CULTURAL DIFFERENCES IN TOURISM WEB-COMMUNICATION:

A PRELIMINARY STUDY

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This article was published in the Journal in *Tourism Analysis* (2012), Volume 17, Number 6, December 2012, pp. 761-774.

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This paper analyzes cultural differences in web communication in the tourism context. The conceptual framework presenting cultural differences in the three types of web communication is developed. The specific hypotheses are tested on the US American and Chinese sample. Although the findings support the developed framework they also reveal non-significant differences between the groups. Theoretical and practical implications of the findings are identified and recommendations for future studies are made.

Key words: Information technology; Internet; Web communication; Cultural differences; Hofstede; Hall communication patterns; Tourism

Introduction

Numerous researchers emphasized the importance of Information and Communication Technology (ICT) in tourism, especially the World Wide Web (Buhalis, 1998; Buhalis & Law, 2008; Law, Leung, & Buhalis, 2009; Poon, 1993; Werthner & Klein, 1999). In the last two decades the Internet has become the main web communication channel that changed the way tourism and travel information have been distributed and affected consumers' behaviors (Gretzel, Fesenmaier, & O'Leary, 2006; Kah, Vogt, & MacKay, 2006; Xiang, Wober, & Fesenmaier, 2008). Today, the Internet represents a main source of travel information (Fodness & Murray, 1999; Jang, 2004). The major countries with the highest number of web users are China (513.1 millions), the United States (245.2 millions) and India (121millions) (Internet World Stats, 2012). In 2010 nearly 87 % of the US adult population made travel booking, 85% used the Internet as a major source of information, and 62% researched their upcoming trips (Google/OTX, 2011). In the same time approximately 100 million Chinese visited online websites and made travel purchases and shared travel experiences with other customers (ChinaTravelTrends.com, 2009).

The ability to attract international tourists to destinations depends upon understanding how the web users communicate and purchase products via the Internet (Buhalis & Law 2008). This paper argues that culturally different groups of web users (potential travelers) are characterized by different web communication behaviors, especially a) information search behavior, b) communication behavior, and c) transaction behavior. By understanding cultural differences in web communication behavior marketers can more effectively stimulate the Internet users' interests in destination websites and facilitate their travel decision-making.

Literature Review

What Is Web Communication?

In web communication people create, exchange and perceive information via the Internet platforms (December, 1996). The main distinction between face-to-face and web communication is the absence of

social context cues in web communication (eg., facial expressions, gestures, voice intonations) (Walther and Burgoon, 2006). However, with the constantly increasing rate of online communication usage (e.g., e-mails, social networking, questions and answers service) and the development of information and communication technology devices (e.g., computers, cell phones, iphones, ipads, ipods) with sophisticated features (e.g., mini cameras, speakers) the effectiveness of web communication is rapidly increasing. Today, in web communication people can effectively communicate online with others, regardless of geographical distance and temporal spatial constraints (Simpson, 2002).

Importance of Web Communication in Tourism

Web communication is one of the main communication methods in travel and tourism. The Internet is increasingly used in travel planning because it is easily accessible, provides high quality and quantity of travel information (Fodness & Murray, 1999; Jang, 2004), offers a wide product selection and decreases the purchase risk (Werthner & Klein, 1999). The Internet is also interactive, cost-effective, widely spread and self-regulated (Hwang, Gretzel, Xiang, & Fesenmaier, 2006). The Internet provides a very dynamic environment for the travel information search and exchange and communication with providers (organizations) and online buyers (Deighton, 1997; Peterson, Balasubramanian, & Bronnenberg, 1997; Sheldon, 1997; Volo, 2007).

Functions of the Internet

Information search function

The Internet is one of the most effective contemporary sources of travel information (Werthner & Klein, 1999) that affects travelers' decision-making, specifically destination choice and evaluation (Crotts, 1999; Fodness & Murray, 1998; Gursoy & Chen, 2000). The Internet is accessed by travelers more frequently than traditional information sources (e.g., books, magazines) because it offers high level of interaction and customization and provides information tailored to personal preferences (Newhagen & Rafaeli, 1996) within a minimum time and with minimum effort (Peterson & Merino, 2003). The Internet

users receive abundant and low cost information from multiple providers and thus are able to make better decisions than those who use traditional information sources (Jang, 2004).

Communication function

The Internet allows its users to communicate through social media (Gretzel, et al., 2006; Pan, MacLaurin, & Crotts, 2007). The major social media used in travel and tourism are virtual communities (virtualtourist.com, tripadvisor.com), travel blogs, online reviews, social networking (facebook.com, myspace.com, HI5.com, Friendster.com, Orkut, bebo.com) and multimedia websites (YouTube.com, Flickr.com). The social media enable people to share experiences and opinions regardless of human, geographical and time barriers (Xiang & Gretzel, 2006).

Transaction function

The Internet enables consumers to make purchases by bypassing traditional selling and buying intermediaries (Werthner & Kline, 1999). The proportion of the US population that has made travel reservations or purchases on the Internet increased from 22% in May 2000 to 52% in May 2010 (Pew Internet Project, 2010). The main reasons for this are convenience and low cost of transaction, an easy access to an unlimited range of products, and opportunities for product comparison and an instant purchase (Quelch & Klein, 1996; Starkov & Price, 2003). Travelers can make online purchases at anytime and anywhere (Ko, Jung, Kim, & Shim, 2004).

Cultural Differences in Web Communication

Studies show large differences in the usage, adoption and diffusion of web communication among its users from different geo-cultural regions (Internet World Stats, 2012). Significant cultural differences were identified in the Internet usage for the purpose of information search (Money & Crotts, 2003 and information technology usage (Law, Bai, & Leung, 2008). Germans were found to use the Internet more for the purpose of information search and product purchase than Japanese, Taiwanese and British (Shiu &

Dawson, 2004). Consumers from Asia Pacific were found to be the biggest social networking users (35% market share), followed by Europeans (28%) and North Americans (23%) (ComScore, Inc, 2008).

Cultural background of the web users is an important factor influencing their web communication in travel and tourism. Therefore, cultural differences in web communication should be identified and web interface be customized to the users' cultural needs. Constructing culture-oriented web communication systems creates an opportunity for both sides (users and providers) to appreciate their differences, enhance the quality of their online communication and enrich web experiences (Baack & Singh, 2007; Gevorgyan & Manucharova, 2009). Hofstede's (1980, 2001) cultural differentiation and Hall's (1960, 1976) communication theories can be used to explain cultural differences in web communication of travelers (Myers & Tan, 2002).

