

# Understanding the Fundamental Building Blocks of Mobile Banking Adoption: A Qualitative Approach

Soo Yeong, Ewe\*  
Sheau Fen, Yap

## *Abstract*

The rapid proliferation of mobile phones and other electronic gadgets has not only changed the way people live, but also created a new channel for marketing. One such new technology is the mobile banking development, which can significantly impact a bank's operational efficiency and customer service aspects. Yet, the adoption of mobile banking in the Asian region has been relatively slow compared to West. One might question, for instance, will mobile banking be as effective as other medium for banking transaction given its limited textual presentation? What do consumers think about mobile banking services? What drives or hinders consumers from adopting mobile banking services? A better understanding of these issues is the key to designing and execution of an effective marketing strategy for mobile banking services. This research aims to explore the underlying motives of mobile banking services adoption. A focus group discussion with eight respondents was conducted to uncover the reasons for using mobile banking. The results suggest that the reasons for using mobile banking is similar to the reasons for engaging in e-commerce as suggested in past literature, for example, perceived advantage over other mediums, perceived risk, usage complexity, and awareness. The finding that the users adopted mobile banking they believe many others have adopted the same service is novel and should be explored further. The paper concludes with implications to marketing and promoting mobile banking services.

**Field of Research:** Banking, Consumer Behavior.

## 1. Introduction

The mobile banking phenomenon, which can significantly impact a bank's operational efficiency, value delivery and customer services, is gaining popularity in developed nations. However, despite its many benefits, the use of mobile phones in banking services is still in its infancy stage especially in the developing nations. Specifically, the usage of mobile phones for banking and payment transactions in Malaysia remained low. The mobile banking subscribers recorded at 0.6 million, accounting for only 2.1% of total mobile phone subscribers in 2009 (BNM, 2010). Many bankers ignore this form of medium probably because they don't understand how to engage with it. Meanwhile, the internet retains its position as the leading medium in electronic banking.

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Soo Yeong Ewe (sooyeong@gmail.com), Sunway University, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor Malaysia; and Sheau Fen Yap (crystal.yap@buseco.monash.edu.my), Monash University Sunway Campus, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor Malaysia.

\* Corresponding author

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The marketers' job becomes more challenging as consumers become more demanding, less willing to visit traditional branches due to time pressure, inconvenient branch opening hours or places and more receptive to new electronic channels (Lewis, 1991; Polatoglu and Ekin, 2001). This evolving trend has opened a new and important area for research. One might question, for instance, will mobile banking be as effective as other medium for banking transaction given its limited textual presentation? What do consumers think about mobile banking services? What drives or hinders consumers from adopting mobile banking services? A better understanding of these issues is the key to designing and execution of an effective marketing strategy for mobile banking services.

However, past mobile banking adoption studies relied heavily on quantitative approach and have found little consensus. There is also dearth of published qualitative work on perceptions of mobile banking adoption, particularly in the context of developing countries in the dynamic Asian region. The diffusion of mobile banking service in Asia is somewhat slower than in the West. Only limited work relating to mobile banking covers Asia, usually Korea, China or Taiwan, which are not representative of all Asian countries. Therefore, this research aims to deepen the understanding of the underlying motives that drive or hinder mobile banking services adoption among urban Malaysians.

## **2. Literature Review**

Following the technological development, mobile phones is permeating almost every aspect of life. The rapid proliferation of mobile phones and other electronic gadgets has not only changed the way people live, but also created a new channel for marketing. The high penetration rate of mobile phones has resulted in the increasing use of handheld devices for marketing purpose. Some sectors even expect that the mobile phones would be the ultimate medium for one-to-one marketing. Particularly, the banking sector is regarded as one of the leading industries in employing mobile technology as means to deliver customer service and value (Laukkanen, 2007). The banking services and consumption have experienced tremendous evolvement during the recent years.

Broadly, electronic banking is regarded as one of the most popular applications in the domain of electronic commerce (Pousttchi and Schurig, 2004). Prior research effort examining electronic banking focused on the development of laws supporting electronic payment systems (Khiaonarong, 2000); consumers' attitude and behavioural controls to intention to use this service (e.g., Daniel, 1999; Liao, Shao, Wang, and Chen, 1999); and the behavioral consequences of e-banking (Mols, 1998).

