Factors Influencing the Adoption of Mobile Service in China: An Integration of TAM

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***Abstract*—This study based on the technology acceptance model(TAM) and theory of planned behaviour (TPB) presents an extended TAM that integrates trust related construct ('perceived credibility') and resource-related constructs ('perceived cost') into the TAM to analyzing adoption behavior of mobile service. The proposed model was empirically tested using data collected from a survey of mobile service consumers. The structural equation modeling technique was used to evaluate the causal model and confirmatory factor analysis was performed to examine the reliability and validity of the measurement model. Our findings indicated that all variables except perceived ease of use significantly affected users' behavioral intention. The implication of this work to both researchers and practitioners is discussed.**

***Index Terms*—Mobile services; TAM; Perceived credibility; Perceived behavioral control**

I. INTRODUCTION

Wireless Internet is the hot topic and trend for both telecom industry and Internet industry, and many dealers now plan to invest greatly for the development of related software and services. Mobile service means that by using mobile terminal equipment, consumers may conduct a vast area of activity comprised of transactions of services, goods and information with monetary value via wireless network. With the growth of technical development, diffusion of mobile device and the higher acceptance consumers have toward mobile service, the domestic commercial market will become larger gradually every year. And with the incorporation of Java mobile phone and 3G systems, the benefit brought by the development, therefore, arouses the attention on industry, government and school. At the beginning for the business, to understand the need and acceptance consumers have toward the application of mobile commerce would be helpful for dealers to evaluate the direction for future development.

This issue has drawn a lot of attention from researchers to understand the factors that drive individuals' adoption/rejection of this innovation. Many studies have been conducted using traditional adoption models and theories such as the Technology Acceptance Model (TAM) [1, 2, 3], the Theory of Planned Behavior (TPB) [4] and the Diffusion of Innovation (DOI) theory [5]. However, many authors (e.g. (Pedersen, Per E. and Nysveen, 2002; Pedersen, Per E. and Ling, 2003; Yu, Liu et al., 2003; Kim, Chan et al., 2005; Nysveen, Pedersen et al., 2005) have pointed out that traditional adoption models are insufficient to gain a comprehensive explanation of the factors that affect individuals' intentions to adopt or reject the use of mobile commerce services [6, 7, 8, 9, 10].

In this paper a new approach for assessing potential adoption of future mobile services is proposed based on the Technology Acceptance Model (TAM). The TAM model has already been applied for analyzing the adoption and acceptance of existing mobile services. Several studies have shown that TAM can explain the influence of different factors on the customers' intention to use mobile services [9, 10, 11, 12, 13]. However, one major problem in the telecom industry is to assess the potential future adoption of mobile services that are not launched on the market yet.

The goal of the research presented in this paper is the exploration of the applicability of the TAM model for evaluation of potential future mobile services. The potential intention to use the mobile services described by the scenarios was evaluated based on an adjusted TAM model for mobile services. The analysis revealed that TAM is a suitable approach to evaluate the potential intention to use mobile services. The results also showed that the most influential factor is the perceived value of the future services.

The paper is structured as follows. In the beginning of section 2 collect and integrate the reference for related theories. In section 3 the research model and hypotheses is described followed by the results in section 4. In section 5 and 6, the implications and the demand for future research are discussed.

II. LITERATURE REVIEW

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doi:10.4304/jcp.5.5.799-806

A. Theory of Planned Behavior

TPB underlying the effort of TRA has been proven successful in predicting and explaining human behavior across various information technologies [4]. According to TPB, a person's actual behavior in performing certain action is directly influenced by his or her behavioral intention and in turn, jointly determined by attitude, subjective norm and perceived behavioral control toward performing the behavior. Behavioral intention is a measure of the strength of one's willingness to try and exert while performing certain behavior. Attitude (A) explains the feeling of a person's favorable or unfavorable assessment regarding the behavior in question. Furthermore, a favorable or unfavorable attitude is a direct influence to the strength of behavior al beliefs about the likely salient consequences. Accordingly, attitude (A) is equated with attitudinal belief (Bi) linking the behavior to a certain outcome weighted by an evaluation of the desirability of that outcome (E_i) in question, i.e.$A = \sum B_i E_i$. Subjective norm (SN) expresses the perceived organizational or social pressure of a person while intending to perform the behavior in question. In other word, subjective norm is relative to normative beliefs about the expectations of other persons. It can be depicted as individual's normative belief (NB_i) concerning a particular referent weighted by motivation to comply with that referent (MC_i) in question, i.e. $SN = \sum NB_i MC_i$.