Hofstede's Cultural Differentiation Theory

Hofstede (1980, 2001) differentiated national cultures on four cultural dimensions: power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity. Power Distance (PDI) reflects the degree to which a society accepts unequal power distribution and social inequality in a given culture. Individualism/Collectivism (IDV) reflects the degree to which individual interests take primacy over the group. Uncertainty Avoidance (UAI) reflects the degree to which people feel threatened by uncertainty, ambiguity and unknown situations. Masculinity/Femininity (MAS) reflects different attitudes to life and the degree to which people differentiate gender roles. The above dimensions represent a very valuable framework for exploring web communication (Singh, 2002). It was found that members of the low PDI societies use web communication more often than those from high PDI societies (Bagchi, Hart, & Peterson, 2004). Members of the high individualistic societies are more likely to use the Internet for personal purposes (e.g., product purchase and information search) (Chau, Cole, Massey, Montoya-Weiss, & O'Keefe, 2002; O'Keefe, et al., 2000) than those from high collectivistic societies who are more likely to use the Internet for social purposes (Wee & Ramachandra, 2000). Also, members of the collectivistic societies perceive higher risk than those from individualistic societies. Those from low UAI

nations seek innovations and adopt new information technology; they are more trustful and embrace the uncertainties associated with new communication technology easier than those from high UAI nations (Garfield & Watson, 1997). Those from masculine societies are more involved in online activities for the purpose of work than those from feminine societies who use online activities for the purpose of pleasure (Shiu & Dawson, 2002).

Hall's Communication Theory

Hall (1976) identified different communication patterns depending upon the extent of 'contexting' in communication (Hall, 1960) - the degree to which listeners understand the subject under discussion when people communicate. Hall distinguished between high context cultures (HCC) that rely on explicit direct verbal style of communication and low context cultures (LCC) that use implicit non-verbal contextual communication. Hall's (1960) communication theory was supported and frequently used in international business (Kim, Pan, & Park, 1998), cross-cultural marketing communication (Onkvisit & Shaw, 2002) and international advertising (Marin et al., 2006). The usefulness of Hall's theory was also confirmed in the communication and ICT literature. The argument was that in order to understand computer-mediated communication one must consider cultural differences and preferences for communication patterns as proposed by Hall (1976) (Köszegi, Vetschera, & Kersten, 2004).

Conceptual framework

Figure 1 presents a conceptual framework indicating that national culture of the web users influences their web communication behaviors, specifically information search behavior, communication behavior, and transaction behavior. There are cultural differences among the web users in each type of their web communication behavior.

[Insert Figure 1 here]

Hypotheses

The general hypothesis proposed states: *There are significant differences in the three types of web communication among culturally different web users in the tourism context.* The sections below identify these differences and propose specific hypotheses in support of the developed framework.

Cultural Differences in Web Information Search Behavior

H1: *There are significant differences in web Information Search Behavior among culturally different web users in the tourism context.*

H1a: *There are significant differences in the Internet usage for information gathering.*

National culture of travelers affects their information search behavior (Chen & Gursoy, 2000; Law, et al., 2008; Money & Crotts, 2003) and the degree and types of information sources travelers use (Schmidt & Spreng, 1996). Those from high UAI cultures use more external information and communication sources than those from low UAI cultures. For example, Japanese travelers (high UAI culture) use less personal information sources than German travelers (medium UAI culture) (Money & Crotts, 2003). National culture of travelers affects the Internet usage (Kshetri, 2001; Law et al., 2008). Travelers from low PDI societies use the Internet more frequently than travelers from high PDI societies because they are not concerned about its impersonal nature (Law, et al., 2008; Matusitz & Musambira, 2009).

H1b*: There are significant differences in motivation for using the Internet.*

Travelers from high collectivistic cultures use the Internet more for social purposes, whereas travelers from high individualistic cultures use the Internet more for information search purposes (Park & Jun, 2003). While travelers from collectivistic cultures are more inclined to seek entertainment when online, travelers from high individualistic cultures tend to seek convenience, variety and choices (Chau et al., 2002). Travelers from feminine cultures tend to use the Internet more for leisure purposes than travelers from masculine cultures (DeMooij, 2000). This is because travel is a type of leisure that influences quality of life and satisfies people's intrinsic needs which are observed more in feminine than masculine cultures.

H1c: *There are significant differences in the perceived risk of using the Internet.*

Travelers from high UAI cultures are less likely to use the Internet and adopt communication technology. Those from collectivistic and high UAI cultures perceive high socio-cultural risk of using communication technology, whereas those from individualistic and low UAI cultures perceive high time and financial risk (Kraemer, Dedrick, & Melville, 2006).

H1d: *There are significant differences in innovativeness.*

Innovativeness is highly correlated with consumer's information searching/seeking behavior (e.g. Bloch, Sherrell, & Ridgway, 1986; Ha & Stoel, 2004). National culture of travelers influences their preferences for innovativeness (e.g. Park & Jun, 2003; Singh, 2006; Van Everdingen & Waarts, 2003) and the likelihood of using new information technology (Kraemer, et al., 2006). Travelers from high UAI and high PDI cultures do not seek innovations and are less likely to adopt new information technology as opposed to travelers from low UAI cultures. Those from high IDV and high MAS cultures seek innovations and new ideas (e.g., Lynn & Gelb, 1996; Steenkamp, Hofstede, & Wedel, 1999).

Cultural Differences in Web Communication Behavior

H2: *There are significant differences in web Communication Behavior among culturally different web users in the tourism context.*

H2a: *There are significant differences in the importance of using web communication methods.*

National culture of travelers influences their preferences for web communication methods (Pan, Li, Zhang, & Smith, 2007), including virtual community (Siau, Nah, & Ling, 2007), travel blogs, social networking, multimedia sharing and review websites (Gretzel, Kang, & Lee, 2008). High UAI travelers use less communication media than low UAI travelers (Straub, 1994). Travelers from high PDI cultures use less social media websites and prefer highly structured information (e.g., official tourism destination websites) (Baack & Singh, 2007). Travelers from HCC seek more information from social networks and rely more on WOM (word of mouth) communication, whereas travelers from LCC rely more on precise instructions and objective facts and seek access to official destination websites (Gretzel et al., 2008).