Lately, some of the most recent studies have focused on mobile banking (Luarn and Lin, 2005; Kim, Shin and Lee, 2009; Gu, Lee and Suh, 2009; Shih, Hung and Lin, 2010). Technological development has continued to reshape the landscape of the banking industry. The fact that mobile phone has become an integral part of many consumers' lives coupled with the increasing numbers of these electronic devices with internet access has led to great potential of mobile phone as a new channel for service delivery and consumption. Mobile banking is an additional banking service which allows customers to request their account balance, interest rates and the

latest transactions of their accounts, to transfer funds between accounts, and to make payments to registered accounts.

Mobile banking has emerged as a wireless service delivery channel that offers increased value for customers' banking transactions. While Laukkanen and Lauronen (2005) suggest that mobile banking offers customers additional value in terms of location-free access, the limitations in mobile device features have caused consumer resistance to adopt mobile banking services (Siau, Sheng, Nah and Davis, 2004). Previous studies indicate that factors contributing to the adoption of mobile banking are related to self-efficacy, cost, trust, risk, usefulness, ease of use and information (e.g., Luarn and Lin, 2005; Gu et al., 2009; Kim et al., 2009).

Despite its advantages, the use of mobile technology for banking transactions has remained slow. There seem to be some forms of barriers that hinder the diffusion of mobile banking applications. Past studies report that factors such as perceived risk (Brown, Cajee, Davies and Stroebel, 2003) and perceived complexity (Laukkanen and Lauronen, 2005) are found to inhibit the adoption of mobile banking. However, contrary to previous studies, some studies have argued that perceived complexity is not a significant barrier to adopting mobile banking (Akturan & Tezcan, 2010). Clearly, this inconclusive finding in the literature warrants further research to look into the facilitators and barriers to mobile banking adoption.

### **3. Research Method**

Data for this empirical investigation were gathered via a focus group interview. Respondents must have owned a mobile phone and maintain at least a regular bank account to be qualified for participation in the focus group interview. Focus group discussion was deemed appropriate for this study for a number of reasons. First, this method is socially oriented, and the data collected through social interaction is often deeper and richer (Thomas et al., 1995). Second, the free flow of discussion among the participants in a more relaxed atmosphere could stimulate the expression of differing opinions and points of view (Marshall and Rossman, 2006). Third, focus group interview allows the researcher to discover deeper insights regarding the underlying motives that guide a person's behaviour, which might be largely neglected in the literature. Lastly, previous research in the technology adoption domain has demonstrated the feasibility of focus group discussion in studying innovative mobile services (Jarvenpaa and Lang, 2005).

A total of eight respondents participated in our empirical investigation. The focus group interview lasted for about 90 minutes. The interview was recorded with prior permission from the participants. Prior to the actual field work, a small interview was conducted as a pre-test to check that the questions contained in the interview guide could be easily understood. After confirming the qualified respondent, a verbal consent was then obtained from the participant before proceeding to the interview. An explanatory letter was distributed to willing and qualified participants. The main contents of the explanatory letter were about the purposes of the study and instructions for the interview. All participants were informed that their participation in this study was voluntary and without any obligations, and that all information and feedback provided will be kept confidential and would only be used for academic purposes.

The interview was semi-structured with a set of interview topics. Respondents were encouraged to express their own viewpoints that may arise in the interview. The interviewer started the interview with an introduction to the purpose and agenda of the research. The rights of the respondents, confidentiality issues as well as the reasons for the audio taping of the session were highlighted. For warm-up questions, the respondents were asked to introduce their own backgrounds such as hobbies, general interest, schedule, and lifestyle. Attempts to engage in small talk continued until the researcher could sense that the respondents were in a more relaxed mood. Thereafter, the respondents were asked to describe their experience in using the mobile banking services, for example, what aspect do they like (or dislike) about using this service. Respondents were also probed to express their feelings and intention to continue using the service. Lastly, discussion relating to the reasons for using mobile banking services was covered.

## **4. Findings**

The interview consists of eight participants, aged between 20 and 40 years old. Among these participants, two of them have experienced using mobile banking service. Another five participants are current online banking users, and the remaining one participant used neither online banking nor mobile banking. Key issues mentioned from the interview are summarized in the following section.

### **4.1 Perceived Relative Advantage**

In the opinion of those interviews, the relative advantages of mobile banking included the independence of time and place. Mobile banking service was considered advantageous compared to other banking channels such as ATM and branch because people carry mobile phones with them most of the time and the mobile banking service is therefore conveniently available in most situations. An interviewee pointed that mobile banking is suitable for busy businessmen who always travel and time is critical to them.

