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FACTORS INFLUENCING THE BEHAVIOR INTENTION OF E-BANKING TRANSACTIONS THROUGH MOBILE PHONES IN CHINA

LIN L

Faculty of Postgraduate Center, Limkokwing University of Creative Technology, Inovasi 1-1, Jalan Teknokrat 1/1, Cyber 3, 63300, Cyberjaya, Malaysia

Tel: 0060173854302;

Email: **blue890812@gmail.com**

SHIQIAN W

Faculty of Postgraduate Center, Limkokwing University of Creative Technology, Inovasi 1-1, Jalan Teknokrat 1/1, Cyber 3, 63300, Cyberjaya, Malaysia

Abstract

With the growth of using e-banking transactions through mobile phones in China, it brings along with convenience of people's life as it enables people to have access to

banking services anywhere and at any time as well as it conducts business more effectively. Technology acceptance model (TAM) has been applied in different contexts to examine a wide range of information technology. With mobile transactions popularity, online payments grew 33.8 percent year over year since 2014 (Marketing China, 2015). It is necessary to investigate the factors influence on customers' behavior intention towards the e-banking transactions through mobile phones. The study employed convenience sampling technique to collect data from 500 respondents of e-banking of mobile users. The results revealed that perceived compatibility and mobility significantly affects to perceived usefulness, and further perceived usefulness significantly affect behavior intention of using e-banking through mobiles. It also examined that perceived usefulness as a mediator between the relationship of perceived compatibility and behavior intention as well as the relationship between mobility and behavior intention.

Keywords: **Perceived Compatibility; Mobility; Perceived Usefulness; Behavior Intention**

INTRODUCTION

With the sky rocking number of smartphone users and popularizing of internet worldwide, there with the phenomenal growth of e-banking transactions through mobile phones. According to a recent forecast (Internet world, 2015), e-commerce would be dominated by smartphone technology in 2017. It was developed 45% e-consumers in Asia have been doing online transactions through smartphones [1]. Based on data of China Financial Certification Authority, underlined that 35.6% customers utilize online banking while 17.8% of them use mobile banking, and the number of clients using e-banking through mobile increased 50% year-on-year. As popularity of mobile banking has increased, there are varieties of mobile-commerce services, which include mobile shopping, mobile financial and mobile entertainment as well as it, would search information through mobile [2]. Thus, mobile developed to

be commerce devices that deliver unique value to users by extending the boundaries set by traditional e-commerce devices [3,4]. Technology is considered to be the key driver put forward the world changing promptly around us. The wide use of internet and technology advancement in, it leads to improve e-banking services of various banks technology-based systems play an important role for companies interact with customers. E-banking of Mobile phones has been widely using in both developing and developed countries as well as it is great potential to extend the provision of financial services. Mobile banking refers to execution of transactions with monetary value with the application of wireless communications networks and devices. It developed an important self-service delivery channel that allows customers via the web services technology and mobile services banks to gain information and service.

LITERETURE REVIEW

Technology Acceptance Model

Davis, posited that technology acceptance model (TAM) refers to a cost-benefit paradigm based on users' cognitive evaluations on a certain action and its result, and it has been used to predict individual's intention to buy and use a particular piece of technology. TAM targeted on evaluation of end-users. With the increase of smartphone users, it has also been applied to evaluate mobile e-banking transactions. TAM has been conducted from a task-oriented perspective. While the popularity of smartphones are closely connected to people's lives, which indicated that the widely spread of mobile e-banking relies on its capability in facilitating online transactions quickly and convenience. In order to study the association of perceived mobility, perceived compatibility, perceived usefulness and behavior intention model, the research model is conducted as presented in Figure 1. Based on the technology acceptance model 2 (TAM2) that suggested by Venkatesh and Davis [5], perceived usefulness is one of the determinants of users' behavior intention to use technology. This study also looks out antecedents of perceived usefulness.

Perceived Compatibility

Compatibility refers to a perceived innovation which regarding to the degree of consistence of existing values, past experiences, and needs of potential adopters [6]. Compatibility is regarded as an antecedent of Roger's diffusion of innovation (DOI) theory, has been widely quoted in researches that investigate the factors influence on the penetration of innovative technologies [7-9]. Further described innovations successful appear to be especially when users are able to adopt them seamlessly. The more compatible the innovation the faster the adoption rate will increase. Smartphones have been diffusion in many domains of human activities including education, work, entertainment and social relationships. This penetration is good for establishing users' values and experiences. Smartphones has been deeply penetrated into people's lives. Many users even feel uneasy to spend a day without their phone that carries their entire virtual presence and organizes their daily activities. If a user perceives anxious without the device which means the phone is compatible with their values and experiences, other mobile-services will be adopted.

