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Understanding consumers' continuance intention towards mobile purchase: A theoretical framework and empirical study – A case of China

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A B S T R A C T

Although mobile purchase is convenient in the age of mobile commerce, many consumers still do not utilize mobile purchase to its full potential. From the mobile vendor's perspective, retaining current customers and facilitating their continued purchase are crucial to create profitability and achieve a sustainable development. An understanding of the continuance intention towards mobile purchase can provide insights into mobile vendors' marketing campaigns. Therefore, it is important to examine the determinants that impact continuance intentions of consumers for mobile purchase. Drawing upon information success model, flow theory and trust, this study proposed and empirically tested an integrated model to better understand the determinants of consumers' continued intention to purchase on mobile sites. Empirical data from 462 users who had experience with mobile purchase were tested against the proposed research model by using structural equation modelling (SEM). The results indicated that information quality, and privacy and security concerns are the main factors affecting trust, whereas service quality is the main factor affecting flow. System quality, and privacy and security concerns affect satisfaction. Trust affects flow, which in turn affects satisfaction. These three factors together affect continued intention towards mobile purchase. The findings of this study provide several important implications for mobile commerce research and practice.

1. Introduction

The application of third generation (3G) mobile communication technologies has triggered mobile commerce development. According to EMarketer (2014), there will be more than two billion smartphone users, or one-quarter of the global population, by 2016. Shopping or buying with a mobile device (mobile purchase) has become an increasingly important topic that has drawn much attention in both industry and academia. Forrester Research (Husson, Ask, Johnson, Parrish, & Kwan, 2014) predicts that media companies and retailers will receive more than 50% of online traffic from mobile devices. Deloitte Consulting (Brinker, Lobaugh, & Paul, 2012) predicts that $31 billion worth of retail revenues will be transacted using mobile devices by 2016. In short, mobile purchase is expected to grow substantially and its growth provides ample potential for marketers and retailers.

However, in China, the growth of mobile purchase is far behind the industry's expectation and mobile purchase has not received wide adoption among consumers (Zhou, 2013b). The China

Internet Network Information Center (CNNIC, 2015) claims that only 16.3% of mobile Internet users have ever used mobile purchase. In addition, the user adoption rate of mobile purchase that represents a transactional application is much lower than that of entertaining applications such as mobile music and TV (CNNIC, 2015). Mobile purchase in China can be described as highly unsatisfactory compared to the costs of developing and managing these systems. Thus, it is necessary for researchers to look into the usage of mobile purchase in China and it is important for the mobile purchase providers to facilitate consumer adoption and usage of mobile purchase.

While mobile vendors can offer a large number of advanced services to mobile users via those hand-held devices, many people who have mobile purchase experience are unwilling to continuously use mobile devices to do the shopping and that makes the growth of mobile purchase relatively slow (Chen & Lan, 2014). For mobile vendors, acquiring new customers and promoting their usage of mobile purchase is only the initial step. They also need to retain existing users and facilitate their continued purchase. It has been discovered that the cost of acquiring a new user is five times that of retaining an existing user (Reichheld & Schefter, 2000). Service providers have invested great resources and effort on releasing mobile purchase services. They cannot recover costs

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and make a profit if users discontinue their usage and purchase. In addition, the competition among mobile vendors is intense (Chen, 2013). There are numerous mobile shopping sites which are almost homogenous, thus mobile vendors need to retain users in order to achieve a competitive advantage. Further, the switching costs are relatively low for mobile shoppers. They can easily switch from one mobile shopping site to another. Thus, it is critical for mobile vendors to retain mobile shoppers and facilitate their continued purchase behaviour.

To date, few academic research projects have studied mobile shoppers' continuance behaviour. There is not a clear understanding of the factors that affect their continuance behaviour. Existing research has focused on using the technology acceptance-related models to explore the consumers' initial adoption and acceptance of mobile purchase (Chen, 2013; Chen & Lan, 2014; Wong, Tan, Ooi, & Lin, 2014; Yang, 2012; Yang & Forney, 2013). Despite the fact that consumers' initial adoption of mobile purchase is an important first step towards successful mobile commerce, many scholars note that the long-term viability of an information technology/information systems and its eventual success depend on its continued rather than first-time use (Bhattacherjee, 2001; Zheng, Zhao, & Stylianou, 2013), and this is especially critical with regard to the success of mobile purchase services (Hung, Yang, & Hsieh, 2012; San-Martin & López-Catalán, 2013). However, little research attention has been paid to continuance behaviour of mobile purchase. Considering the significance of retaining users, the objective of this study was therefore to examine the determinants that impact continuance intentions of consumers for mobile purchase. We aimed to answer the following research question: what and how do determinants collectively affect mobile purchase continuance intention? We employed information system (IS) success model in conjunction with the perspectives of flow experience and trust to derive an integrated model that will help us to better understand the motivations behind customers' continued intention towards mobile purchase. Specifically, system quality, information quality, service quality, and privacy and security concerns are proposed to affect continuance intention through trust, flow and satisfaction. We used flow to reflect customers' shopping experience.

