2017


Copyright: © 2017 Cao Q, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.
effectiveness, convenience and participatory has a significantly positive effect on tourism consumer adoption intention, while the effect of information openness, sharing and connectivity on adoption intention is not significant. Further, the higher is tourism consumer education level, the more attention they pay to the characteristics of sharing and connectivity; the higher is tourism consumers’ income level, the more attention they pay to the characteristic of service quality and information effectiveness. In addition, the frequency of using social media and engaging in tourism activities is significantly and positively correlated with adoption intention.

Our main contribution to the literature is as follows: Firstly, we systematically divide social media into eight characteristics through summarizing literatures about social media and design questionnaires to explore specific characteristic variables that affecting tourism consumer adoption intention. The design of our questionnaire provides a useful exploration for the future tourism research about social media. Secondly, we investigate the influence of eight social media characteristics on adoption intention, and illuminate the effect of different social media characteristic on tourism consumption decision. Additionally, our paper adds to the literatures which study the social media and tourism consumer adoption intention. At last, we analyze the effect of tourism consumers’ heterogeneity on social media characteristics. Specifically, we include the demographic variables of tourism consumers in Urumqi, and examine the relationships of demographic characteristics, social media characteristics and adoption intention.

The rest of the paper is organized as follows. Section 2 is a review of related literatures and theory background; Section 3 is the research design; Section 4 is the analysis of data; we have a discussion in section 5; and Section 6 is our conclusions and prospects.

**Literature Review**

**Definition of social media**

The term “social media” first appears in the field of information science, where researchers use this concept to describe information communication space that results from social network service, including Wikipedia, Podcasts, Blog, Social networking, BBS, Content Community, Twitter, and so on. In addition, some researchers confuse the concept of “social media”, “web 2.0” and “network media”; other researchers even directly regard “virtual community”, “we media”, “new media” as “social media”. In order to distinguish social media from these similar concepts, we summarize the implication of them as well as their relationship, as is shown in Table 1.

Social media is in infant without a precise definition. How to define social media and how to confuse it correctly are key problems to solve in this paper. Lon points out in his book “The Media Bible”, “Social media is the media we use to contact with each other.” Socialization is the interaction between individuals, and media is the information channels. According to the definition of Haenlein and Kaplan, social media is the Internet media based on a series of technologies (such as Web 2.0) and thoughts, which allows users to create contents themselves and communicate with others. Social media and web 2.0 are often confused by us. In fact, web 2.0 is the technology of building a social media and it provides the background of environment for social media, as we previously summarize the concept. In a word, social media is a platform which provides users shared information and social activities. Social media is a kind of social networking tools. This concept has two meanings: on the one hand, social media is product of both social progress and technology progress and its appearance is under the background of social network; on the other hand, the nature of social media is the combination of interpersonal relationship and media, it can be interacted with users in addition to transmitting information. Xiao-GuangWang [6] defines social media from aspects of technology and content. In terms of technology, he thinks social media is a kind of fully Internet based digital media, which depends on a variety of technical software operation. And social media mainly contains two groups, platform operator and network user, which are two main body of social media. In terms of content, social media mainly covers content of perceptual cognition, such as personal opinions, personal understandings, and sharing experience, differing from the traditional media which gives priority to the factual reports and hard news.

Above all, we think social media is an organic integration platform of social attribute and technology with support of Web 2.0 where Internet users can have two-way communication and interaction instantly. The social media has eight characteristics: service quality, interactivity, connectivity, information effectiveness, participation,

<table>
<thead>
<tr>
<th>Concept</th>
<th>Time and person</th>
<th>Implication</th>
<th>Relationship with social media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Network</td>
<td>2003</td>
<td>Social network is a virtual space. Network users can upload their own data, interests anytime and anywhere; and they can update personal information and state freely. At the same time, they can connect and agglomerate to one or more trusted friend group. Social network provides a variety of tools to get rich information, it achieve the goal of enhancing relationship within the group.</td>
<td>Social network affiliate with social media. They both contain each other.</td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web2.0</td>
<td>2004 Dale Dougherty</td>
<td>Along with appearance of new application websites, “.com” has shattered. It has become a key turning point for web 2.0.</td>
<td>Web2.0 lays the environmental and technical basis for social media.</td>
</tr>
<tr>
<td>We Media</td>
<td>2003 Shayne Bowman and Chris Willis</td>
<td>We media are method of understanding how public people provide or share the fact about themselves and their own news, which is connected to global knowledge system by digital technology.</td>
<td>Similar relationship with social network service</td>
</tr>
<tr>
<td>New Media</td>
<td>1967 P Goldmark</td>
<td>New media is greatly inclusive and elastic. In simplicity, new emergence of media is within the category of new media as long as it is not precisely positioned.</td>
<td>The relationship of New media and social media is crossed. But their concept is not opposing or equivalent.</td>
</tr>
<tr>
<td>Virtual Community</td>
<td>1993 Rheingold</td>
<td>Virtual community is formed by a group of people through the network communication; they have common knowledge and information between each other and treat each other as friends.</td>
<td>Similar relationship with social network service</td>
</tr>
<tr>
<td>Content Community</td>
<td>2012</td>
<td>Content community is a strategic blueprint of the new media era; it is also a practical path to combine the old and new media.</td>
<td>Similar relationship with social network service</td>
</tr>
</tbody>
</table>