H2b: *There are significant differences in motivation for using social media sources.*

National culture influences travelers' motivation for using social media websites (Park & Jun, 2003). Highly individualistic travelers are more likely to use social media websites directly (e.g., marketing organizations) for information search purposes, whereas highly collectivistic travelers are more likely to use social media websites for social reasons (Gretzel et al., 2008). Travelers from low PDI cultures use more social media websites (e.g., TripAdvisor, Travel Blog, or YouTube) to share, exchange and discuss their trip information and experiences with others as opposed to travelers from high PDI cultures (Bagchi et al., 2004).

Cultural Differences in Web Transaction Behavior

H3: *There are significant differences in web Transaction Behavior among culturally different web users in the tourism context.*

H3a: *There are significant differences in the perceived online purchase risk.*

There are cultural differences in travelers' perceptions of online purchase and transaction risk (Lin, Jones, & Westwood, 2009; Quintal, 2007). Korean buyers assess high social risk of online purchase, whereas the U.S. American buyers estimate high time and psychological risk (Ko et al., 2004). Travelers from collectivistic and high UAI cultures make fewer online transactions than travelers from individualistic and low UAI cultures (Zhou, Dai, & Zhang, 2007). For example, individualistic and low UAI Swedish consumers are more involved in the Internet banking services than collectivistic and high UAI Estonian consumers (Nilsson, 2007) because Swedish consumers take more risk and trust both in-group and out-group members, whereas Estonian consumers are afraid of taking risk and trust local peers more than out-group members (Doney, Cannon, & Mullen, 1998; Lim, Leung, Sia, & Lee, 2004).

H3b: *There are significant differences in trust expressed towards online provider.*

Trust is a key to e-transaction success but the concept itself is largely dependent on national culture (Doney et al., 1998; Hofstede, Neuijen, Ohayv, & Sanders, 1990). The degree of trust in online activities is different in different cultures (Gefen & Heart, 2006; Sia, et al., 2009). Travelers from collectivistic, high UAI and high PDI cultures tend not to trust strangers and make less online purchases than those

from individualistic, low UAI and low PDI cultures (Fukuyama, 1995). Travelers from high PDI countries express less trust towards service providers than travelers from low PDI countries (Shaffer & O'Hara, 1995).

Methodology

Sample

A random sample of the US American and Chinese web users was used. The United States and China are currently the biggest English and non-English speaking groups of the Internet users in the world. The US American and Chinese groups are also culturally different; they obtained different scores on almost all Hofstede's cultural dimensions. The US American culture scored higher on Hofstede's (1980, 2001) IDV (91) and UAI (46) and lower on PDI (40) and MAS (62) than Chinese culture which scored lower on IDV (20) and UAI (30) and higher on PDI (80) and MAS (66). Both groups have also different communication styles; the US Americans belong to the LLC, whereas Chinese belong to the HCC. The total sample size was 340 and included 190 US American and 150 Chinese respondents.

Questionnaire Development

The structured questionnaire was used to collect data. The first part of the questionnaire asked the respondents about their web information search behavior, specifically the importance of various communication means, the Internet usage as a main information source, motivation for using the Internet, perceived risk of using the Internet for travel information search, and innovativeness. A 6-point rating scale was used ranging from 1 (strongly disagree) to 6 (strongly agree). The second part of the questionnaire asked the respondents about their web communication behavior, specifically the importance of using various communication methods when searching for travel information and motivation for using social media websites. A 6-point rating scale was used ranging from 1 (not important at all) to 6 (extremely important). In the third part of the questionnaire respondents were asked about their web transaction behavior, specifically the perceived online purchase risk and trust expressed towards web

retailers. Again, a 6-point rating scale was used ranging from 1 (not risky at all) to 6 (extremely risky) (see Table 1). The last part of the questionnaire asked about the respondents' demographic profile.

Procedure

The questionnaire was developed in English, translated into Mandarin, and then translated back to English. The back translation method (Brislin, 1986) was used to avoid translation errors and maintain consistency of the meanings conveyed in words. The questionnaires were distributed to the US American and Chinese visitors to Philadelphia in 2011. Currently, China belongs to the top international markets generating visitors to the US (Office of Travel and Tourism Industries, 2011). Philadelphia is experiencing a big explosion of Chinese visitation. The Philadelphia's Convention and Visitors Bureau (CVB) aims at attracting many Chinese visitors in the future (Vider, 2011; www.flyingkitmedia.com). The US and Chinese respondents were approached at Philadelphia's major tourist attractions, such as the Liberty Bell and Independence Hall, City Hall, Museum of Arts and Society Hill Historic District. Research assistants fluent in the English and Mandarin languages were hired to collect data.

Data analysis

Frequency distribution of the variables examined was carried out to identify the respondents' profile. Two Principal Component Analyses with varimax rotation were run to identify the dimensions of motivations to use the Internet and motivations to use social media websites. The Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity tests were explored to assess sampling adequacy and determine whether the variables considered in the analysis correlated highly enough to provide a reasonable basis for factor analysis (Hair, Anderson, Tatham, & Black, 1998). Only variables with factor loadings above 0.5 and factors with eigenvalues greater than 1.0 were accepted in the final solution. The reliability tests using Cronbach's Alpha were calculated to assess the internal consistency of the measuring scales. T-tests were carried out to identify significant differences in the three types of web communication behavior between the two groups.

Results

Respondents' Profile

The sample consisted of 190 US Americans (55.9% of the total sample) and 150 Chinese (44.1%). Female respondents represented 59.1% of the sample, while male represented 40.9%. Most respondents were professionals (77.2%) between the ages of 21 and 29 (81.9%). Most of the US American (92%) and Chinese (97%) respondents have never been to Philadelphia before. Most of the US American respondents travelled independently, in contrast to the Chinese respondents who travelled in groups.

Differences in Web Information Search Behavior

The T-test showed identified no significant differences between the two groups in the perceived importance of communication means, such as e-mail, telephone calls, text-messaging and social media, (see Table 1).

[Insert Table 1 here]

There was a significant difference between the two groups in the usage of the Internet as a main information source (t=-4.59, $p<0.001$). The US American respondents were more likely to use the Internet as a main information source than Chinese respondents (see Table 1). The result supports the findings of Strite and Karahanna (2006) and Kshetri (2001) and is consistent with previous studies indicating that members of the high PDI societies (China) are less likely to use the Internet and communication technology than those from low PDI societies (e.g., Law, et al., 2008; Matusitz & Musambira, 2009). The result supports Hypothesis 1a.

A Principal Component Analysis with varimax rotation carried out on 15 items identified three major dimensions of motivations for using the Internet: social interaction, information search, and entertainment (see Table 2).