Our contribution to the mobile commerce literature is threefold. Firstly, unlike most previous studies focusing on initial mobile purchase intention, this study examined the continuance intention of mobile purchase by integrating IS success model, flow theory, and trust. It advances our understanding of continuance intention of consumers for mobile shopping during the post-purchase stage, which is critical to mobile vendors' success. Secondly, our results highlight the necessity to include consumers' mobile shopping experience in explaining their post-purchase behaviour. To date, rather limited attention has been paid to the shopping experience which if investigated may provide significantly stronger guidance for the successful service offering and interface design. Prior studies have mainly used Technology Acceptance Model (TAM) (Davis, Bagozzi, & Warshaw, 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Thong, Venkatesh, Xu, Hong, & Tam, 2011) as theoretical bases and identified the effects of extrinsic motivations such as perceived usefulness and performance expectance on mobile purchase behaviour. However, mobile shoppers' behaviour may not only be affected by extrinsic motivation that emphasizes purchase outcomes, but also receive influence from flow, which is an intrinsic motivation that emphasizes shopping process and experience. The findings of this study also demonstrate the salience of flow as an optimal experience in predicting continued intention towards mobile purchase. The study enriches the flow theory by extending it to a new service context. Thirdly, the IS success model has seldom been examined in the context of continued mobile purchase. The study generalized it

to mobile post-purchase phase. The results confirm its utility and applicability in explaining the mobile shoppers' continuance behaviour. It offers new insights into the factors that impact continued intention towards mobile purchase from a quality perspective. The findings of this study also yield practical guidelines for choosing a customer retention strategy by aiding in understanding factors that affect mobile shoppers' continued purchase intention.

The rest of the paper is structured as follows: in Section 2, a review of the relevant bodies of literature is undertaken, after which hypotheses are developed in Section 3. Methodologies employed for the implementation of the study are outlined in Section 4. Section 5 reports the results, followed by the discussions and implications in Section 6. The conclusion is presented in Section 7.

2. Literature review

2.1. Mobile purchase

Mobile commerce is growing rapidly around the world. Researchers (Kim, Chung, Lee, & Preis, 2015; Yang, in press) have summarize the definitions of mobile commerce and state that mobile commerce as the use of wireless technology, particularly handheld mobile devices and mobile Internet, to facilitate transaction, information search and user task performance in consumer, business-to-business, and intra-enterprise communications. In this study, mobile commerce is defined as any transaction with a monetary value that is conducted over a wireless telecommunication network.

According to the CNNIC report (2015), mobile Internet users in China reached 557 million as of December 2014, accounting for 85.8% of its Internet population (649 million). Attracted by the great market potential, service providers have released a variety of mobile applications and services, such as mobile instant messaging, mobile games and mobile purchase (Zhou, 2013b). For example, Taobao, the largest Chinese online consumer-to-consumer platform, has introduced mobile Taobao, which allows users to conduct purchases through their mobile phones. Dangdang, the largest Chinese online bookstore, has also built a mobile shopping website. These leading retailers have already provided mobile websites and are racing to provide a competitively differentiated shopping experience through mobile phone functions and features (Yang, 2010).

Building on the previous research on mobile purchase (Groß, 2015; San-Martín, Prodanova, & Jiménez, in press; Wang, Malthouse, & Krishnamurthi, 2015), this study defines mobile purchase as any purchase-related activity conducted by smartphones or tablets through mobile Internet. Mobile shoppers conveniently browse mobile Internet to plan their pre-shopping activities (e.g. finding directions and store hours), compose, modify, or place orders online, and conduct purchase transactions using mobile devices without the constraints of time and location (Ström, Vendel, & Bredican, 2014).

Compared to the general Internet purchase, mobile purchase allows consumers to shop online at any time and in any location with the help of mobile networks and devices (Wong et al., 2014). Mobile service providers can acquire uses' location information based on the location-based services (Mamonov & Benbunan-Fich, 2015). Then, they can match this information with products and services and push the relevant information or services to users. Thus, the mobile Internet enables retailers to send customized information and pinpoint users' location in real-time interactions with the customers via their handset (Chen & Lan, 2014). This provides convenience and value to users, which may facilitate their adoption of mobile purchase. However, due to the