Table 1: Similar concept with social media.
information openness, sharing, and convenience. Social media can be divided into eight categories: (1) Blog; (2) Wikipedia; (3) Instant Messenger; (4) BBS; (5) Social Networks; (6) Content Community; (7) Micro-Blogging; (8) Podcasts.

**Characteristic of social media**

The category of social media is various. There is heterogeneity in users' preference, so they may choose different social media platform. Diversified platform provides different choices for tourism consumers; they can log on different social media platform and search satisfactory information. However, what kind of social media information do tourism consumers pay more attention to? What characteristics of social media play an important role in tourism consumers' adoption intention? To answer these questions, we need to understand characteristics of social media. According to our definition of social media, social media has eight characteristics as follows.

Service quality is the tourism consumers' process of comparing the expected social media's service quality with the actual service experience [7]. Lin-Fen Chen and Prof Wang [8] propose that the network consumers' perception of e-commerce service quality will directly affect individuals' buying behavior.

Interactivity is the direct interaction and communication between individual and social media platform [9]. Wei-Hong Liao [10] finds that interactive marketing strategy such as mobile QR code, mobile business circle, wireless web and SMS website, has significantly positive effect on consumer behavior. The higher is the interactivity of social media; the stronger is tourism consumers' adoption intentions. Thus, interactivity may play a positive role in tourism consumers' adoption intention.

Connectivity is that the social media platforms aggregate all kinds of information to one place through the links and content push [2,11]. Yong-Bing Liao, Jing Gao and Jian Yang [12] find that connectivity of social media influence users' trust, thus affecting individuals' consuming decision-making.

Information effectiveness is degree of consistency between the information tourism consumers search using social media platform and that of actual tourism information awareness and discovery while travelling. The higher is the information effectiveness of social media, the more reliable is the information it provides. Customers will also increase degree of trust on the social media.

Participation is the level of consumers involving in social media at the aspects of material and spirit [13]. In general, the stronger is tourism consumers' participation, the higher is the probability of adopting the social media information.

Information openness refers to the degree of social media information openness and availability for consumers [14]. Consumers want to understand and grasp the most comprehensive information when selecting and purchasing tourist commodities. Consumers pay more attention to the degree of information openness, especially in the virtual Internet that is full of uncertainty. Consumers must master more related information to enhance confidence about their chosen tourist products without confirming its reliability in advance.

Sharing is all kinds of information, mutual communicating and sharing on the social media platform; for example, users can share their subjective experience, feeling and quality of goods and services [2,11]. Yong-Bing Liao, Jing Gao and Jian Yang [12] find that the group using social media often show a characteristics of community; that is to say, they tend to focus on a common interested topic and quickly form a circle sharing their own feelings and information. Therefore, it may have a positive effect on tourism consumers' adoption intention.

Convenience is the facilities which make tourism consumers feel convenient and smooth when using social media [15]. Individual cares about social media convenience of operation; if the operation is too complicated, it is difficult to get a wide range of application and promotion.

In this paper, we design eight items respectively to study the effect of social media characteristic on tourism consumer adoption intention.

**Social media and tourism consumer adoption intention**

Social media is the result of the rapid development of Internet information technology; most studies about social media are based on the theory of information technology acceptance [16]. It analyzes the consumers' behavior in accepting a new technology. The theory assumes that system usage is determined by behavioral intention; perceived usefulness and usage attitude commonly determine the behavioral intention. Usage attitude is determined by perceived usefulness and perceived convenience; perceived convenience and external variable determine the perceived usefulness; and perceived convenience is determined by the external variable. This suggests that consumers' behavioral intention towards a new information technology has a crucial influence on its successful adoption. In other words, if consumers are not willing to accept, the information technology can't bring interests to the organization [16]. Therefore, if consumers adopt intention of social media is stronger, they will spend more time and energy frequently contacting or using social media.

