



An empirical examination of continuance intention of mobile payment services

Tao Zhou

School of Management, Hangzhou Dianzi University, Hangzhou, 310018, PR China

ARTICLE INFO

Article history:

Received 8 December 2011
Received in revised form 18 July 2012
Accepted 21 October 2012
Available online 26 October 2012

Keywords:

Mobile payment
Continuance intention
Trust
Flow

ABSTRACT

Retaining users and facilitating their continuance usage are crucial for mobile payment service providers. Drawing on the information systems success model and flow theory, this research identified the factors affecting continuance intention of mobile payment. We conducted data analysis with structural equation modeling. The results indicated that service quality is the main factor affecting trust, whereas system quality is the main factor affecting satisfaction. Information quality and service quality affect flow. Trust, flow and satisfaction determine continuance intention of mobile payment. The results imply that service providers need to offer quality system, information and services in order to facilitate users' continuance usage of mobile payment.

© 2012 Elsevier B.V. All rights reserved.

1. Introduction

Mobile internet has been developing rapidly in the world. According to a report issued by China Internet Network Information Center (CNNIC), the number of mobile internet users in China has reached 356 million, accounting for 69% of its internet population (513 million) [11]. Attracted by the great market, service providers have released a variety of mobile services, such as mobile instant messaging, mobile games and mobile payment. Among them, mobile payment as a critical service supporting mobile business has received great attention from enterprises. For example, Alipay, the largest online payment service provider in China, has released its mobile payment product: *Shouji Zhifubao*. Telecommunication service providers such as China Mobile and China Unicom have also provided mobile payment services, which allow users to pay bus and subway fees with their mobile phones. However, mobile payment services have not received wide adoption among users. The CNNIC report [11] indicates that only 8.6% of mobile internet users have ever used mobile payment. Thus, it is necessary to facilitate user adoption and usage of mobile payment.

Mobile payment means that users adopt mobile terminals such as mobile phones to conduct payment for bills, goods and services [13]. Compared to traditional and online payment, the main advantage of mobile payment is ubiquity. That is, with the help of mobile networks and terminals, users can conduct payment at anytime from anywhere. This may promote user adoption of mobile payment. However, mobile terminals have their constraints, such as small screens, inconvenient input and slow responses. These constraints may negatively affect users' experience and impede their continuance usage. In addition, service providers have invested great effort and resources on releasing mobile payment services. If they cannot retain users and facilitate users'

continuance usage, they will not recover these costs and achieve success. Further, there exists intense competition among mobile payment service providers and the switching cost is low for users. If users are unsatisfied with a service provider, they may switch to another one.

Extant research has drawn on information technology theories such as technology acceptance model (TAM) and innovation diffusion theory (IDT) to examine initial adoption and usage of mobile payment [32,42,50]. Factors such as perceived usefulness, perceived ease of use and compatibility are identified to affect initial usage [32,50]. Trust is also found to be a significant determinant of mobile payment usage [7]. However, the post-adoption usage of mobile payment has seldom been examined. Considering the significance of retaining users, it is necessary to identify the factors affecting continuance usage. This is the purpose of this research. We used the information systems success model proposed by DeLone and McLean [15] as the theoretical base. System quality, information quality and service quality are proposed to affect continuance intention. Trust, flow and satisfaction are included as the mediators.

The rest of this paper is organized as follows. We present literature review in the next section. Then we develop research model and hypotheses in Section 3. Section 4 reports instrument development and data collection. Section 5 presents results, followed by a discussion of these results in Section 6. Section 7 presents theoretical and managerial implications. We conclude the paper in Section 8.

2. Literature review

2.1. Mobile payment

As a basic service supporting mobile business, mobile payment has great market potential. It is estimated that the number of mobile payment users in China will reach 480 million and the transaction volume via mobile payment exceeds 218.6 billion RMB Yuan (about

E-mail address: zhoutao@hdu.edu.cn.

34.4 billion US dollars) in 2013 [25]. Faced with the great opportunity, many enterprises have stepped into mobile payment market and released their products.

The earliest mobile payment is short-messages based. For example, when users download color ring tones, service providers send a short message to inform them about the charge. If users confirmed the message, the fees will be charged from their accounts. Later, users can conduct mobile payment via wireless application protocol (WAP) sites and client-end applications. On the whole, mobile payment includes two types: remote payment and proximity payment [7]. Remote payment means that users need to connect to remote payment servers in order to conduct payment. It includes mobile banking and mobile internet payment services. Proximity payment means that users conduct payment via their mobile phones on the spot. It is often based on technologies such as radio frequency identification (RFID) and near field communication (NFC). Through proximity payment, users can pay public bus fees, subway fees and bills.

