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Dimensions of Trust in Tourism M-commerce: a Conceptual Model

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Abstract: Tourism is an information-based industry and innovative mobile service is believed to be providing more business opportunities for the industry. However, the adoption of mobile tourism service is still in its formative stage. Lack of trust has been recognized as one of the most frequently cited reasons for consumers not adopting m-commerce in academic as well as in practitioner communities, hence knowing the nature of consumer trust and its determinants in m-commerce has become an important goal. The current research intends to explore the conceptual model of trust in tourism mobile service. The key issues to be addressed in the present study concern with discussing the importance of consumer trust and identifying the determinants and dimensions of trust in mobile tourism service. The study advances the knowledge of consumer trust of tourism m-commerce which will help the tourism mobile service providers, including hotels, restaurants and travel agencies to understand how to build and improve consumer trust in m-commerce.

Key words: M-commerce, tourism M-commerce, trust, conceptual model

INTRODUCTION

During the last two decades of the twentieth century, mobile phones have been rapidly diffused across the globe which laid the foundation for a new type of technology-aided commerce, mobile commerce (m-commerce). This new type of mobile commerce, characterized by location-based services, is bringing new business opportunities for related service organizations to develop invocative mobile services.

Of new types of mobile commerce, tourism services have been claimed as one of the most promising and profitable services (Fesenmaier, 2000; Buhalis and Licata, 2002; Buhalis and Law, 2008; Lee and Mills, 2010). Since travel is an information-based behavior and tourists require timely, higher quality information during travelling, innovative mobile services are able to reach tourists anywhere at anytime to satisfy their sophisticated needs, examples including maps, personal navigation systems and location-based mobile guides etc. M-commerce has been considered “a good fit” for travel-related information search and purchase (Buhalis and Law, 2008; Goh *et al.*, 2010).

Despite the phenomenal growth and the spectacular prediction of future prosperity for mobile tourism services, practitioners have encountered problems and challenges at the same time. Lack of trust has been recognized as one of the most frequently cited reasons for consumers not adopting e-commerce in academic as well as in practitioner communities (Chen and Dhillon, 2003; Bart *et al.*, 2005). The importance of initiating, building and maintaining trust between buyers and sellers as key facilitators of

successful e-commerce is increasingly being recognized (Bart *et al.*, 2005; Chen, 2006; Casalo *et al.*, 2007; Beldad *et al.*, 2010). Considering the uncertainty and infancy of m-commerce environment, trust is even more important in affecting consumer to accept m-commerce (Siau and Shen, 2003). Knowing the nature of m-commerce trust and its determinants has become an important goal. A number of empirical studies have investigated the role of trust in the context of e-commerce and some specifically in m-commerce environment (Siau and Shen, 2003; Bart *et al.*, 2005; Chen, 2006; Casalo *et al.*, 2007; Beldad *et al.*, 2010). However, few academic studies have been made to explore the nature of trust in mobile tourism service environment. With the prediction of future prosperity for the mobile tourism services, the current research intends to explore the conceptual framework of trust in tourism mobile service. The key issues to be addressed in the present study concern with determining the importance of trust in mobile tourism services from the tourists’ perspective and identifying the dimensions of trust in mobile tourism service.

MOBILE TECHNOLOGY AND TOURISM SERVICES

Mobile Internet is an enabling technology for m-commerce in the tourism industry (Fesenmaier, 2000; Buhalis and Licata, 2002; Goh *et al.*, 2010). M-commerce not only extends the benefits of the Web but also allows for unique services enabled by the convergence of the Internet with mobile technologies. By perfectly meeting customers’ information needs about products and services prior to purchase, the tourism industry is benefiting from

mobile technology in satisfying customer expectations, in improving convenience and in decreasing costs. As mobile phones and other portable devices becoming more advanced, tourism is one obvious application area (Buhalis and Licata, 2002; Lee and Mills, 2010).