Mobility

Kim et al. [10] underlined that perceived mobility refers to the degree of prospective benefits which are provided by mobile technologies, which includes the information access, communication, and services anytime and anywhere. Most studies found mobility was an antecedent of adopt mobile service and influenced on users' intention [11]. As noted by Schierz [11] individual mobility as a major contributor to intention to use mobile e-banking services, and Kaba and Osei-Bryson [12] further described that mobility is capable of affecting mobile phones use in Quebec. Consequently, flexibility and accessibility have been identified as major contributor to mobile-commerce adoption [10]. Likewise, the strong mobility of smartphone technology have already integrated users' lives with which they can conduct mobile payment services anywhere and at any time [13].

Perceived Usefulness

Perceived usefulness refers to the subjective assessment of expected users using a specific application system will increase their exist context [14]. Based on TAM2 theory [5] mentioned that perceived usefulness and perceived ease-of-use directly influenced on users' intention. Evidence outlined by Davis, "people tend to use or not use an application to the extent they believe it will help them perform their job better". Perceived usefulness signifies that the degree of customers' assessment on making transactions via a smartphone will make business more convenience and efficient his or hers performance.

Behavior Intention

Behavior intention is defined as consumer readiness and likelihood to use a special piece of technology [15,16]. With the diffusion of smartphones, the wireless mobile-service have already integrated in users' lives, which means they are willing or intend to apply the e-banking transactions through mobile phones. Behavior intention is the only dependent variable in this study. Prior studies identified many factors that might affect behavior intention such as perceive ease of use, social influence, or mobility [14,17]. Based on the technology acceptance model 2 (TAM2) that suggested by Venkatesh and Davis [5], perceived usefulness is one of the determinants of users' behavior intention to use technology.

The Relationship among Perceived Compatibility, Mobility, Perceived Usefulness and Behavior Intention

Evidence outlined by Kim [10] mobility had a positive effect on the perceived usefulness of mobile payment, while Schierz [11] reported that there is not a positive relationship between individual mobility and perceived usefulness in the context of mobile e-banking transactions services. As noted by Kim [10] reported that mobility has no positive influence on perceived usefulness of mobile payment.

However, several previous mobile researches investigated that there was the positive influence of perceived usefulness on users' intention [10,18-20]. Based on Mallat [7] suggestion that compatibility has a positive effect on consumers' intention to use mobile e-banking. Chen [8] further described that compatibility has a positive effect on consumers' behavior intention toward utilizing a virtual store.

Meanwhile, Wang [9] have notified that compatibility was capable of affecting the perceived usefulness of mobile-commerce. Several previous mobile researches has examined the consistence of users' needs, values and past experiences to make a purchase via a smartphone, and the compatible innovation as one determinant of perceived as useful, the results identified that there was a positive relationship between usefulness and intention to adopt an application [21-23], such as mobile-games [23] or electronic mail systems [22].

RESEARCH METHOD

Quantitative research approach was adopted using an online questionnaire survey with a 5-point Likert scale to measure the dependent variable and independent variables. Behavior intention as dependent variable, a total of 800 email invitations were sent to potential respondents, which adopted convenience sampling technique, 500 out 800 completed questionnaires were valid for analysis after screening and filtering. The measurement instrument used questions from previous research.

The measurement of behavior intention adopted from Lu and Su, and Chen [8], while the questions adopted for measuring the independent variables were as follows: 'perceived usefulness' adopted from Yu et al., the scale of 'compatibility' was adopted from Chen [8] and Vijayasarathy, 'mobility' was adopted from Hong et al., the research model in Figure 1, below illustrates the factors that have been hypothesized affecting users' behavior intention to use e-banking transactions through mobile phones.

RESEARCH HYPOTHESES

H1: There is a positive relationship between perceived compatibility and perceived usefulness.
H2: There is a positive relationship between mobility and perceived usefulness.
H3: There is a positive relationship between perceived usefulness and behavior intention.
H4: There is a mediating effect of perceived usefulness between compatibility and behavior intention.
H5: There is a mediating effect of perceived usefulness between mobility and behavior intention.