Perceived behavioral control (PBC) reflects a person's perception of ease or difficulty toward implementing the behavior in interest. It concerns the beliefs about presence of control factors that may facilitate or hinder to perform the behavior. Thus, control beliefs about resources and opportunities are the underlying determinant of perceived behavioral control and it can be depicted as control beliefs (CBi) weighted by perceived power of the control factor (PFi) in question, i.e. $PBC= \sum CB_i PF_i$. In sum, grounded on the effort of TRA, TPB is proposed to eliminate the limitations of the original model in dealing with the behavior over which people have incomplete volitional control [4]. In essence, TPB differs from TRA in its addition of the component of perceived behavior control.

B. Technology Acceptance Model

Davis used TRA as its theoretical foundation to discuss the correlation among cognitive, emotion and application of technology, and then developed a framework as Technology Acceptance Model (TAM), shown as Fig. 1.

This model provides a theoretical foundation to understand how external variables influence the inner beliefs, attitude, and intention of users, and then affect the use of technology. The purpose of TAM is to provide an explanation toward the acceptance of technology which explains users' behavior on accepting new information technology, and analyzes the factors that influence their attitude toward using new information technology [1, 2, 3].

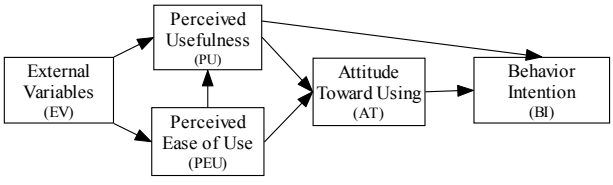

Figure 1. Technology Acceptance Model

TAM further suggests that two beliefs–perceived usefulness and perceived ease of use–are instrumental in explaining the variance in the intention of users. Perceived usefulness is defined as the extent to which a person believes that using a particular system will enhance his or her job performance, and perceived ease of use is defined as the extent to which a person believes that using a particular system will be free of effort. Among the beliefs, perceived ease of use is hypothesized to be a predictor of perceived usefulness. Information system researchers have investigated and replicated the TAM, and agreed that it is valid in predicting an individual's acceptance of various corporate IT [14, 15]. However, the TAM's fundamental constructs do not fully reflect the specific influences of technological and usage-context factors that may alter user acceptance [2]. Thus, prior studies have extended the TAM with constructs such as perceived playfulness [16, 17], compatibility [18], perceived user resources [19], trust [20], perceived credibility [21, 22] and trustwor-thiness [23]. Venkatesh et al. reviewed eight popular models and combined them to the Unified Theory of Acceptance and Use of Technology (UTAUT) to explain the acceptance of information systems [24]. Most of the research in technology acceptance was done on technologies that were introduced into organizations and could therefore only partially describe the completely voluntary usage of technologies such as the mobile phone by independent end users. Only recently the technology acceptance theory was applied to Mobile Services.

C. Extension of TAM model

In order to apply the TAM model, it is necessary to operational its components in accordance to the specific characteristics of the technology under consideration. The original TAM suggested by Davis focused on the two components perceived usefulness and perceived ease of use. Even though the findings of Davis were considered, it was not possible to apply them to the evaluation of future broadcasting services, because they are oriented towards adoption of technologies in companies. The mobile services considered in this paper are entertainment services. Thus, the "perceived usefulness" and "perceived easy of use" had to be operational in a suitable way in order to encounter the specific entertainment characteristics of mobile broadcasting services.