Social media platform provides a great convenience for consumers collecting satisfactory tourism information. The application effect of social media depends on user data, which comes from users' depth and breadth of engagement. Tourism consumers' instant tourist experience and satisfaction evaluation plays an important role in adoption intention. Woodside and Lysonski [17] develop a model of tourists' decision making from the perspective of geography and psychology; they study the influence of tourism destination marketing strategy and word-of-mouth by consumer individual or group on tourists' final decision. Ji-Gang Bao [18] investigates empirically the impact of tourism motivation, tourism decision-making, and tourist preference on tourist behavior by investigating tourists in Beijing. Sun Chun-Hua and Liu Ye-Zheng [19] study the tourism consumers' motivation and demand under the web 2.0; and they develop a tourism consumption behavior model: cognitive needs, information search, judgment and selection, purchase decision and purchase evaluation. Xiang and Gretzel [6] built a conceptual framework to illustrate the relationship of tourists, search engine and network tourism (Figure 1).

Firstly, according to individual demographic characteristics and travel demand, tourism consumers log on social media platforms to search information. Under the support of information technology, social media websites provide users a two-way communication and interaction platform. For example, tourism consumers A and B can share their own travel experience instantly; at the same time, the shared experience by consumers A and B is likely to be adopted by each other or a third party in determining travel choice (Figure 1).

**Research Design**

**Questionnaire Design and Pre-test**

The questionnaire is divided into two parts. Part one includes demographic variables, frequency of social media usage, frequency of
tourism activity and tourist destination type. The second part is the main body of our questionnaire. Items for social media characteristics and tourism consumer adoption intention are adapted from related literatures of Hodkinson [20] and Teo [10]. The 4-item measures tourism consumer adoption intention. The 25-item version of media characteristics is composed of 8 sub-scales: participation (3 items), interactivity (3 items), sharing (3 items), connectivity (3 items), service quality (3 items), convenience (3 items), information openness (3 items), and information effectiveness (4 items). Participants are asked to rate the extent to which statements described themselves on a 5-point scale ranging from 1 (does not approve at all) to 5 (approve greatly).

Pre-test of questionnaires are issued, 134 in Tianchi Lake Scenic spot from March 20 to March 28 in 2015. The recycled questionnaires are 118 in which the valid questionnaires are 100 with the valid rate of 84.7%. SPSS 19.0 reliability examination results show that the whole scale has good consistency reliability and the Cornbach α coefficient is 0.943. After that, the final questionnaire is formed by screening and modifying, as is shown in Table 2.

Sample selection and data collection
The questionnaire is issued to 1100 residents who have used social media for tourism consumption in Urumqi, the Capital City of Xinjiang Uygur Autonomous Region in China. A total of 1100 questionnaires are issued and 1026 of them are recycled (93.27%). The valid questionnaires are 999 and the valid rate is 97.37%. The demographic characteristics of the sample are shown in Table 3.

The selection of urban dwellers in Urumqi is mainly focused on four densely populated areas, which are Tianshan district, Shuimogou district, Saybagh district and Saybagh every weekend. The questionnaire is issued in New Urban district in June. The number of the questionnaires issued in district of Tianshan, Shuimogou, Saybagh and New Urban is 200, 230, 215 and 225, respectively. And 230 questionnaires are issued by the way of local friends spreading on Internet (Table 3).

Reliability and Validity analysis of questionnaire
As can be seen from Tables 4 and 5, the questionnaire coefficient α of this research and design is 0.922, which shows a higher reliability of the questionnaire.

The Kaiser-Meyer-Olkin (KMO) value of the questionnaire is 0.919, and the spherical degree of Bartlett test reaches significant levels (p<0.001). It shows that the questionnaire not only has good validity, but also satisfies the condition of factor analysis.

Data Analysis
Descriptive statistics
Using rate of different social media platforms: The frequency of tourism consumers surveyed using different types of social media from high to low is shown in following content: (1) Instant messenger (such as MSN, Skype, Gtalk, QQ, ICQ, Yahoo Messenger, Sina, etc.), whose user account for 93.99% of tourism consumers. (2) Baidu Encyclopedia, accounting for 55.26%. (3) Community network (such as Myspace, Renren, Happy Net, etc.), accounting for 42.92%. (4) Blog, accounting for 31.53%. (5) Content Community (such as Youtube, Flickr, Netease Album, Tudou, etc.), accounting for 42.92%. (6) Microblogging (such as Twitter and Digg), accounting for 24.32%. (7) Forum, accounting for 23.42%. (8) Podcast, accounting for 4.20%.