*"I think it depends on the person as well. I mean like businessman they always find way to do things faster, and they may travel quite a lot, so they will learn how to use the mobile banking...."*

Nevertheless, the limited functionality of mobile banking has inhibited consumers from adopting this service (Laukkanen and Lauronen, 2005). Among the limitations, small displays, keypads, limited transmission speed & memory, and short battery have diminished the usability and user-friendliness of this mobile technology. During the focus group discussion, half of the interviewees mentioned about the features of mobile banking service. They suggested that this service should include certain features such as providing full statement, notification and alert message. The following quote from one of the interviewee represent this view:

*"For internet banking you can click many tabs and do something at the same time while waiting but for phone you cannot."*

## 4.2 Perceived Complexity

In addition, the focus group interview suggests that customers expect the mobile banking to be easy to use. This is congruent with past research that found ease of use and convenience to have influence on consumer adoption of electronic banking services such as Internet payments (Shon and Swatman, 1998). One interviewee believes that the complexity of mobile banking services frequently emerged as a barrier to adoption. The following statement highlights this issue:

*"For laptop you are so used to typing, you can just type faster on account number but for mobile phone you have to press the button one by one and if you reset the whole thing you have to start from beginning again."*

Furthermore, in order to subscribe for mobile banking service, the users have to maintain an online banking account as well. Maintaining active status of the service itself is not an easy job. If the mobile banking subscribers do not access the system for a specified period, the access to the system would be prohibited. Following this, the subscribers would have to take a several further steps to reactivate the service. One participant has discontinued her online banking subscription and resisted to accept mobile banking again. The following quote describes her unpleasant experience about using online banking:

*"..... another thing about online banking is that they always reset the password if you don't log in about 1 month. It is very troublesome and then you have to go back to the bank and need to reset the password and need to go to the ATM again to key in some things. So it's troublesome and sometimes I just let my online account die and leave it until I need to use it. But the thing is, without password also you can't use mobile banking because they share the same password. I really don't like it."*

In sum, the focus group interview revealed that ease of use represents a factor that enhances the adoption of mobile banking, whereas complexity of the usage and subscription maintenance has inhibited the adoption of mobile banking service.

## 4.3 Perceived Risk

The causes of perceived risk described by the interviewees included unauthorized use of mobile phone, lack of transaction record and confirmation statement, irrecoverable consequences resulting from making mistakes, and the unpleasant past experience. Half of the interviewees are concerned about the unauthorized use of their mobile phones. For instance, they worried that if they lost their mobile phones, or their phones have been hacked, other people might use their mobile phones to make payments through their mobile banking service. The following statements illustrate this point:

*"If you lost your hand phone and if someone know your pin, then they can just use it to make payment."*

*"People can hack the password and things like that."*

Besides, lack of transaction record and confirmation statement to prove that the banking transaction has been done was viewed to be risky too. Most interviewees mentioned that they do not feel comfortable without having a proper documentation for their banking transactions. For instance, one respondent mentioned that:

*"One thing I don't like is it doesn't show the specific statements like from who I receive the money from and specific details like that. After I transferred money also no receipt to prove that."*

Respondents also worried about self-making mistakes (e.g., keying in wrong transaction code/ number). This response is consistent with the findings of prior study on the security issues related to mobile banking service transactions such as data input and output mechanism (Laukkanen and Lauronen, 2005). In addition, it was also mentioned in the interview that the respondents are afraid of making mistakes that might lead to irrecoverable consequence, which ultimately might lead to an increase in financial risk (Kuisma et al., 2007). The following statement supports the perceived financial risk associated with use of mobile banking services:

*"...somehow you will get disrupted if you accidentally press the wrong button to reject the call and then accidentally reject the transaction? That would be a hassle. It would be even worse if I press the wrong key and make the wrong payment."*

Additionally, the unpleasant past experience stemmed from lacking of control also have an influence on consumers' perception about the financial risk. One interviewee described that sometime user are not sure whether the payment has been made or charged by the vendor. The following quote demonstrates his unpleasant experience that resulted in a single product to be purchased twice:

*"After I keyed in all the information and enter and it was in loading mode for about half an hour so I refreshed. When I refreshed, I go back and keyed in again. So when I called Air Airasia, I had booked two tickets."*

It can be concluded that perceived risk towards mobile banking has a role in influencing the adoption of the mobile banking application.