Various studies have found that trust is strongly associated with attitude towards products and services and towards purchasing behaviors. In accordance with Kaasinen another specific and important factor influencing the acceptance of mobile services is trust [25, 26]. Also, Keat & Mohan suggested adding a component describing the trust to the TAM. Trust is a combination of

level of familiarity, the company reputation, factual signals, and the quality of experience [27]. Kaasinen furthermore combined the specific components of TAM for mobile services in a new version of TAM dedicated to mobile services. Kaasinen modified the value component (from perceived usefulness) and added the components trust and perceived ease of adoption [26].

Many different definitions of trust have been proposed [28,29],We defined trust as party trust and control trust, based on the study of Tan & Theon, Jieun Yu et al. [30,31]. According to their study, transaction trust consisted of trust in the other party and trust in the control mechanisms. Party trust was subjective trust in a transaction with another party and had both an action and information perspective. We limited party trust to a belief in a mobile services provider's after-services. Control trust was then trust in control mechanisms that ensured the successful performance of the transaction. We limited this to stable payment, system security, and personal information protection. Since interactive information exchange takes place in the use of mobile services, perceived variables about system security or personal information protection seriously affect adoption [20]. Gefen suggested that trust in an e-commerce vendor increased a user's intention to use the vendor's web site and was the most efficient factor for reducing uncertainty [20]. Doney and Cannon showed that customer trust was related to intention to use the vendor in the future [33]. Grazioli and Jarvenpaa found that customers' attitude was determined by trust in the context of an Internet shopping mall[34]. Therefore, trust would be an important factor in influencing consumers' attitudes and BI toward the adoption of mobile services.

With the increasingly high penetration rate of Internet applications, people are anxious about the diverse types of risks presented when engaging in online activities or transactions. When customers are uncertain about product quality, brands and online services they may worry about an unjustifiable delay in product delivery, providing payment without receiving the product and other illegal activities and fraud. The theory of perceived risk has been applied to explain consumer's behavior in decision making since the 1960s [35]. The definition of perceived risk has changed since online transactions became popular. In the past, perceived risks were primarily regarded as fraud and product quality. Today, perceived risk refers to certain types of financial, product performance, social, psychological, physical, or time risks when consumers make transactions online [35,36].Other research also indicated that perceived risk is an important determinant of consumers' attitude toward online transactions [35,37]. Since intention to use a mobile phone for transactions involves a certain degree of uncertainty, perceived risk is incorporated as a direct antecedent of behavioral intention to use.

According to behavioral decision theory, the perceived cost pattern is significant to both perceived usefulness and ease of use. As Chen and Hitt and Plouffe et al. pointed out, consumers must deal with non-negligible costs in switching between different brands of products or relative services invarious markets. Transitioning from wired electronic services (ES) to mobile services (MS) implies some additional expenses. Equipment costs, access cost, and transaction fees are three important components that make MS use more expensive than wired ES. Furthermore, frustrating experiences, such as slow connections, poor quality, out-of-date content, missing links, and errors have infuriated online users [34, 35].

Unfortunately, consumers must pay for all these frustrations. Some researchers suggested that MS providers should find solutions that reduce the costs and entice present and new customers to access portals anytime, from anywhere [35]. Undoubtedly, the anticipation is that these early investments will lead to a long-term stream of profits from loyal customers, and that this will make up for the expense. Otherwise, MS will not thrive because users can obtain the same information or results through alternative solutions.

Previous research has suggested that trust-related constructs, cost-constructs and risk-related constructs should be the critical antecedents of the behavioral intention to use IS. Integrating these perspectives and empirically examining the factors that build usage intention in an m-service context that lacks typical human interaction, can advance our understanding of these constructs and their link to m-service adoption behavior. Wang et al. define trust and risk is Perceived Credibility, perceived credibility is defined as the extent to which a person believes that using m-service will be free of security and privacy threats [21, 22]. Perceived credibility was also found to have a significant positive influence on the behavioral intentions to use online banking [21], electronic tax filing [21], electronic learning [38] and m-banking [39]. In general, the perceived credibility that people have in the ability of the m-service system to conclude their transactions securely and to maintain the privacy of their personal information, affects their voluntary acceptance of m-service. Based on the previous theory and then developed a framework as an extension of TAM model, shown as Fig. 2.