Travel purpose and Information content: In terms of the tourism consumers travel purpose, the percentage of different purposes from high to low is shown in following content: (1) Sightseeing tourism, accounting for 70.87%. (2) Entertainment tourism, accounting for 30.93%. (3) Personal and family affairs tourism, accounting for 30.92%.
### Variable Code Item Reference

**Adoption intention (AI)**

- **AI-1**: I will always search for tourist information through social media

- **AI-2**: Social media is the first reference when I search for tourist information
  - Reference: Davis (1989)

- **AI-3**: I will consider using social media to share and exchange tourist experiences and information

- **AI-4**: I will continue to use social media to search for tourist information in the future

**Participation (P)**

- **P-1**: I will actively participate in varieties of social media

- **P-2**: My life cannot be separated from social media

- **P-3**: I will accept the invitation of friends to share common information and interests through social media

**Interactivity (I)**

- **I-1**: I like to use social media to interact with friends
  - References: Jiang and Benbasat (2007); Palmer (2002)

- **I-2**: I use social media for its highly interactive

- **I-3**: I am satisfied with the high interactive of social media

**Sharing (S)**

- **S-1**: I use social media to share information and feelings with my colleagues and friends
  - Reference: Ennew and Binks (1999)

- **S-2**: Most people use social media because it will enable people to share various resources

- **S-3**: I want to use social media to share information at anytime and anywhere

**Connectivity (CY)**

- **C-1**: Social media makes it easy for me to connect to a wider range of information
  - Reference: Lee (2005)

- **C-2**: You can find friends by the connectivity which is provided by social media

- **C-3**: I can connect to more relevant information through social media

**Service quality (SQ)**

- **SQ-1**: The better the quality of service, the more I am willing to adopt social media

- **SQ-2**: I am increasingly willing to adopt social media for its good service quality

- **SQ-3**: If the service quality is good, I would recommend friends to adopt social media

**Convenience (CE)**

- **FC-1**: The facilitating of social media has increased my acceptance
  - Reference: Venkatesh et al. (2003)

- **FC-2**: The more facilitate conditions are, the more I have an intention to adopt social media

- **FC-3**: Owing to the 24 hours facilitating solution, I am more inclined to adopt social media

**Information Openness (IO)**

- **IO-1**: Information is open to members so that I am willing to adopt social media
  - Reference: Gefen et al. (2003)

- **IO-2**: The reason why I adopt the social media is that it can obtain the openness of information

- **IO-3**: The more openness of the information, the more likely I am to adopt social media

**Information Effectiveness (IE)**

- **JA-1**: When I get the relevant tourist information from the social media, I will have a basic understanding of the tourism products

- **JA-2**: It can save me more time and energy by using social media to get tourist information

- **JA-3**: If the tourist information obtained from social media can help me to reduce the cost of money, time and energy, I will strengthen the decision to make the purchase of tourist decisions

- **JA-4**: I think the situation in the process of tourism is broadly in line with the information on social media

### Table 2: Item and reference of social media

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>483</td>
<td>48.30%</td>
</tr>
<tr>
<td>Female</td>
<td>516</td>
<td>51.70%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;=20</td>
<td>33</td>
<td>3.30%</td>
</tr>
<tr>
<td>&gt;=21 and &lt;=29</td>
<td>684</td>
<td>68.50%</td>
</tr>
<tr>
<td>&gt;=30 and &lt;=39</td>
<td>225</td>
<td>22.50%</td>
</tr>
<tr>
<td>&gt;=40 and &lt;=49</td>
<td>45</td>
<td>4.50%</td>
</tr>
<tr>
<td>&gt;=50</td>
<td>12</td>
<td>1.20%</td>
</tr>
<tr>
<td>Educational level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school or below</td>
<td>9</td>
<td>0.90%</td>
</tr>
<tr>
<td>Junior high school</td>
<td>54</td>
<td>5.40%</td>
</tr>
<tr>
<td>Senior high school or Technical Secondary School</td>
<td>90</td>
<td>9.00%</td>
</tr>
<tr>
<td>Junior college</td>
<td>156</td>
<td>15.60%</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>444</td>
<td>44.40%</td>
</tr>
<tr>
<td>Postgraduate or above</td>
<td>246</td>
<td>24.65%</td>
</tr>
<tr>
<td>Income level (Yuan)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Without fixed income</td>
<td>108</td>
<td>10.80%</td>
</tr>
<tr>
<td>&lt;=2000</td>
<td>267</td>
<td>29.70%</td>
</tr>
<tr>
<td>&gt;2000 and &lt;=4000</td>
<td>288</td>
<td>27.30%</td>
</tr>
<tr>
<td>&lt;4000 and &lt;=6000</td>
<td>162</td>
<td>17.70%</td>
</tr>
<tr>
<td>&lt;6000 and &lt;=8000</td>
<td>72</td>
<td>7.20%</td>
</tr>
<tr>
<td>&lt;8000</td>
<td>72</td>
<td>7.20%</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>303</td>
<td>30.30%</td>
</tr>
<tr>
<td>Single</td>
<td>696</td>
<td>69.70%</td>
</tr>
</tbody>
</table>