[Insert Table 2 here]

The t-test result showed significant differences between the two groups in motivation to use the Internet for the purpose of social interaction (t=2.40, $p<0.1$) and entertainment (t=3.01, $p<0.01$). Chinese respondents were more likely to use the Internet for the purpose of social interaction and entertainment than American respondents (see Table 1). This result is in line with the findings of Chau et al. (2002), DeMooij (2000), Ko et al. (2004), Hermeking (2006) and Park and Jun (2003). Although there was no significant difference between the two groups in using the Internet for the purpose of information search, the mean value for the US American group (x=4.25) was higher than for the Chinese group (x=4.05) which is consistent with previous findings by Taylor, Miracle, and Wilson (1997). The results partially support Hypothesis 1b.

There were significant differences between the two groups in the perceived risk of using the Internet for travel information search. The US Americans perceived higher risk because of 'not being able to inspect the product' (t=-3.79, $p<0.001$) and 'not being able to experience the product' (t=-2.58, $p<0.01$) than Chinese (see Table 1). The result supports the findings by Kraemer et al., (2006). However, there was no significant difference between the groups in the perception of 'not being able to compare price'. The results partially support Hypothesis 1c.

There were also significant differences between the two groups in their perceived technological innovativeness. Overall, Chinese respondents perceived themselves as technologically more innovative than the US Americans. Chinese taught they knew more about new technologies (t=3.53, $p<0.001$), were the first to buy new technologies (t=5.32, $p<0.001$), and used more new technologies than others (t=3.36, $p<0.001$) (see Table 1). The study supports the findings by Steenkamp et al., (1999), Lynn and Gelb (1996) and Kraemer et al., (2006) who reported that those from low UAI and high MAS cultures (e.g. China) are more likely to seek innovations and adopt new ICT. The result supports Hypothesis 1d.

In summary, there were nine (out of 15 areas of measurement) significant differences in information search behavior between the groups. The study results partially support Hypothesis 1. The study results are partially in line with previous findings by Chen and Gursoy (2000), Gursoy and Umbreit (2004), Law et al. (2008), and Money and Crotts (2003).

Differences in Web Communication Behavior

There were significant differences between the two groups in the importance of using web communication methods for the purpose of travel information search, especially multimedia (e.g., Youtube) (t=-1.97, $p<0.01$) and review websites (e.g., TripAdvisor and TourCompanyReviews) (t=-3.41, $p<0.001$). Both communication methods were perceived to be more important to the US American group than the Chinese group (see Table 1). The result supports the findings by Gretzel et al. (2008) and Straub (1994). There were no significant differences between the two groups in the importance of using virtual community, travel blogs and social networks. The results partially support Hypothesis 2a.

A Principal Component Analysis with varimax rotation carried out on 15 items identified three dimensions of motivations for using social media websites, such as social interaction, information search, and entertainment (see Table 3).

[Insert Table 3 here]

The T-test result showed no significant differences between the two groups in motivation for using social media websites which contradicts previous findings by Park and Jun (2003). The result does not support Hypothesis 2b. In summary, there were two (out of eight areas of measurement) significant differences in web communication behavior between the groups. The study results only partially support Hypothesis 2.

Differences in Web Transaction Behavior

There were significant differences between the two groups in the perceived online purchase risk. The U.S. Americans perceived significantly higher online purchase risk than Chinese because of the fear of "making poor purchasing decision" (t=-4.75, $p<0.001$), the necessity to "provide personal information" (t=-5.57, p<*0.001*), and the probability of "experiencing an unpredictable change in price" (t=-3.27, p<*0.001*) (see Table 1). The result supports Hypothesis 3a. This result is supported by Ko et al., (2004), Lin et al., (2009), Park and Jun (2003) and Quintal (2007). There were no significant differences between the two groups in trust expressed towards web retailers. The result does not support Hypothesis 3b. The result is in contrast to the findings by Fukuyama (1995) and Shaffer and O'hara (1995). In summary, there were three (out of seven areas of measurement) significant differences in web transaction behavior between the groups. The study results only partially support Hypothesis 3.

Discussion

The study results show that the US Americans and Chinese do not differ in the perceived importance of communication means; the Internet, especially e-mail, text messaging and social media are important means of web communication to both groups. This is because the Internet is becoming a universal, very fast and cheap means of communication around the world.

The US Americans are more likely than Chinese to use the Internet as a main information source. This is because the US Americans have a better access to communication technology. They are also highly individualistic, more independent and free to travel and thus more likely to use the Internet for information search and product purchase (Chau et al., 2002; O'Keefe, et al., 2000). In addition, the US Americans are more likely than Chinese to use multimedia and review websites as the main web communication methods when searching for travel information. The US Americans who belong to low PDI culture are not constrained by rules of communication and social status differences to the same degree as Chinese are; the US Americans are more likely to share, exchange and discuss information online with others (Hofstede, 2001). The US Americans also seek more variety of information sources and like to challenge others. Further, the US Americans perceive higher risk of using the Internet for the

purpose of online purchase, mainly because they are exposed to many competitive alternatives and are aware of the sudden changes in prices and purchasing conditions; they are also less comfortable with providing personal information. It seems the US Americans seek more financial security than Chinese.

Chinese, on the other hand, are more likely to use the Internet for the purpose of social interaction and entertainment. This is because collectivistic Chinese focus more on interdependent human relations, social ties, group activities, and mutual cooperation. In contrast to the more masculine US Americans who tend to be more involved in online activities for the purpose of work, more feminine Chinese tend to use online activities for the purpose of leisure (Shiu & Dawson, 2002), socializing and exchanging e-mails and downloading softwares (Wee & Ramachandra, 2000). Also, Chinese perceive themselves as being more technologically innovative and knowledgeable than others. They believe they are the first who buy and use new information technologies. This finding contradicts the past findings that high UAI Chinese tend not to take risk and are suspicious of new ideas and developments to avoid conflict (Kailani & Kumar, 2011). The study result shows the opposite (also see Lynn & Gelb, 1996; Steenkamp et al., 1999). The study shows that Chinese are open to technological developments and believe in their technological superiority. It is possible that the fast globalization of the world economy and the need to be more competitive changed the Chinese attitudes to risk and made them embrace the uncertainties associated with new communication technologies.

Conclusion

This study confirmed the existence of the significant differences in web information search, communication and transaction behaviors between the US American and Chinese travelers. Significant differences were found in 14 out of 30 areas of measurement. The US Americans were more likely than Chinese to use the Internet as a main information source, especially multimedia and review websites. They also perceived higher risk of using the Internet for travel information search and higher risk of online purchase. Chinese were more likely to use the Internet for socializing and entertainment and perceived themselves to be more technologically innovative. The study argued that cultural differences

should be taken into account when developing web communication strategies for culturally different travelers.