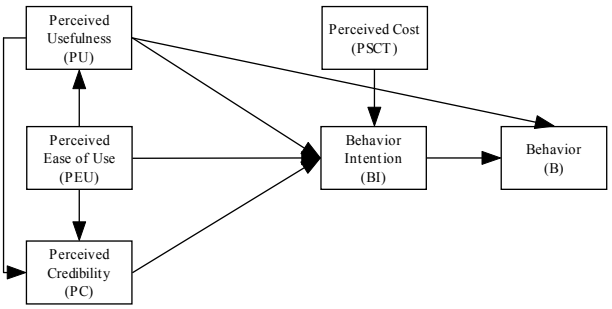

Figure 2. Extension of TAM Model

III. Research Model and Hypotheses

The research model is shown in Fig. 3. In the extended model, like many other studies of TAM, our model integrates the key variables of TAM (perceived usefulness and perceived ease of use), TPB (perceived behavioral control), and "attitudes" construct has been

removed for simplification. The proposed constructs and hypotheses are supported by prior studies in information systems literature.

Based on this, the following hypotheses are proposed:

H1. Perceived usefulness will have a positive effect on the behavioral intentions.

H2a. Perceived ease of use will have a positive effect on the behavioral intentions.

H2b. Perceived ease of use will have a positive effect on the perceived usefulness.

H3a. Perceived behavioral control will have a positive effect on behavioral intention.

H3b. Perceived behavioral control will have a positive effect on perceived ease of use.

H4a. Perceived ease of use will have a positive effect on perceived credibility.

H4b. Perceived credibility will have a positive effect on perceived usefulness.

H4c. Perceived credibility will have a positive effect on behavioral intention.

H5: Perceived cost will have a positive effect on behavioral intention.

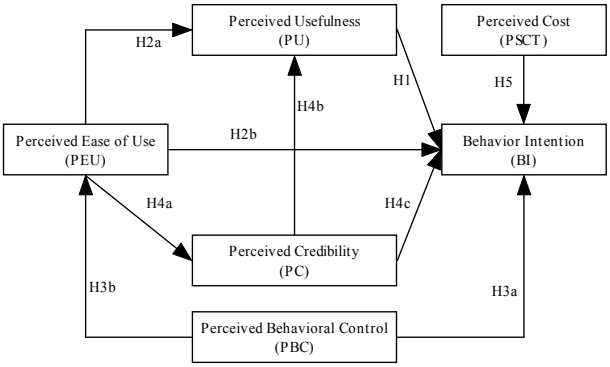

Figure 3. Research Model

IV. TEST AND RESULT

A. Data Collection

We conducted an online survey to verify our research model. After data-filtering to eliminate invalid responses, we had received 228 questionnaires. Most questions in our questionnaire were taken from prior studies that had proved their validity and reliability. Each item of the questionnaire was assessed using a 5-point Likert scale with end points of 'strongly disagree' and 'strongly agree'. Accordingly, the first part is basic information. This part of questionnaire was used to collect basic information about respondents' characteristics including gender, age, education, occupation, and experience using online banking. The second part of questionnaire was developed based on the constructs of perceived usefulness, perceived ease of use, perceived credibility, perceived behavior control, perceived cost, and behavior intention to use. Before conducting the main survey, we performed a pre-test to validate the instrument. The pre-test involved 10 respondents who have more than 1 years experience using mobile service. Respondents were asked to comment on the length of the instrument, the format, and the wording of the scales. Therefore, the instrument has confirmed content validity.

B. Reliability Analysis

Our data analysis was conducted using SPSS 13.0. Internal consistency reflects the stability of individual measurement items across replications from the same source of information; it was assessed by computing Cronbach's α whose coefficients for the eight constructs were above 0.7, indicating a reasonable level of internal consistency among the items making it up, Show as Table I.