### Table 3: Sample statistics

<table>
<thead>
<tr>
<th>Cronbach’s α</th>
<th>Items number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.922</td>
<td>29</td>
</tr>
</tbody>
</table>

**Table 4: Reliability analysis.**

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin value</th>
<th>Spherical degree of Bartlett test</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.919</td>
<td>Approximate chi-square 3595.771</td>
</tr>
<tr>
<td></td>
<td>df 406</td>
</tr>
<tr>
<td></td>
<td>p-value 0.000</td>
</tr>
</tbody>
</table>

**Table 5: Tests of KMO and Bartlett.**

When tourism consumers search information in social media platform, they rank the information point as follows according to extend of concern: (1) Network word of mouth (89.19%); (2) price information (79.28%); (3) travel guides (61.86%); (4) the scenic spots introduction (58.56%); (5) weather conditions (50.15%); (6) diet characteristic (49.55%); (7) accommodation (48.95%); (8) travel route (44.74%); (9) traffic information (42.94%); (10) local environments and customs (41.44%); (11) special products (33.33%); (12) entertainment facilities (6.43%); (13) information of travel agency (13.81%).

Frequency of social media usage and travel activity: The percentage of surveyed tourism consumer using social media every day is 81.98%. That is to say, more than 80% of them use several types of social media every day. However, there is a low proportion of individuals who have a low frequency of using social media.

The frequency distribution of surveyed tourism consumers’ travel activity is relatively uniform. The percentage of travelling once less than three months is 12.95%; the proportion of half a year to travel is 30.12%, which is slightly higher than travelling once a year (28.01%) and travelling once beyond a year (28.92%).

Factor analysis: In this paper, based on the questionnaire data as the foundation, through the factor analysis method, we extract the principal factors that impact tourism consumers’ social media adoption intention.

Table 6 shows the factor loading of item 10 is less than 0.35 and a. Convergence of rotation after 22 iteration.
Variance analysis

- Frequency of social media use and travel activity: As it is shown in Table 8, tourism consumers’ using frequency of social media has a positive effect on adoption intention (p<0.01); specifically, the higher the is the using frequency of social media, the stronger is tourism consumers adoption intention. In addition, there is a significant difference of perceived importance social media characteristics in using frequencies, except for information openness (p>0.05). Thus, using frequency has a positive effect on perceived importance of seven social media characteristics.

Table 9 shows that tourism consumers’ frequency of travel activity has a positive effect on adoption intention (p<0.05); specifically, the more frequent is the travel activity, the stronger is tourism consumers adoption intention. There is a significant difference of perceived importance of social media characteristics in travel activity frequencies (p<0.05). That is to say, frequency of travel activity has a positive effect on perceived importance of social media characteristics.

- Educational level and Income level: Tables 10 and 11 show that there is no significant difference of adoption intention in educational level and Income level (p>0.05); educational level and Income level have no significant effect on adoption intention.

Additionally, there is a significant difference of sharing and connectivity in educational level (p<0.05). And there is a significant difference of service quality and Information effectiveness in Income level (p<0.05). Other six social media characteristics have no significant difference in educational level and Income level (p>0.05).

- Marital status: Table 12 shows that there is no significant difference of adoption intention in marital status (p>0.05); and marital status has no significant effect on adoption intention. Further, there is a significant difference of Information effectiveness in marital status.