Figure 1: Relationship between perceived compatibility and perceived usefulness.
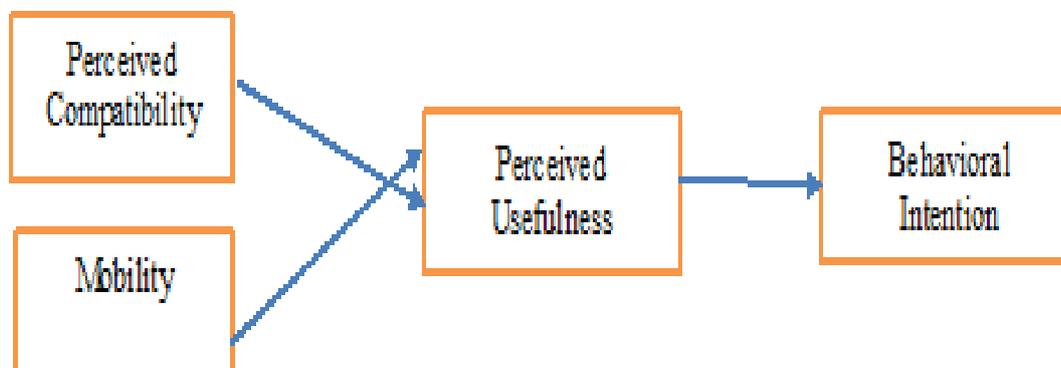
ANAYSIS AND FINDING

From Table 1 it displayed that the correlation coefficients for each path, that is, the links between each of the variables are statistically significant. These results indicate that, at the bivariate level, each of the conditions necessary to test for the possible role of a mediator has been met, in order to conduct the Sobel test for mediation [24].

Firstly, to compute the raw regression coefficient and the standard error for this regression coefficient for the association between the IV and the mediator. Secondly, to test the association between the mediator and the DV. Lastly, to compute the regression coefficient and standard error for the association between the IV and the mediator.

Table 1: Direct Relationship Correlations and P-value, Mediation Model.

Average_PC	Average_PC	Average_PU	Average_BI
Pearson Correlation	1	0.567	0.411
Sig. (2-tailed)		0.000	0.000
Average PU			
Pearson Correlation	0.567**	1	0.506**
Sig. (2-tailed)	0.000		0.000
average_BI			
Pearson Correlation	0.411**	0.506**	1
Sig. (2-tailed)	0.000	0.000	
**.Correlation is significant at the 0.01 level (2-tailed).			

Table 2: Coefficient-perceived compatibility and perceived usefulness.

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	**Std. Error**	**Beta**		
1	(Constant)	1.816	0.128		14.243	0.000
	average_PC	0.513	0.035	0.567	14.877	0.000
Dependent Variable: average_PU						

Table 3: Coefficient-indirect relationship with mediation.

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	**Std. Error**	**Beta**		
1	(Constant)	1.381	0.165		8.354	0.000
	average_PC	0.173	0.045	0.182	3.822	0.000
	average_PU	0.423	0.050	0.403	8.449	0.000
Dependent Variable: average_BI						

Table 4: Sobel test P-value of indirect relationship with mediation.

	Input		Test statistic	Std. Error	p-value
A	1.81	Sobel test	7.33870968	0.10358769	0
b	0.42	Aroian test	7.32643006	0.10376131	0
s_a	0.12	Goodman test	7.35105125	0.10341378	0
s_b	0.05				

It signifies that all the links between each variable are significant at the 0.000 level (Tables 1 and Table 2) further to test the indirect effect of perceived compatibility to behavior intention with the present of perceived usefulness as a mediating factor is significant at p<0.000 (Table 3) based on Sobel test described by Baron and Kenny, Sobel [24], Goodman, and MacKinnon, Warsi, and Dwyer, it is used to test of whether the indirect effect of the IV on the DV via the mediator is significantly different from zero through insert the a, b, s_a, and s_b into the cells (Table 4) and this program will calculate the critical ratio. In this model, the test statistic of the Sobel test is 7.33, with an associated p-value of 0.00. The result revealed that the observed p-value is below the established alpha level of 0.05 indicates that the association between the IV and the DV, which means that there is mediating effect of perceived usefulness between perceived compatibility and behavior intention in the model.

DISCUSSION AND CONCLUSION

This study intends to estimate the factors influence on users' behavior intention of using e-banking transactions through mobile phones in China. The results revealed that perceived compatibility has a positive and significant direct effect on perceived usefulness, it consistent with previous studies [9,22,23], and mobility significantly affect to perceived usefulness in lines with past studies [10,11], and further perceived usefulness significantly affect behavior intention in lines with past studies [10,18]. It also examined that perceived usefulness as a mediator between the relationship of perceived compatibility and behavior intention as well as the relationship between mobility and behavior intention. With the growth of using e-banking transactions through mobile phones in China, it brings along with convenience of people's life as it enables people to have access to banking services anywhere and at any time, yet there were lack of researches on the mediating effect of perceived usefulness on users' behavior intention. The theoretical contribution is this research supplemented the gap of research on users' behavior intention. It also practically provides direction for marketers and management the relative importance

various key factors that might affect the behavior intention of mobile phone users.

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