TABLE I
CONSTRUCTS MEAN, STANDARD DEVIATION AND INTERNAL CONSISTENCY RELIABILITY

Constructs(Items)	Mean	Standard deviation	Cronbach's α
Perceived usefulness			
PU1:Using mobile services would improve my performance in conducting services transactions	4.20	0.80	0.76
PU2:Using mobile services would make it easier for me to conduct services transactions	4.34	0.78	
PU3:I would find mobile services useful in conducting my service transaction	4.41	0.78	
Perceived ease of use			
PEU1:Learning to use mobile services is easy for me	4.03	1.00	0.78
PEU2:It would be easy for me to become skillful at using mobile services	3.80	1.02	
PEU3:I would find mobile services easy for me	4.00	0.87	
Perceived credibility			
PC1:Using mobile services would not divulge my personal information	3.32	1.05	0.72
PC2:I would find mobile services secure in conducting my services transactions	3.52	1.02	
Perceived behavioral control			
PBC1:In my experience and expectations, I believe to use mobile services will not have much difficulty	3.70	0.93	0.71
PBC2:I think I have more resources and opportunities, expected fewer obstacles, to act to control behavior on the perception is stronger	3.90	0.85	
Perceived cost			
PCST1:It would cost a lot to use mobile services	3.30	0.94	0.81
PCST2:There are financial barriers to my using mobile services(e.g., having a pay for handset and communication time)	3.40	0.90	
Behavioral intention			
BI1:Assuming that I have access to mobile services systems, I intend to use them	3.65	0.94	0.88
BI2:I intend to increase my use of mobile services in the future	3.50	0.99	

C. Validity Analysis

A confirmatory factor analysis using LISREL 8.3 was conducted to test the measurement model. Nine common model-fit measures were used to assess the model's overall goodness of fit: the ratio of χ^2 to degrees of freedom (d.f.), normalized fit index (NFI), non-normalized fit index (NNFI), comparative fit index (CFI), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), and root mean square error of approximation (RMSEA). As shown in Table II, all the model-fit indices exceeded their respective common acceptance levels suggested by previous research, thus demonstrating that the measurement model exhibited a fairly good fit with the data collected. Therefore, we could proceed to evaluate the psychometric properties of the measurement model in terms of reliability, convergent validity and discriminant validity [27].

TABLE II
THE MODEL-FIT INDICES

Fit Indices	Recommended value	Measurement model	Structural model
χ^2/d.f.	≤3.00	1.494	1.805
NFI	≥0.90	0.955	0.931
NNFI	≥0.90	0.916	0.909
CFI	≥0.90	0.942	0.925
GFI	≥0.90	0.973	0.954
AGFI	≥0.80	0.980	0.963
RMSEA	≤0.08	0.044	0.056

Composite reliability for all the factors in our measurement model was above 0.70. The average extracted variances were all above the recommended 0.50 level [10], which meant that more than one-half of the variances observed in the items, were accounted for by their hypothesized factors. Convergent validity can also be evaluated by examining the factor loadings; composite reliability and average variance extracted from the confirmatory factor analysis (see Table III). Following Fornell,C. & Larcker, D.F.(1981) recommendation: (1)factor loadings greater than 0.50 were considered very significant. All of the factor loadings of the items in the research model were greater than 0.70. (2) Composite reliability greater than 0.8 were considered very significant. All of the Composite reliability of the items in the research model were greater than 0.8. (3) Average variance extracted greater than 0.5 were considered very significant [39]. All of the Average variance extracted of the items in the research model were greater than 0.7. Accordingly, all factors in the measurement model had adequate reliability and convergent validity.

Reliability and convergent validity of the factors were estimated by composite reliability and average variance extracted (see Table IV). The composite reliabilities can be calculated as follows: (square of the summation of the factor loadings)/{(square of the summation of the factor loadings)+(summation of error variables)}, where the factor loadings are obtained directly from the program output, and the error variables is the measurement error for each indicator. The interpretation of the composite reliability is similar to that of Cronbach's alpha, expect that it also takes into account the actual factor loadings, rather than assuming that each item is equally weighted in the composite load determination.