### Table 7: Analysis on the adoption intention and the characteristics of social media

<table>
<thead>
<tr>
<th>Item</th>
<th>Everyday</th>
<th>More than once a week</th>
<th>Once a week</th>
<th>Once a month</th>
<th>Uncertain</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI</td>
<td>3.884 ± 0.537</td>
<td>3.714 ± 0.454</td>
<td>3.433 ± 0.197</td>
<td>3.800 ± 0.490</td>
<td>3.469 ± 0.543</td>
<td>5.171</td>
<td>0.000</td>
</tr>
<tr>
<td>P</td>
<td>3.799 ± 0.670</td>
<td>3.595 ± 0.816</td>
<td>3.917 ± 0.665</td>
<td>3.625 ± 0.479</td>
<td>3.328 ± 0.869</td>
<td>3.368</td>
<td>0.010</td>
</tr>
<tr>
<td>I</td>
<td>3.746 ± 0.573</td>
<td>3.595 ± 0.533</td>
<td>3.542 ± 0.368</td>
<td>3.625 ± 0.777</td>
<td>3.138 ± 0.537</td>
<td>7.773</td>
<td>0.000</td>
</tr>
<tr>
<td>S</td>
<td>4.028 ± 0.829</td>
<td>3.881 ± 0.568</td>
<td>3.750 ± 0.274</td>
<td>3.375 ± 0.479</td>
<td>3.724 ± 0.751</td>
<td>2.821</td>
<td>0.025</td>
</tr>
<tr>
<td>CY</td>
<td>3.729 ± 0.594</td>
<td>3.683 ± 0.365</td>
<td>3.667 ± 0.365</td>
<td>3.333 ± 0.720</td>
<td>3.287 ± 0.653</td>
<td>3.940</td>
<td>0.004</td>
</tr>
<tr>
<td>SQ</td>
<td>3.931 ± 0.559</td>
<td>3.810 ± 0.622</td>
<td>3.375 ± 0.262</td>
<td>3.688 ± 0.315</td>
<td>3.612 ± 0.581</td>
<td>3.652</td>
<td>0.006</td>
</tr>
<tr>
<td>CE</td>
<td>3.817 ± 0.625</td>
<td>3.667 ± 0.508</td>
<td>3.500 ± 0.447</td>
<td>3.375 ± 0.479</td>
<td>3.397 ± 0.760</td>
<td>3.736</td>
<td>0.005</td>
</tr>
<tr>
<td>IO</td>
<td>3.628 ± 0.618</td>
<td>3.452 ± 0.631</td>
<td>3.583 ± 0.492</td>
<td>3.375 ± 0.479</td>
<td>3.569 ± 0.678</td>
<td>0.573</td>
<td>0.683</td>
</tr>
<tr>
<td>IF</td>
<td>3.719 ± 0.522</td>
<td>3.714 ± 0.442</td>
<td>3.208 ± 0.188</td>
<td>3.250 ± 0.500</td>
<td>3.422 ± 0.579</td>
<td>4.110</td>
<td>0.003</td>
</tr>
</tbody>
</table>

### Table 8: Variance analysis on using frequency of social media

<table>
<thead>
<tr>
<th>Item</th>
<th>Less than three months</th>
<th>Once half a year</th>
<th>Once a year</th>
<th>More than a year</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI</td>
<td>3.898 ± 0.561</td>
<td>3.916 ± 0.556</td>
<td>3.804 ± 0.556</td>
<td>3.717 ± 0.470</td>
<td>2.753</td>
<td>0.028</td>
</tr>
<tr>
<td>P</td>
<td>3.988 ± 0.572</td>
<td>3.800 ± 0.732</td>
<td>3.699 ± 0.680</td>
<td>3.615 ± 0.734</td>
<td>2.681</td>
<td>0.032</td>
</tr>
<tr>
<td>I</td>
<td>3.762 ± 0.543</td>
<td>3.835 ± 0.559</td>
<td>3.605 ± 0.616</td>
<td>3.539 ± 0.572</td>
<td>4.704</td>
<td>0.001</td>
</tr>
<tr>
<td>S</td>
<td>4.128 ± 0.608</td>
<td>4.140 ± 0.586</td>
<td>3.850 ± 0.638</td>
<td>3.859 ± 0.656</td>
<td>4.825</td>
<td>0.001</td>
</tr>
<tr>
<td>CY</td>
<td>3.535 ± 0.559</td>
<td>3.840 ± 0.518</td>
<td>3.706 ± 0.639</td>
<td>3.545 ± 0.633</td>
<td>4.992</td>
<td>0.001</td>
</tr>
<tr>
<td>SQ</td>
<td>3.913 ± 0.567</td>
<td>4.045 ± 0.562</td>
<td>3.871 ± 0.589</td>
<td>3.701 ± 0.498</td>
<td>5.821</td>
<td>0.000</td>
</tr>
<tr>
<td>CE</td>
<td>3.849 ± 0.551</td>
<td>3.820 ± 0.622</td>
<td>3.774 ± 0.649</td>
<td>3.630 ± 0.662</td>
<td>2.417</td>
<td>0.049</td>
</tr>
<tr>
<td>IO</td>
<td>3.837 ± 0.564</td>
<td>3.680 ± 0.622</td>
<td>3.468 ± 0.584</td>
<td>3.552 ± 0.630</td>
<td>4.648</td>
<td>0.001</td>
</tr>
<tr>
<td>IF</td>
<td>3.855 ± 0.457</td>
<td>3.798 ± 0.548</td>
<td>3.643 ± 0.552</td>
<td>3.505 ± 0.465</td>
<td>5.518</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Gradual regression and Adjust-R² is 57.2%. The regression coefficient of the other three factors is not significant.