Implications and Contribution

From the theoretical point of view, the paper developed a comprehensive framework for analyzing cultural differences in web communication in the tourism context. It argued for the need to include national culture of travelers in web communication studies and called for developing culture-oriented Internet-based communication. From the practical point of view, the paper suggested that web communication planners and developers should use culturally customized online communication strategies to better serve tourists' needs and support their travel planning.

Study Limitations

Although the two ethic groups were selected for their significant differences along Hofstede's (2001) cultural measures the analyses were not controlled for the influence of cultural profile of the respondents. The significant differences observed in responses could be due to differences in socio-demographics or even the Internet availability. For example, one can argue that the United States have a huge lead over China when it comes to the actual Internet penetration; the share of the US and Chinese population that has access to the Internet is 78.3% and 38.4%, respectively (Internet World Stats, 2012). However, although the United States more than doubled its Internet population between 2000 and 2010 China's Internet user base grew an incredible 1,767% in the same period of time (http://royal.pingdom.com/2011/04/19/usa-vs-china-on-the-internet). Further, most respondents in the study were young professionals. Given the familiarity with Internet technology, this group uses the Internet the most. The questionnaires were distributed in Philadelphia only. Consequently, one should be careful about generalizing the findings to other segments of the population or geographical regions.

Future Research

Future research should verify the findings on a larger sample of respondents from various geo-cultural regions and control for the impact of demographic, socio-economic and cultural variables. The differences in the Internet availability should be taken into account. Web communication of different types of travelers should be examined. For example, first-time versus repeat travelers and experienced versus inexperienced travelers might have different Internet usage, distinct motivation for using social media and seek different information and perceive different risk. The usefulness of the Internet functions for destination marketing and the impacts of these functions on travel intentions should be examined. New models of cultural differences in web communication should be developed and tested.

References

Baack, D., & Singh, N. (2007). Culture and web communications. *Journal of Business Research, 60,* 181-188.

Bagchi, K., Hart, P., & Peterson, M. (2004). National culture and information technology adoption. *Journal of Global Information Technology Management, 7*(4), 29-46.

Bloch, P. H., Sherrell, D. L., & Ridgway, N. M. (1986). Consumer search: An extended framework. *Journal of Consumer Research, 13*(1), 119-126.

Brislin, R. (1986) The wording and translation of research instruments. In Lonne, W. and Berry, J. (eds) *Field Methods in Cross-Cultural Research*. Newbury Park, CA: Sage.

Buhalis, D. (1998). Strategic use of information technologies in the tourism industry. *Tourism Management, 19*(5), 409-421.

Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet--The state of eTourism research. *Tourism Management, 29*(4), 609-623.

Chau, P., Cole, M., Massey, A., Montoya-Weiss, M., & O'Keefe, R. (2002). Cultural differences in the online behaviour of consumers. *Communications of the ACM, 45*(10), 138–143.

Chen, J., & Gursoy, D. (2000). Cross-cultural comparison of the information sources used by first-time and repeat travellers and its marketing implications. *International Journal of Hospitality Management, 19*(2), 191-203.

ChinaTravelTrends.com (2009). Chinese Travelers hit the Internet to plan vacations. Retrieved from http://www.chinatraveltrends.com/2009/08/travelers-hit-internet-to-plan-vacations/.

ComScore, Inc. (2008). *Social Networking Explodes Worldwide as Sites Increase their Focus on Cultural Relevance.* Retrieved from http://www.comscore.com/Press_Events/Press_Releases/2008/08/Social_Networking_World_Wide.

Crotts, J. (1999). Consumer decision making and pre-purchase information search. In Y. Mansfield, & A. Pizam (Eds.), *Consumer behaviour in travel and tourism* (pp.149-168). Binghamton, NY: Haworth Press.

Crotts, J., Buhalis, D., & March, R. (2000). Introduction to global alliances in tourism and hospitality management. *International Journal of Hospitality & Tourism Administration, 1*(3/4), 1-10.

December, J. (1996). Units of analysis for Internet communication. *Journal of Communication, 46*(1), 14–37.

Deighton, J. (1997). Commentary on exploring the implications of the Internet for consumer marketing. *Journal of the Academy of Marketing Science, 25*(4), 347-351.

DeMooij. M. (2000). The future is predictable for intentional marketers: Converging incomes lead to diverging consumer behaviour. *International Marketing Review, 17*(2), 103-113.

Doney, P., Cannon, J., & Mullen, M. (1998), Understanding the influence of national culture on the development of trust. *The Academy of Management Review, 23*(3), 601-620.

Fukuyama, F. (1995). *Trust: The Social Virtues and the Creation of Prosperity*. London: Penguin.

Fodness, D., & Murray, B. (1998). A typology of tourist information search strategies. *Journal of Travel Research, 37,* 108-119.

Fodness, D., & Murray, B. (1999). A model of tourist information search behaviour. *Journal of Travel Research, 37*(3), 220-230.

Garfield, M., & Watson, R. (1997). Differences in national information infrastructure: The reflection of national cultures. *Journal of Strategy Information Systems, 6,* 313-337.

Gefen, D., & Heart, T. (2006). On the need to include national culture as a central issue in e-commerce trust beliefs. *Journal of Global Information Management, 14*(4), 1-30.

Google/OTX (2011) The traveller's road to decision 2011: Think travel with Google. Retrieved from http: think with google.com/insights.

Gevorgyan, G., & Manucharova, N. (2009). Does culturally adapted online communication work? A study of American and Chinese internet users' attitudes and preferences toward culturally customized web design elements. *Journal of Computer-Mediated Communication, 14*, 393-413.

Gretzel, U., Fesenmaier, D., & O'Leary, J. (2006). The transformation of consumer behaviour. In D. Buhalis, & C. Costa (Eds.), *Tourism business frontiers.* Oxford, UK: Butterworth-Heinemann.

Gretzel, U., Kang, M., & Lee, W. (2008). Differences in consumer-generated media adoption and use: A cross-national perspective. *Journal of Hospitality and Leisure Marketing, 17*(1/2), 99-120.

Gursoy, D., & Chen, J. (2000). Competitive analysis of cross cultural information search behaviour. *Tourism Management, 21,* 583-590.

Gursoy, D., & Umbreit, W. (2004). Tourist information search behaviour: Cross-cultural comparison of European union member states. *International Journal of Hospitality Management, 23,* 55-70.