TABLE III
FACTOR LOADINGS, COMPOSITE RELIABILITY AND AVERAGE VARIANCE EXTRACTED

Variables	Constructs	Factor loadings	Composite reliability	Average variance extracted
PU	PU1	0.86	0.90	0.83
	PU2	0.82		
	PU3	0.91		
PEU	PEU1	0.83	0.83	0.80
	PEU2	0.78		
	PEU3	0.80		
PC	PC1	0.92	0.88	0.83
	PC2	0.95		
PBC	PBC1	0.80	0.85	0.78
	PBC2	0.89		
PCST	PCST1	0.82	0.81	0.72
	PCST2	0.98		
BI	BI1	0.92	0.87	0.84
	BI2	0.95		

TABLE IV
COMPOSITE RELIABILITY AND AVERAGE VARIANCE EXTRACTED

Variables	1	2	3	4	5	6
PU	1.00					
PEU	0.36**	1.00				
PC	0.51**	0.42**	1.00			
PBC	0.16	0.40**	0.22**	1.00		
PCST	0.40**	0.33**	0.26**	0.45**	1.00	
BI	0.02	0.01	0.09	0.23**	0.13	1.00

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

KMO Measure of Sampling Adequacy: 0.818

Bartlett's Test of Sphericity: 405.144; Significance: .000

D. Structural Model

A similar set of indices was used to examine the structural model. Comparison of all fit indices with their corresponding recommended values provided evidence of a good model fit. Thus, we proceeded to examine the path coefficients of the structural model. Properties of the causal paths, including standardized path coefficients, t-

values and variance explained, for each equation in the hypothesized model, are presented in Fig. 4.

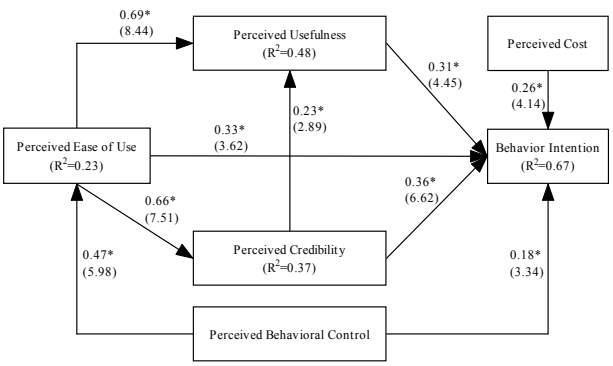

Figure 4. Hypotheses testing results

* P < 0.05; t-values in parentheses.

As expected, hypotheses H1, H2b, H4c, H3a and H5 were supported in that perceived usefulness, perceived ease of use, perceived credibility, perceived behavioral control and perceived cost all had a significant effect on behavioral intention. Altogether, they accounted for 67% of the variance in behavioral intention with perceived usefulness (β=0.31) contributing to intention nearly perceived ease of use (β=0.33), perceived credibility (β=0.36), perceived behavioral control (γ=0.18) and perceived cost (γ=0.26). In addition, hypotheses H2, H3, H6 and H7 were also supported. Perceived behavioral control was found to have a significant influence on perceived ease of use (γ=0.47). Both perceived ease of use and perceived credibility had a significant effect on perceived usefulness (γ=0.69 and β=0.23, respectively). Thus, perceived ease of use had a significant effect on perceived credibility (γ=0.66).

V. Conclusions and Discussions

Prior studies have found that TAM appears to be superior to TPB in explaining behavioral intention of using an IS, and that the decomposed TPB model, which integrates TPB and TAM, is better than TAM but the difference is not substantial [17].

This study based on the TAM and TPB presents an extended TAM that integrates trust related construct (‘perceived credibility’) and two resource-related constructs (‘perceived self-efficacy’ and ‘perceived cost’) into the TAM to analyzing adoption behavior of mobile commerce. The proposed model was empirically tested using data collected from a survey of mobile commerce consumers. The structural equation modeling technique was used to evaluate the causal model and confirmatory factor analysis was performed to examine the reliability and validity of the measurement model. Our findings indicated that all variables except perceived ease of use significantly affected users’ behavioral intention. Compared with prior studies integrating TAM and TPB, the findings of this study strongly suggest that our model with only five independent constructs has a higher ability to predict and explain the behavioural intention of users to use an IS. The variance in intention explained (R^2) in our study was 67%. The results of this paper are to provide necessary reference to promote mobile commerce in practice. The results show that there are some significant factors affect consumers’ using mobile commerce as follows. According to the results of this research, mobile commerce companies can affect consumers' willingness of using mobile commerce, to increase the number of mobile commerce users.