The technology has managed to generate a vast amount of investment in wireless phone services, such as news, weather, financial services, banking information, travel agencies, timetables, leisure and so on. Making the information accessible to tourists anytime at anywhere if needed could be effective and helpful for travelling. For example, for decades, most reservations were conducted by phone, letter, or facsimile to travel agents or hotels. However, tourists would be able to do that by clicking the mobile phones, especially when they want to make change to reservations nearing departure of arrival time (Buhalis and Licata, 2002). Mobile commerce offers great flexibility for the tourists while travelling, as well as tourism suppliers who operate in volatile markets. The promotional message can be changed more quickly on a web page than on a printed document, eliminating the lag time between the adoption and the implementation of a policy decision.

Mobile services not only adds convenience to the tourists and tourism suppliers it is also viewed as an integral part of the tourists' overall travel experiences (Eriksson, 2002; Buhalis and Law, 2008). The literature is replete with examples of both experimental and commercial mobile tourism services, including wireless access to information (Buhalis and Law, 2008); mapping facilities that show nearby points of interest on a map (Baus *et al.*, 2005), context-aware guides that deliver services based on a user's current context such as location and time (Hinze and Buchanan, 2005) and booking/reservation services (Werthner and Ricci, 2004).

The literature on mobile tourism service has extensively discussed a wide range of applications of mobile technology on tourism service, however, there is still a limitation for the current research to examine the attitude and behaviors of the mobile tourists. There are a few studies that have been conducted in the mobile tourist's behavioral research field, including that: Studied tourist satisfaction on tourism mobile service based on American Consumer Satisfaction Model (ACSM). Moreover, Eriksson and Strandvik (2009) has explored the influencing factors on tourism mobile service adoption and found that value, price transparency and ease of use significantly affect the tourism mobile service adoption. However, the body of literature has not empirically examined the impact of trust in tourism mobile service even though trust has generally been assumed as an important precondition for people's adoption of electronic

services (Chen and Dhillon, 2003; Bart *et al.*, 2005; Beldad *et al.*, 2010).

TRUST IN E-COMMERCE

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One of the most frequently cited definitions in the literature on trust in e-commerce is the one worked out by Mayer *et al.* (1995), who define trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party". This definition of trust is applicable to a relationship between two parties: A trustor and a trustee. Mayer *et al.* (1995) have found that ability, benevolence and integrity explain a major portion of a trustee's trustworthiness.

In a personal relationship, the trustee is another person or other people but in e-commerce, the trustee is an abstract technical system, which places the buyer into a more vulnerable situation (Bart *et al.*, 2005). Concerning the uncertainty and transaction risk involved in e-commerce, trust has been empirically tested as a key factor in the initiation, development and maintenance of e-business relationship (Chen, 2006; Teo and Liu, 2007).

TRUST IN M-COMMERCE

Mobile commerce, as the emerging subset of e-commerce, faces the same trust problems troubling e-commerce. Gaining customer trust in mobile commerce which uses radio-based wireless devices to conduct

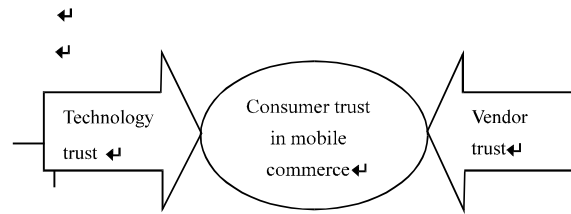


Fig. 1: Framework for m-commerce trust (Siau and Shen, 2003)

business transactions over the web-based e-commerce system, is particularly difficult due to its unique features (Siau *et al.*, 2001). Mobile handsets are limited in computational power, memory and battery life and wireless networks have the limitations in bandwidth and connection stability. Also, these networks have a relatively high operation cost, lack a standardized protocol and data transmitted wirelessly is more vulnerable to eavesdropping.

Siau and Shen (2003) claimed that as mobile technology evolves, focus will shift from engendering customer trust in technology to engendering trust in vendors. They proposed a framework for building customer trust in mobile commerce, in which technology trust and vendor trust are believed equally important in securing customer trust (Fig. 1).