#### **4.4 Network Externalities**

Many respondents agree that the number of users using the same service has an influence on their intention to adopt mobile banking service. Particularly, one interviewee feels that if many people are using mobile banking services, she would be more willing to try it out. This respondent further explained that she feels more secured to use the service if more people using it, as shown in the following statement:

*"..... like when more people used it, I know that it is tested already. So I will feel more secured."*

Besides, the interviewees generally feel that the availability of complementary service in mobile banking might influence the consumers' adoption intention to use this service. That is, the more types of banking transactions can be performed via

mobile banking, the more likely the consumers will use this service. For instance, one interviewee mentions that:

*"If transferring fund is the only function, then not many people will use it because it doesn't create more value....."*

It can be seen that users expect mobile banking to provide more complementary services such as paying for movie tickets and withdrawing cash. Also, the perception of the number of users using the same service may potentially reduce the perceived risk associated with the service, which in turn increase the likelihood of adoption. It is worth noting that the number of users and the availability of complementary service are two important concepts captured in the network externalities theory (NE), which originated from the economic field.

#### **4.5 Awareness and Knowledge**

A number of respondents feel that low awareness of mobile banking services can influence their intention to adopt this service. In addition, lack of knowledge about mobile technology and/or mobile banking especially information related to the applications discourage them from trying the service. One participant mentions that Malaysians are generally not familiar with mobile banking service, and that probably is one of the reasons contribute to low adoption rate at the moment. The following quote represents this view:

*"The awareness is very low ...because it is very new to the banks as well because when they are launching it, the people don't know and not very open to it yet."*

### **5. Discussion and Implication**

The general focus of this paper was to provide a preliminary understanding on the underlying reasons that motivate or hinder the adoption of mobile banking. Overall, the results suggest that perceived relative advantages and complexity of usage, perceived risk, awareness and knowledge are salient in determining users' mobile banking adoption. The finding regarding the influence of the number of users adopting the same service (a concept captured in the network externalities theory) is novel as this phenomenon that borrowed from economics has been largely neglected in the marketing literature. The contribution of the paper lies in providing guidance to the development of a promising framework in examining mobile banking adoption behavior. It expands the literature on electronic commerce especially.

The finding that perceived relative advantages and perceived complexity exert influence on mobile banking adoption highlights the importance of innovation characteristics to bank managers who are involved in the design and development of mobile banking services. For instance, marketers may design strategy to strengthen the advantages associated with the use of mobile banking such as providing convenient and location-free access, upgrade the mobile banking features (e.g., banking transaction reminder via short message service). Furthermore, bank managers need to consider making their mobile banking services more user-friendly. For instance, the design and interface of the mobile banking application could be created to look similar to other features in mobile phones, making it easier for phone

users to explore this new technology. Besides, the procedure of subscribing this service and getting technical support may be simplified to ease the usage.

The finding that the users adopted mobile banking they believe many others have adopted the same service is novel and should be explored further. Similarly, when the potential adopters perceive more types of banking transactions available in this service, they would be more willing to try it. Therefore, bank managers may reflect this network externalities effect in their promotional effort by providing information about the current number of users, the forecast of future mobile banking users, the types of transactions available in the existing system, and the planned additional transactions and system upgrades in the near future. This information may stimulate favorable perceptions toward this service among consumers.

The result indicates that perceived risk also entails an essential obstacle to adopting mobile banking. Consumers are generally worried about the security and potential financial loss pertaining to this service. Banks may consider enhancing the security of the supporting system, and educating consumers on the safety of using this service and how to avoid unpleasant outcomes. A good consumer education program plays an important role since the level of awareness and knowledge about mobile banking among Malaysians is low. Effective promotional campaigns with persuasive communication messages that aim at stimulating the usage would be needed.

## **6. Conclusion**

In conclusion, the present study provides the initial foundation towards building a promising theoretical framework which is needed to assess mobile banking adoption behavior. As in all studies, our empirical investigation has its limitations. We focus on a specific electronic banking context. Hence, the findings are not generalizable through statistics (as in the case of the traditional quantitative approach). Instead, we argue for theoretical generalization of our observation of mobile banking adoption as opposed to population generalization. The present findings of qualitative study, being more depth than wide in nature, deserve to be quantitatively examined in future studies in order to provide more generalisable results.

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