- Predictor variable: (constant), Service quality SQ.
- Predictor variable: (constant), Service quality SQ, Interactivity I.
- Predictor variable: (constant), Service quality SQ, Interactivity I, Information effectiveness IF.
- Predictor variable: (constant), Service quality SQ, Interactivity I, Information effectiveness IF, Convenience CE.
- Predictor variable: (constant), Service quality SQ, Interactivity I, Information effectiveness IF, Convenience CE, Participation P.
- Dependent variable: Adoption intention AI.

### Discussion

The using frequency of different social media

A questionnaire survey on tourism consumers, conducted by Yu Hao [21], indicates that the most familiar social media for tourism consumers is micro blog (such as Sina microblog, Tencent microblog and Sohu microblog), the second familiar social media is SNS (such as Renren and Kaixin), followed by blog and online encyclopedia (such as Wikipedia and Baidu Encyclopedia). Besides, when tourism consumer makes a travel plan, the top 3 most frequently used social media are online encyclopedia, SNS and online community.

By comparison, this study indicates that the top 3 most frequently used social media are: (1) Instant messenger, such as QQ and We chat, whose users account for 93.99%; (2) Online encyclopedia, such as Wikipedia and Baidu Encyclopedia. Therefore, when tourism consumers plan a travel, they usually use online social media to search for information and make decisions.
The category of travel purpose

This study indicates that the travel purpose of tourism consumer can be categorized and sorted as (1) Sightseeing travel, accounting for 70.87%; (2) Entertainment travel, accounting for 63.36%; (3) Travel for dealing with personal affairs, accounting for 30.93%; (4) Travel for acquiring knowledge, accounting for 19.52%; (5) Business travel, accounting for 15.02%; (6) Exploratory travel, accounting for 12.61%; (7) medical travel, accounting for 9.61%; (8) Religious travel, accounting for 2.40%. Accordingly, the main purpose of traveling is sightseeing and entertainment in current stage. It is a good chance for Xinjiang to develop tourist industry. Under the Belt and Road Initiative, Xinjiang should strengthen tourism destination marketing and promote the brand of “Spectacular Xinjiang” by social media platform.

The information content concerned by tourism consumers in using social media

The study indicates that the most concerned information for tourism consumers when using social media is traveling commodity’s internet word-of-mouth. There are 89.19% respondents selecting this option. Jin-Feng Zhang [22] and Ting-Ting Yu [21] study the internet word-of-mouth marketing and find that internet word-of-mouth in social media has a significant impact on tourism consumer behavior. On the other hand, the least concerned information for tourism consumers is travel agency. Only 13.81% respondents choose this option. This phenomenon indicates that the internet marketing of travel agencies is weak and need more works on brand building and information promotion. Only the formation of customer loyalty and the spreading of word-of-mouth marketing, can make travel agencies gain competitive advantage both online and offline.

The impacts of demographic variable on the degree of tourism consumers’ emphasis on social media characteristics

The study indicates that the education level of tourism consumer has a significant impact on sharing and connectivity. The tourism consumer with higher education level will pay more attention to social media characteristics of sharing and connectivity. China is known as a state of etiquette and Chinese regard reserve as a kind of virtue, so Chinese lay inadequate emphasis on information sharing and communicating. However, the individuals with higher education level always understand the importance of information communication. They are accustomed to sharing and communicating with the outside world to acquire needed information. Besides, the individuals with higher education level are prone to select more efficient way to acquire needed information because they always know how and where to find more comprehensive information. As a result, sharing and connectivity can better meet the needs of those individuals with higher education level and are more attractive for them.