Ha, Y., & Stoel, L. (2004). Internet apparel shopping behaviors: The influence of general Innovativeness. *International Journal of Retail & Distribution Management, 32*(8), 377-385.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Pearson Education.

Hall, E. (1960). The silent language in overseas business. *Harvard Business Review*, May-June.

Hall, E. (1976). *Beyond culture*. New York, NY: Anchor Press.

Hermeking, M. (2006). Culture and Internet consumption: Contributions from cross-cultural marketing and advertising research. J*ournal of Computer-Mediated Communication, 11,* 192-216.

Hofstede, G. (1980). *Cultural consequences: International differences in work related values*. Beverly Hills, CA: Sage.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviours, institutions and organizations across nations* (2nd ed). Thousand Oaks, CA: Sage.

Hofstede, G., Neuijen, B., Ohayv, D., & Sanders, G. (1990). Measuring organizational cultures: A qualitative and quantitative study across twenty cases. *Administrative Science Quarterly, 35*(2), 286-316.

Hwang, Y., Gretzel, U., Xiang, Z., & Fesenmaier, D. (2006). Information search for travel decisions. In D. Fesenmaier, H. Werthner, & K. Wöber (Eds.), *Destination recommendation systems: Behavioral foundations and applications* (pp. 3-16). Cambridge, MA: CABI.

Internet World Stats (2012). *Internet usage statistics: World internet users and population stats.* Retrieved from http://www.internetworldstats.com/stats.htm

Jang, S. (2004). The past, present, and future research of online information search. *Journal of Travel and Tourism Marketing, 17*(2/3), 41-47.

Kah, A., Vogt, C., & MacKay, K. (2006). *Internet involvement in trip planning and purchasing*. In Proceedings of 2006 TTRA Annual Conference, Dublin, Ireland.

Kailani, M. A., & Kumar, R. (2011). Investigating uncertainty avoidance and perceived risk for impacting internet buying: A study in three national cultures. *International Journal of Business and Management, 6*(5), 76-92.

Kim, D., Pan, Y., & Park, H. (1998). High- versus low-context culture: a comparison of Chinese, Korean, and American cultures. *Psychology and Marketing, 15*(6), 507-521.

Kraemer, K., Dedrick, J., & Melville, N. (2006). Globalization and national diversity: E-commerce diffusion and impacts across nations. In K. Kraemer, J. Dedrick, N. Melville, & K. Zhu (Eds.), *Global e-commerce: Impacts of national environment and policy* (pp. 13–61). Cambridge, UK: Cambridge University Press.

Ko, H., Jung, J., Kim, J., & Shim, S. (2004). Cross-cultural differences in perceived risk of online shopping. *Journal of Interactive Advertising, 4*(2), 20-29.

Köszegi, S., Vetschera, R., & Kersten, G. (2004). National cultural differences in the use and perception of Internet-based NSS: Does high or low context matter? *International Negotiations Journal, 9*(1), 79–109.

Kshetri, N. (2001). Determinants of the locus of global E-commerce. *Electronic Markets, 11*(4), 250-257.

Law, R., Bai, B., & Leung, B. (2008). Travel website uses and cultural influence: A comparison between American and Chinese travellers. *Information Technology and Tourism, 10*(3), 215-225

Law, R., & Leung, R. (2000). A study of airlines' online reservation services on the Internet. *Journal of Travel Research, 39*(2), 202-211.

Lim, K., Leung, K., Sia, C., & Lee, M. (2004). Is e-commerce boundary-less? Effects of individualism–collectivism and uncertainty avoidance on Internet shopping. *Journal of International Business Studies, 35*(6), 545–559.

Lin, P., Jones, E., & Westwood, S. (2009). Perceived risk and risk-relievers in online travel purchase intentions. *Journal of Hospitality Marketing & Management, 18*(8), 782 – 810.

Lynn, M., & Gelb, B. (1996). Identifying innovative national markets for technical consumer goods. *International Marketing Review, 13*(6), 43–57.

Marin, B., Marin, G., Perez-Stable, E., Otero-Sabogal, R., & Sabogal, F. (2006). Cultural differences in attitudes toward smoking: Developing messages using the theory of reasoned action. *Journal of Applied Social Psychology, 20*(6), 478-493.

Matusitz, J., & Musambira, G. (2009). *Power distance, uncertainty avoidance, and communication technology: analyzing Hofstede's dimensions and human development indicator*. In Proceedings of the AEJMC Annual Convention, Boston, MA

Money, R., & Crotts, J. (2003). The effect of uncertainty avoidance on information search, planning, and purchases of international travel vacations. *Tourism Management, 24*(2), 191-202.

Myers, M., & Tan, F. (2002). Beyond models of national culture in information systems research. *Journal of Global Information Management, 10*(2), 1-19.

Newhagen, J., & Rafaeli, S. (1996). Why communication researchers should study the Internet: A dialogue. *Journal of Computer-Mediated Communication*. Retrieved from http://www.ascusc.org/ jcmc/vol1/issue4/rafaeli.html.

Nilsson, D. (2007). A cross-cultural comparison of self-service technology use. *European Journal of Marketing, 41*(3/4), 367-381

Office of Travel and Tourism Industries (2011). International visitation to the United State: A statistical summary of U.S. visitation (2011). Retrieved from http://tinet.ita.doc.gov/outreachpages/download_data_table/2011_Visitation_Report.pdf.

O'Keefe, R., Cole, M., Chau, P., Massey, A., Montoya-Weiss, M., & Perry, M. (2000). From the user interface to the consumer interface: Results from a global experiment. *International Journal of Human–Computer Studies, 53*, 611–628.

Onkvisit, S., & Shaw, J. (2002). Standardised international advertising: Some research issues and implications. *Journal of Advertising Research, 39*, 19-24.

Pan, B., Li, X., Zhang, L., & Smith, W. (2007). An exploratory study on the satisfaction and barriers of online trip planning to China: American college students' experience. *Journal of Hospitality & Leisure Marketing, 16*(1/2), 203-226.

Pan, B., MacLaurin, T., & Crotts, J. (2007). Travel blogs and the implications for destination marketing. *Journal of Travel Research, 46,* 35-45.

Park, C., & Jun, J-K. (2003). A cross-cultural comparison of Internet buying behaviour: Effects of the Internet usage, perceived risks, and innovativeness. *International Marketing Review, 20*(5), 534-553.