1) Perceived Usefulness: Mobile commerce companies can strengthen the system function; improve consumer perception of mobile commerce usefulness, to enhance behavior intention of using mobile commerce. 2) Perceived Ease of Use: Mobile commerce companies can strengthen the system ease of the use, and enhance behavior intention of using mobile commerce by increasing the system ease of the use. 3) Perceived Credibility: Mobile commerce companies can strengthen the transaction security and privacy protection abilities in the mobile commerce, to reduce the risk of consumer perception. 4)Perceived Behavioral Control: Mobile commerce companies should keep abreast of consumers' results generated by using mobile commerce and consumers' response to the results. 5) Perceived Cost: Mobile commerce companies should make the mobile commerce cost as low as possible.

Although this paper makes certain achievements, it also faces many restrictions. First, due to the time limit, we only collected a small quantity of questionnaire, so there are some shortcomings in the sample amount; more samples should be tested in the follow-up research. Second, this paper only researches the mobile commerce, it should be prudent and careful to apply the research results to the whole mobile business, and the research results can’t be explained excessively. Subsequent research can investigate the application in other mobile service to enhance the development of the mobile business theory. In the follow-up research study, we can join other important factors to the three theory models for further research to improve the models.

VI. Limitations and Future Research

In terms of academic, TAM is used to realize users’ behaviors to accept new IT, and try to analyze factors that influence users to accept new IT; it is known from the research that the TAM’s path relation among factors is workable under mobile service, and has certain explanatory capability, which shows consumer’s highly attitude and intention to accept mobile service is conform to the path relation of original TAM.

In terms of industry, the research results enable mobile service providers to realize consumers’ conceptual psychology factor toward mobile service, which show that even though consumers have highly attitude and intention toward mobile service, the actual use is not as expected; therefore, services providers could make further research for the causes to find out the real causes why consumers do not frequently used and then improve use condition.

Due to time and source limitations, the research cannot be done as a long-term research, and did not have the

chance to understand the individual purpose for using mobile service. The research is done regionally rather than nationally due to various restrictions. Besides, in order to let the research proceed smoothly, the selection for services did not cover all types of mobile commerce services, but to list a few most commonly used services for survey.

On the other hand, due to part of the measurements were sent to the interviewees, their willingness for replying the measurement may not be high, and if the one who replied the measurement was not the one we would like to ask, it would influence the result as well. Furthermore, the interviewees who took their time replying the measurements indicate that they are interested in the topic we enquired, in other words, the recovered measurements might be done a group of people who have interest in this field which might create bias for the result. Moreover, the questions were simplified in order to reduce the pages of the measurement and make the interviewees feel easier to reply which might influence the result as well.

From the experiences we had this time, we suggested that other researchers may discuss the same topic from the following directions. Due to the fact that the samples collected in this research were limited, the result cannot be generalization. For future research, the samples could be selected from national-wide, or every industry and long-term follow-up study could be made to understand deeply about the consumers' behaviors. TAM was adopted for this research as to understand the consumers' attitude and behavioral intention toward mobile service, in the future, other behavioral theories could be adopted or introduce for proceeding future research as well. Moreover, other variables that would influence the actual use of mobile service, stated by Liao and Cheung (2001), could include the price, using experiences, brand, education, sense for using information technology, and communication quality for wireless network etc., all of the above items could let us understand more about the variables that influence consumers' actual use toward mobile commerce [40].

ACKNOWLEDGMENT

The authors would like to thank the guest editors and two anonymous reviewers for their valuable comments and insightful suggestions. This research was substantially supported by the Science and Technology Commission of Shanghai Municipality "Research and Development of Public Service Platform Construction Project" under grant number 06DZ22924, Shanghai Science and Technology Development Fund Soft Science Doctoral Thesis Research under grant number 200906017 and Suzhou philosophy and social science research topics under grant number 09-C-45.

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