In terms of income level, result shows that the factor of service quality and information effectiveness reflects material differences for tourism consumers with different income levels. The individuals with higher income level always pay more attention to service quality and information effectiveness of social media. Compared with low-income group, high-income group faces higher pressure in daily work so their primary purpose of traveling is relaxing and unwinding and then improving life quality. Therefore, when making travel plans, the individuals with higher income level are prone to choose the social media with higher service quality to minimize troubles and difficulties. Besides, due to the high working pressure, the individuals with higher income level always have less time in travel plans. Therefore, they are prone to select those social media with more effective information.

In terms of marital status, married tourism consumers pay more attention on information effectiveness than single tourism consumers in using social media. One possible reason to explain this result is that married individuals may bear more work and family responsibilities and have less time in making travel plans. Another reason may be that married individuals always travel with their family rather than travel alone. An effective and rational travel plan is much more important for family compared with a single tourist.

The impacts of social media characteristics on tourism consumer adoption intention

The study of the influence factors of consumers’ adoption of social media, conducted by Yong-Bing Jiao, Jing Gao and Jian Yang [12], finds that perceived enjoyment and trust play a positive role in consumers' adopting social media; while perceived risk plays a negative role. Although there have been many in-depth studies on internet consumers behavior based on social media both in China and in other countries currently, the study on tourism consumers behavior is scarce. This study analyzes the impacts of social media characteristics on tourism consumers’ behavior, and the result shows that all of the five characteristics of social media have positive impacts on tourism consumers’ adoption of social media. Particularly, the service quality has greatest influence on adoption intention.

Conclusion

According to our study, the conclusions show that

1. The most frequently used social media by tourism consumers in our survey is instant messenger (e.g., MSN, QQ, We Chat, etc.), then the Wikipedia and Baidu encyclopedia, the social network (such as Facebook, Renren and Kaixin, etc.).

2. Travel purpose of the tourism consumers surveyed generally includes eight types. The top three are sightseeing travel, entertainment travel, travel for dealing with personal affairs respectively.

3. Tourism consumers mainly focus on Internet word of mouth of tourism commodities in making tourism planning and schedule, followed by tourism commodity price information, travel guides and so on. In addition, in our survey, the travel agency information is the least concerned information by tourism consumers.

4. Some dimensions of demography variables affect the extent of tourism consumers’ emphasis on social media related characteristics. Mainly, the tourism consumer with higher education level will pay more attention to social media characteristics of sharing and connectivity. The higher income level is tourism consumers, the more they take service quality and information effectiveness into account. In addition, the married travel consumers attach more importance to information effectiveness of social media than single tourism consumers.

5. For travel consumers, the frequency of using social media have a positive effect on its adoption intention at a certain extent, the specific performance is that the more tourism consumers use social media, the stronger is adoption intention.
6. For travel tourism consumers, the frequency of using social media have frequency of using social media has a positive effect on effect on its adoption intention at a certain extent. Specifically, the more frequently tourism consumers use social media, the stronger is the adoption intention.

7. Five characteristics of social media (service quality, interactivity, information effectiveness, participation, convenience) for tourism consumers play a positive role in promoting the adoption intentions, and the promotion degree of service quality is the highest.

In summary, tourism has become one of the major "players" on the Internet. At the same time, the online travel market of tourism also has a place on the Internet. For example, it represents nearly 19.4 percent of the overall market of Europe in 2007. In the next few years, the market scale will be flexible and continuously grow according to forecast. And those tourism enterprises who adopt high quality communication technology software cannot only improve tourism service quality, but also increase its market share. Social media, a new kind of online media, gives users a lot of participation choices; and the characteristics of social media is openness, interactivity, communication, connectivity and mass. Its special properties and popularity completely change the market activities, such as advertising, sales promoting [23].

The conclusion of our paper can provide reference for related tourism enterprises and departments.

a) The extant literature about tourism consumer behavior is relatively rare; and research focused on its influencing factors is also preliminary with no in-depth discussion and analysis. This paper explores the influence of eight characteristics of social media on tourism consumer adoption intention. Future study can delve into the relationship of the eight characteristics. In addition, derivative of the scientific problems, such as the changes of tourism consumer behavior brought by mobile terminal technology, need to be further studied [24-37].

References

27. Gretzel U, Yoo KH, Purfroy M (2007) Online travel review study: Role and impact of online travel reviews.