Peterson, R., Balasubramanian, S., & Bronnenberg, B. (1997). Exploring the implications of the Internet for consumer marketing. *Journal of the Academy of Marketing Science, 25*(4), 329-346.

Peterson, R., & Merino, M. (2003). Consumer information search behaviour and the Internet. *Psychology and Marketing, 20*(2), 99-121.

Pew Internet Project (2009). Online activities 2000-2009. Retrieved from http://pewinternet.org/Trend-Data-%28Adults%29/Online-Activities-20002009.aspx

Pew Internet Project (2010). *Online Product Research.* Retrieved from http://pewinternet.org/Press-Releases/2010/Online-Product-Research.aspx.

Poon, A. (1993). *Tourism, technology and competitive strategies*, Wallingford: CABI.

Quelch, J., & Klein, L. (1996). The Internet and international marketing. *Sloan Management Review, 37*(3), 60-75.

Quintal, V. (2007). *An investigation into the effects of risk and uncertainty on consumers' decision-making process: a cross-national study*. Unpublished Doctoral Dissertation, University of Western Australia, 2007.

Schmidt, J., & Spreng, R. (1996). A proposed model of external consumer information search. *Journal of the Academy of Marketing Science, 24*(3)*,* 246–256.

Shaffer, T., & O'Hara, B. (1995). The effects of country of origin on trust and ethical perceptions of legal services. *The Service Industries Journal, 15*(2), 162-185.

Sheldon, P. (1997). *Tourism information technology.* Oxford: CABI.

Shiu, E., & Dawson, J. (2002). Cross-national consumer segmentation of Internet shopping for Britain and Taiwan. *The Service Industries Journal, 22*(1), 147-166.

Shiu, E., & Dawson, J. (2004). Comparing the impacts of Internet technology and national culture on online usage and purchase from a four-country perspective. *Journal of Retailing and Consumer Services, 11*(6), 385-394.

Sia, C., Lim, K., Leung, K., Lee, M., Huang, W., & Benbasat, I. (2009). Web strategies to promote Internet shopping: Is cultural-customization needed? *MIS Quarterly, 33*(3), 491-512.

Siau, K., Nah, F., & Ling, M. (2007). National culture and its effects on knowledge communication in online virtual communities. *International Journal of Electronic Business, 5*(5), 518 – 532.

Simpson, J. (2002). Computer-mediated communication. *ELT Journal, 5*(4), 414-415.

Singh, N. (2002). Analyzing cultural sensitivity of websites: A normative framework. *Journal of Practical Global Business, 1*(2)*,* 32-53.

Singh, S. (2006).Cultural differences in, and influences on, consumers' propensity to adopt Innovations. *International Marketing Review, 23*(2), 173-191.

Starkov, M., & Price, J. (2003). *Online travellers prefer booking directly on the hotel website.* Retrieved from http://www.wiredhotelier.com/news/4015607.

Steenkamp, B., Hofstede, F., & Wedel, M. (1999). A cross-national investigation into the individual and national cultural antecedents of consumer innovativeness. *Journal of Marketing, 63,* 55-69.

Strite, M. & Karahanna, E. (2006). The role of espoused national cultural values in technology acceptance. *MIS Quarterly, 30*(3), 679-704.

Straub, D. (1994). The effect of culture on IT diffusion: e-mail and FAX in Japan and the U.S. *Information Systems Research, 5*(1), 23-47.

Taylor, C., Miracle, G., & Wilson, R. (1997). The impact of information level on the effectiveness of U.S. and Korean television commercials. *Journal of Advertising, 26*(1), 1–15.

Van Everdingen, Y., & Waarts, E. (2003). The effect of national culture on the adoption of innovations. *Marketing Letters, 14*(3), 217-232.

Vider, E. (2011) Flocking to Philly: International visitors up nearly 50 percent. www.flyingkitmedia.com/.

Volo, S. (2007). Communicating tourism crises through destination Websites. *Journal of Travel and Tourism Marketing, 23*(2), 83-93.

Walther, J., & Burgoon, J. (2006). Relational communication in computer-mediated interaction. *Human Communication Research, 19*(1), 50-88.

Wee, K., & Ramachandra, R. (2000). Cyberbuying in China, Hong Kong and Singapore: Tracking the who, where, why and what of online buying. *International Journal of Retail and Distribution Management, 28*, 307-325.

Werthner, H., & Klein, K. (1999). *Information technology and tourism: A challenging relationship* (1st ed). Vienna, Austria: Springer-Verlag.

Xiang, Z., & Gretzel, U. (2006). Role of social media in online travel information search. *Tourism Management, 31*(2), 179-188.

Xiang, Z., Wöber, K., & Fesenmaier, D. (2008). Representation of the online tourism domain in search engines. *Journal of Travel Research, 47,* 137-150.

Zhou, L., Dai, L., & Zhang, D. (2007). Online shopping acceptance model: A critical survey of *Journal of Electronic Commerce Research, 8*(1), 41-62.