Compared to offline payment and online payment, a main advantage of mobile payment is ubiquity. Users can conduct payment via their mobile terminals conveniently. Offline payment requires users to carry cash and credit cards through wallets. Online payment requires users to sit before a computer and connect to internet. Both offline payment and online payment pose temporal and spatial constraints to users. In comparison, mobile payment frees users from such constraints and enables them to conduct ubiquitous payment. Nevertheless, compared to offline and online payment, mobile payment may also involve greater uncertainty and risk because of vulnerable mobile networks. In addition, users' experience may be affected due to the constraints of mobile terminals such as small screens and inconvenient input. Thus, users may need to engender enough trust and obtain a compelling experience in order to facilitate their usage.

2.2. Mobile payment user adoption

As an emerging service, mobile payment has not received wide adoption among users. Thus, researchers have been concerned with mobile payment user behavior and tried to identify the factors affecting user adoption of mobile payment. Most research focuses on initial adoption and TAM is often used as the theoretical base. Schierz et al. [50] noted that perceived security, perceived usefulness, perceived ease of use and mobility affect user attitude, which in turn affects usage intention. Kim et al. [32] argued that individual differences and system characteristics affect the intention to use mobile payment through perceived usefulness and perceived ease of use. Individual differences include innovativeness and mobile payment knowledge, whereas system characteristics include mobility, reachability, compatibility and convenience.

Trust is also integrated with TAM to examine mobile payment user behavior. Chandra et al. [7] suggested that mobile service provider characteristics and mobile technology characteristics affect user trust, which further affects perceived usefulness, perceived ease of use and user adoption. Mobile service provider characteristics include perceived reputation and perceived opportunism, whereas mobile technology characteristics include perceived environmental risk and structural assurance. Shin [51] found that user adoption of mobile payment system is affected by perceived usefulness, perceived ease of use, perceived risk and trust.

In addition, IDT is also used to explore mobile payment user behavior. Mallat [42] noted that relative advantage, compatibility, complexity, costs, trust and perceived risk affect user adoption of mobile payment. Chen [9] integrated TAM and IDT to examine the factors affecting mobile payment user adoption.

2.3. Post-adoption of mobile services

As users' post-adoption usage is critical to the success of mobile service providers, extant research has paid much attention to identify

the factors affecting post-adoption behavior. Kuo et al. [33] suggested that service quality, perceived value and satisfaction predict post-purchase intention of mobile value-added services. Shin et al. [52] found that perceived usefulness, cost rationality and perceived ease of use significantly affect post-adoption usage of mobile internet. Hong et al. [24] argued that attitudinal beliefs, normative beliefs and perceived behavioral control determine the continuance intention of mobile data services. Lee et al. [38] drew on two-factor theory to examine the effects of system quality and information quality on post-adoption usage of mobile data services. Liu et al. [39] noted that relationship quality (including satisfaction and trust) and switching barrier affect mobile phone user loyalty.

From these studies, we can find that although users' post-adoption behavior has been examined in the contexts of mobile internet, mobile data services and mobile purchase, it has seldom been tested in the context of mobile payment, which involves great uncertainty and risk that may inhibit users' continuance usage. Thus, it is necessary to conduct an empirical research to identify the factors affecting continuance usage of mobile payment.

2.4. Information systems success model

DeLone and McLean [14] proposed an information systems success model, which argues that system quality and information quality affect use and user satisfaction, both of which further lead to individual impact and organizational impact. Later, they developed an updated model and included service quality into the model [15].

Since its inception, the information systems success model has been widely used to examine user adoption of various information systems. Song and Zahedi [53] examined the effects of system quality and information quality on user trust in health intermediaries. Kim et al. [27] compared the effects of system quality, information quality and service quality on initial trust and repeat trust building. Chen and Cheng [10] applied information systems success model to predict user intention to conduct online shopping. Teo et al. [55] integrated trust and information systems success model to examine electronic government success.

Recently, information systems success model has been used to understand mobile user behavior. Kim et al. [30] adopted information systems success model to examine ubiquitous computing use and u-business value. Chatterjee et al. [8] conducted a qualitative study to identify the success factors for mobile work in healthcare. Lee and Chung [36] noted that system quality, information quality and interface design quality affect user trust in and satisfaction with mobile banking.

As evidenced by these studies, although information systems success model has been widely used to examine user behavior, it has seldom been tested in the context of mobile payment, which represents an emerging information technology. Thus, it is necessary to generalize information systems success model to mobile payment. On the other hand, we focused on user satisfaction and continuance intention in this research. The information systems success model also includes satisfaction as a dependent variable. Thus, it is appropriate to use information systems success model as our theoretical base.

3. Research model and hypotheses

3.1. Trust

Trust reflects a willingness to be in vulnerability based on the positive expectation toward another party's future behavior [43]. Trust includes three beliefs: ability, integrity and benevolence [29,44]. Ability means that service providers have knowledge and skills necessary to fulfill their tasks. Integrity means that service providers keep their promises and do not deceive users. Benevolence means that service providers care users' interests, not just their own benefits.

Built on mobile networks and terminals, mobile payment involves great uncertainty and risk. For example, mobile networks are vulnerable

Download English Version:

<https://daneshyari.com/en/article/10367280>

Download Persian Version:

<https://daneshyari.com/article/10367280>

[Daneshyari.com](https://daneshyari.com)