CONCEPTUAL MODEL OF TRUST IN MOBILE TOURISM SERVICE

The framework for m-commerce trust proposed by Siau and Shen has provided a foundation to further study customer trust in mobile commerce. However, this is just a general guiding framework which did not specify which factors will lead to formation of consumer trust in m-commerce. There is still a need for continued research to find a more detailed model to extend the general framework, including further explore the dimensions of both technology trust and vendor trust.

Dimensions of technology trust: Siau and Shen (2003) indicated that in order to enhance trust in mobile technology, technical hurdles must be surmounted. Improvements are needed on current mobile devices, including enhancing usability, enabling customers to perform business activities easily and effectively without sacrifice to mobility and flexibility. Also, security must be designed into the system.

Some specific antecedents and influencing factors on the formation of trust in e-commerce which concern with mobile technology, have been found by various empirical

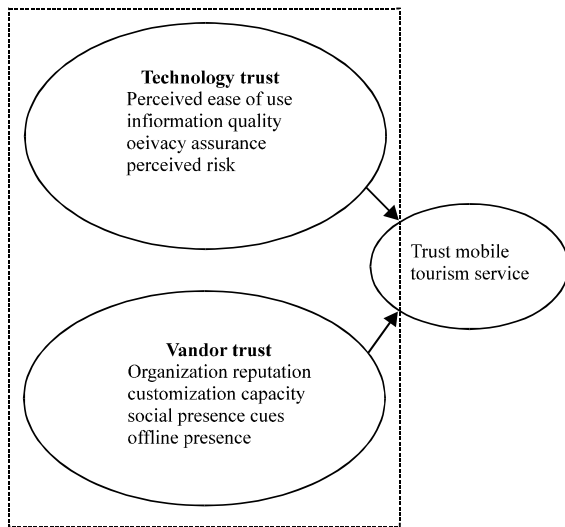


Fig. 2: Conceptual model of trust in mobile tourism service

studies which include “perceived ease of use” (Bart *et al.*, 2005; Chen, 2006); “information quality” (Liao *et al.*, 2006; Kim *et al.*, 2005); “privacy assurance” (Koufaris and Hampton-Sosa, 2004). Beldad *et al.* (2010) pointed out that current empirical studies on trust in e-commerce have not given so much attention on the influence of risk perception on trust formation, though user’s perception of risk has been identified as a significant factor in trust literature (Mayer *et al.* 1995; Pavlou, 2003). Based on the previous studies, this study will take the factors above mentioned as the dimensions of technology trust in the research model of this study.

Dimensions of vendor trust: Siau and Shen (2003) believed that compared to mobile technology trust building, building trust in mobile vendors is more elusive and challenging. To engender initial trust formation in an industry unfamiliar to most potential customers, this young industry must disseminate information, cultivate interest and convince potential buyers their needs will be met by mobile commerce.

The antecedents and influencing factors concerning on trust in e-commerce vendors have also been found by some empirical studies which include “organizational reputation” (Josang *et al.*, 2007; Casalo *et al.*, 2007); “customization capacity” (Koufaris and Hampton-Sosa, 2004); “social presence cues” (Schimke *et al.*, 2007); “offline presence” (Kuan and Bock, 2007). Based on the previous studies, this study will take the factors above mentioned as the dimensions of vendor trust in the research model of this study.

Conceptual model: Based on the framework proposed by Siau and Shen (2003) and the previous research on trust in m-commerce above-mentioned, the conceptual model for this study is depicted in Fig. 2. This model extends the previous general framework by depicting the dimensions of technology trust and vendor trust which also integrates m-commerce with tourism service towards better locating tourism services, products and information.

CONCLUSIONS

This study discussed the mobile tourism services required by the tourists at the present time and examines the dimensions of consumer trust in mobile services in the context of tourism industry. The study enhances the current body of knowledge on m-commerce, especially on understanding of consumer trust in tourism mobile service. It is also hoped that this study will stimulate further scholar discussion on customer trust in hospitality and tourism mobile service. However, this study is still a theoretical discussion of a research model to build consumer trust in tourism mobile service. In order to provide more understanding about consumer trust to tourism mobile service providers and researchers, further empirical research in the context of tourism industry is still needed to recover the deficiency in knowledge of the new and challenging research field.

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