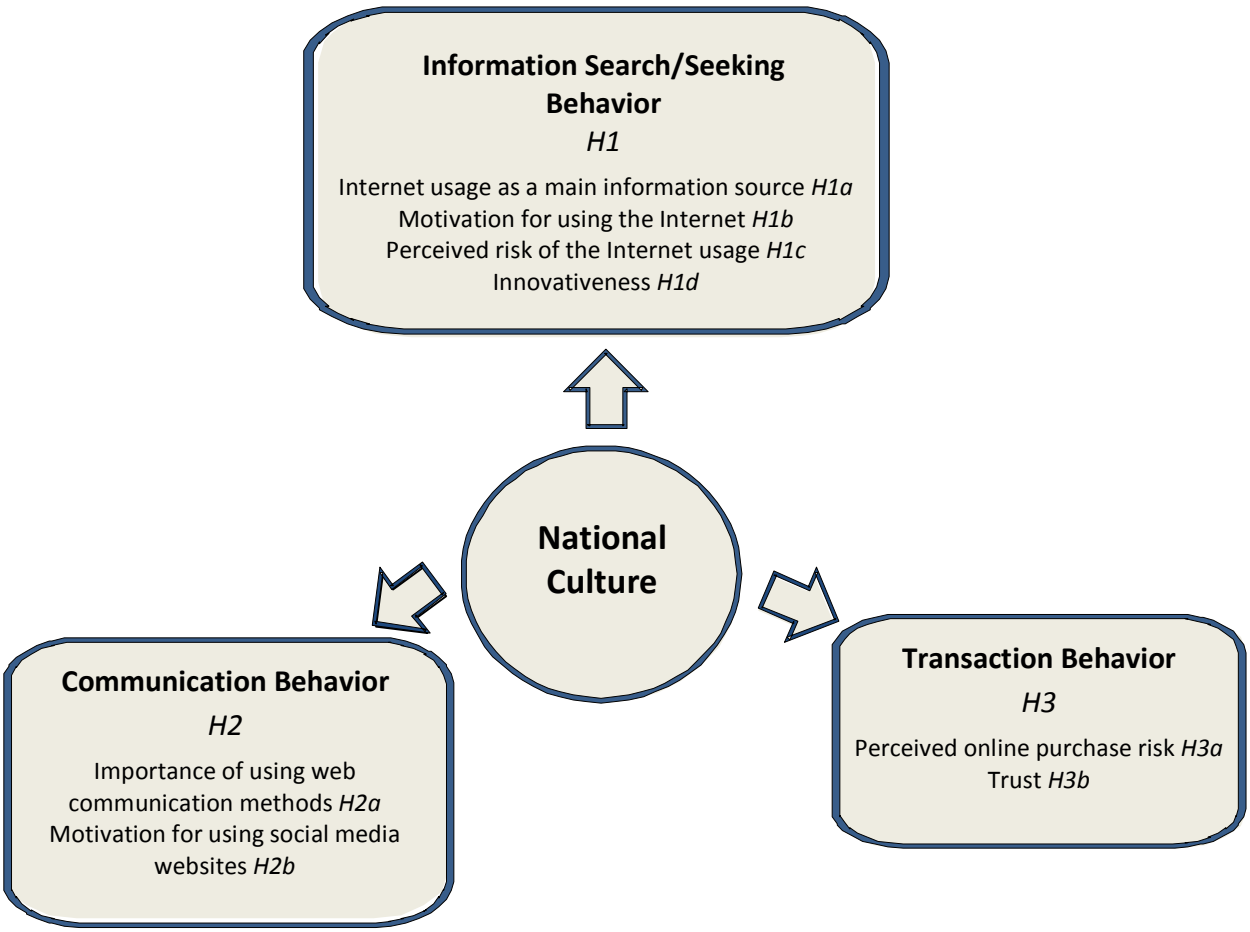

Figure 1. Cultural Differences in Web Communication Behavior

Table 1
Results of the T-Tests between the Two Groups

	Variables	US American (mean)	Chinese (mean)	t critical	Support
H1	Web Information Search Behavior				
	Perceived importance of communication means				
	E-mail	5.14	4.95	-1.26	No
	Telephone call	4.76	4.99	1.36	No
	Text-message	4.87	4.72	-.85	No
	Social media (e.g., Facebook, Myspace, etc.)	3.87	4.25	1.66	No
H1a	Use of the Internet as a main information source	5.11	4.24	-4.59***	Yes
H1b	Motivation for using the Internet				
	For social interaction	2.46	2.92	2.40*	Yes
	For information search	4.25	4.05	-1.24	No
	For entertainment	4.12	4.58	3.01**	Yes
H1c	Perceived risk of using the Internet for travel information search				
	Not being able to inspect the product	4.08	3.36	-3.79***	Yes
	Not being able to experience the product	4.15	3.60	-2.85**	Yes
	Not being able to compare price	3.12	3.19	.33	No
H1d	Innovativeness				
	I learn about new technologies before others	3.39	4.16	3.53***	Yes
	I am the first who buys new technologies	2.64	3.77	5.32***	Yes
	I use more new technologies than others	3.13	3.92	3.36***	Yes
H2	Web Communication Behavior				
H2a	Importance of using web communication methods when searching for travel information				
	Virtual community	2.73	2.71	-.09	No
	Travel blogs	3.15	2.99	-.74	No
	Social networks (incl. Facebook)	3.25	3.00	-1.05	No
	Multimedia (e.g., Youtube)	3.53	3.05	-1.97*	Yes
	Review websites (e.g., TripAdvisor)	4.47	3.72	-3.41***	Yes
H2b	Motivation for using social media websites				
	For social interaction	2.71	2.95	1.24	No
	For information search	3.90	3.57	-1.70	No
	For entertainment	3.90	4.19	1.79	No
H3	Web Transaction Behavior				
H3a	Perceived online purchase risk				
	Making poor purchasing decision	3.74	2.83	-4.75***	Yes
	Providing personal information	4.46	3.40	-5.57***	Yes
	Experiencing an unpredictable change in price	3.62	2.95	-3.27***	Yes
H3b	Trust expressed towards online providers				
	Online providers are honest	3.15	3.29	.75	No
	Online providers are not opportunistic	3.05	2.72	-1.80	No
	Online providers are trustworthy	3.27	3.25	-.11	No
	Online providers are predictable	3.41	3.33	-.40	No

*p<.05; **p < .01; ***p < .001. A 6-point scale was used.

Table 2

Principal Components Analysis for Motivation to Use the Internet

Items	Factor 1 (Social Interaction)	Factor 2 (Information Search)	Factor 3 (Entertainment)
To influence group	.820		
To meet new people	.804		
To visit chat room	.782		
To make money	.727		
To advertise	.710		
To search for employment information		.822	
To search for educational information		.761	
To search for travel information		.711	
To search for product information		.686	
To look for a job		.680	
To sell something		.561	
To play games			.825
To download software			.723
To enjoy myself			.621
To search for hobby information			.564
Eigenvalues	3.69	3.51	2.21
Variance explained	23.08%	21.93%	13.81%
Cumulative variance explained	23.08%	45.01%	58.82%
Reliability coefficients (Cronbach's Alpha)	.86	.83	.73
KMO and Bartlett's Sphericity Test		.84 and1310.72***	

Table 3

Principal Components Analysis for Motivation to Use Social Media

Items	Factor 1 (Social Interaction)	Factor 2 (Information Search)	Factor 3 (Entertainment)
To influence group	.830		
To visit chat room	.802		
To advertise	.798		
To meet new people	.761		
To make money	.718		
To sell something	.660		
To search for travel information		.832	
To search for employment information		.807	
To search for educational information		.794	
To search for product information		.771	
To look for a job		.531	
To play games			.734
To enjoy myself			.692
To search for hobby information			.658
To download software			.568
Eigenvalues	4.39	3.74	2.31
Variance explained	27.47%	23.39%	14.42%
Cumulative variance explained	27.47%	50.86%	65.28%
Reliability coefficients (Cronbach's Alpha)	.89	.89	.72
KMO and Bartlett's Sphericity Test		.89 and 1573.35***	