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# Factors Affecting Mobile Commerce Adoption: A Cross-Cultural Study in China and United States

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## ABSTRACT

Mobile communication technologies have penetrated consumer markets throughout the world. It is likely to make a deep influence on business activities, consumer behavior, and national and global markets. Thus the identification of factors that impact mobile commerce adoption will have significant value. This paper identified nine factors affecting mobile commerce adoption by consumers, based on recently published research. Multiple comparisons in China and United States were conducted to clarify the applicability of these factors in the two regions. A survey was conducted on 190 individual mobile commerce users in China and US. We found significant differences among the antecedents and their impact on consumers' intentions to use mobile commerce. The study also draws a number of practical insights and provides vendors seeking to enter the Chinese and US marketplace with specific information about m-commerce users' perceptions and intentions.

## Keywords

Mobile Commerce, Adoption, China, United States, Cross-cultural, Consumer Intentions

## INTRODUCTION

Mobile communication technologies have penetrated consumer markets throughout the world. The global system for mobile communications (GSM) cell phone system and the Internet are viewed as two dominant global communication networks. According to Internet World Stats (2007), current internet users are 1.24 billion while the mobile phone subscribers are 2.7 billion in 210 countries and territories (Mobile World, 2007; Wikipedia). According to the consultants McKinsey & Company, by 2010, mobile commerce will be the second-largest industry in the world.

Mobile commerce (also called mobile e-commerce or m-commerce) is defined as "all activities related to a (potential) commercial transaction conducted through communications networks that interface with wireless (or mobile) devices" (Tarasewich et al., 2002, p42). Mobile commerce is transforming mobile phone from a simple voice-communication device to an advanced-communication device which can provide voice, text, and video messaging, web surfing, digital imaging, entertainment functions, payments, banking, financial instrument trading, and shopping (Mao, 2005). However, technology development is seriously challenged when users are slow to adopt the technology. Enhanced functionality and greater levels of mobile services require an in-depth understanding of consumer's perception and behavior. Besides, the global use of wireless technologies and applications adds complexity to issues in m-commerce. Such complexity derives from legal, cultural, social, political, and technical differences among countries (Tarasewich et. al, 2002). In electronic commerce research, cultural aspects influence the typical ways in which web applications are used within a country (Zakaria and Stanton, 2003). As mobile commerce has spread globally, culture can have a stronger effect on the ways in which mobile commerce is used in each country (Lee et al, 2004). However, most current practitioners only concentrate on language translation when they enter a foreign market (Chau et al., 2002). Therefore, we need to develop an in-depth understanding of m-commerce adoption in different cultures. In this study, we investigate mobile commerce adoption in two different cultural contexts: China and United States.

The goal of this research is to address three research questions:

- What are the factors affecting the adoption of mobile commerce?
- What is the relative importance of these factors?
- Do the factors affecting mobile commerce adoption differ in China and USA?

## LITERATURE REVIEW

### Mobile Commerce and Technology Adoption Model

Most of the IS studies on adoption and usage of information technology have adopted models derived from the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975) and its extensions (Khalifa and Cheng, 2002). The TRA consists of five main components: external factors, beliefs, attitudes, intentions, and behavioral outcome. By extending TRA, the Technology Acceptance Model - TAM (Davis, 1989) has been widely used to predict the attitudes and behaviors of consumers when introduced to a new technology. On the basis of TAM, several models were developed to measure the acceptance of users to certain types of emerging technologies or systems. There have been single country studies on mobile commerce adoption. Malhotra and Segars (2005) investigated wireless web adoption pattern in the US. Wong and Hiew (2005) conducted a survey to find correlations between factors affecting the diffusion of mobile entertainment in Malaysia. Kim and Stenfield (2004) studied consumer mobile internet service satisfaction and continuance intentions and investigated the relationship between satisfaction and technology adoption intention in Korea. Rosenbaum and Kleber (2004) described ongoing research investigating mobile commerce (m-commerce) in Japan. Using a social informatics perspective, this research provided insights into ways Japanese culture is changing as mobile phone technologies and m-commerce become reutilized in Japanese life. Bruner and Kumar (2003) extended TAM by adding the concept of “fun” and indicated that fun of using a device was a powerful determinant of attitude toward usage.

### Cross-Cultural Studies of Mobile Commerce

Mobile technology and mobile commerce usage patterns vary across different cultures. The cross-culture issues seem to be highly related to adoption. Hofstede (1980) defines culture as “the collective programming of the mind which distinguishes the members of one group from people from another.” He further developed five distinctly different macro cultural level cultural dimensions: (1) Power Distance, (2) Uncertainty Avoidance, (3) Masculinity-Femininity, (4) Individualism-Collectivism, plus (5) Long-Term Time Orientation. Such culture dimensions of culture are closely associated with the usage pattern of mobile commerce users (Lee et al, 2004). Yet, little research has been performed on cross-cultural issues in the mobile environment. This might be due to relative youth of this market (Harris et al, 2003) and the difficulties in conducting culture research (Straub et al. 2002).

Several initial endeavors have been made. Harris et al (2003) compared m-commerce usage in the United Kingdom and in Hong Kong; these are two areas with apparently similar mobile telecommunications infrastructures but with markedly different cultural profiles. Su and Adam (2004) investigated mobile use and adoption in China and the UK by drawing upon Individualism vs. Collectivism cultural dimension. Lee et al (2004) develop metrics to measure the cultural aspects of mobile Internet use where culture was found to have a profound impact on the use of information technology. Data from Hong Kong and Korea were collected in this cross culture study. Mao et al (2005) tested an extended TAM model in the U.S. and Turkey which explored key factors that influence the usefulness, ease of use, and intentions to use advanced mobile phone services, such as mobile Internet access, E-Mail, and payments.

However, none of the prior study focuses on the antecedents of consumer acceptance and their intentions to use mobile commerce in cross-cultural context. A variety of consumer characteristics influence the perception of barriers to the adoption of m-commerce services (Lu, et al., 2003). This implies that researchers and practitioners should develop deeper levels of knowledge about the impact of consumer characteristics and their behavior to understand acceptance of m-commerce services in distinct cultures.

## BACKGROUND OF MOBILE COMMERCE IN UNITED STATES AND CHINA

### Mobile Commerce in United States

According to PRECOMM (2007), the current mobile phone penetration is at about 50% in USA, compared to most European and many Asian-Pacific countries with much higher rates. For example, penetration currently stands at 90% in Italy, Taiwan and Hong Kong and at more than 80% in U.K., Finland, Portugal, Norway, and Austria. The revenue generated from mobile commerce is 3.3 million US dollars in 2005 compared to the 9.4 million in Asia and 7.8 in West Europe.

Clearly, USA is in its early stages of m-commerce compared to the Asian and European countries although US was a pioneer in the Internet and E-Commerce era. While advanced mobile phone services are available and consumers own new generation phones, the acceptance of these services is not automatic. An in-depth understanding of the factors influencing the adoption of mobile phone services would help U.S. businesses stimulate deeper penetration and realize the benefits sooner (Mao et al, 2004).

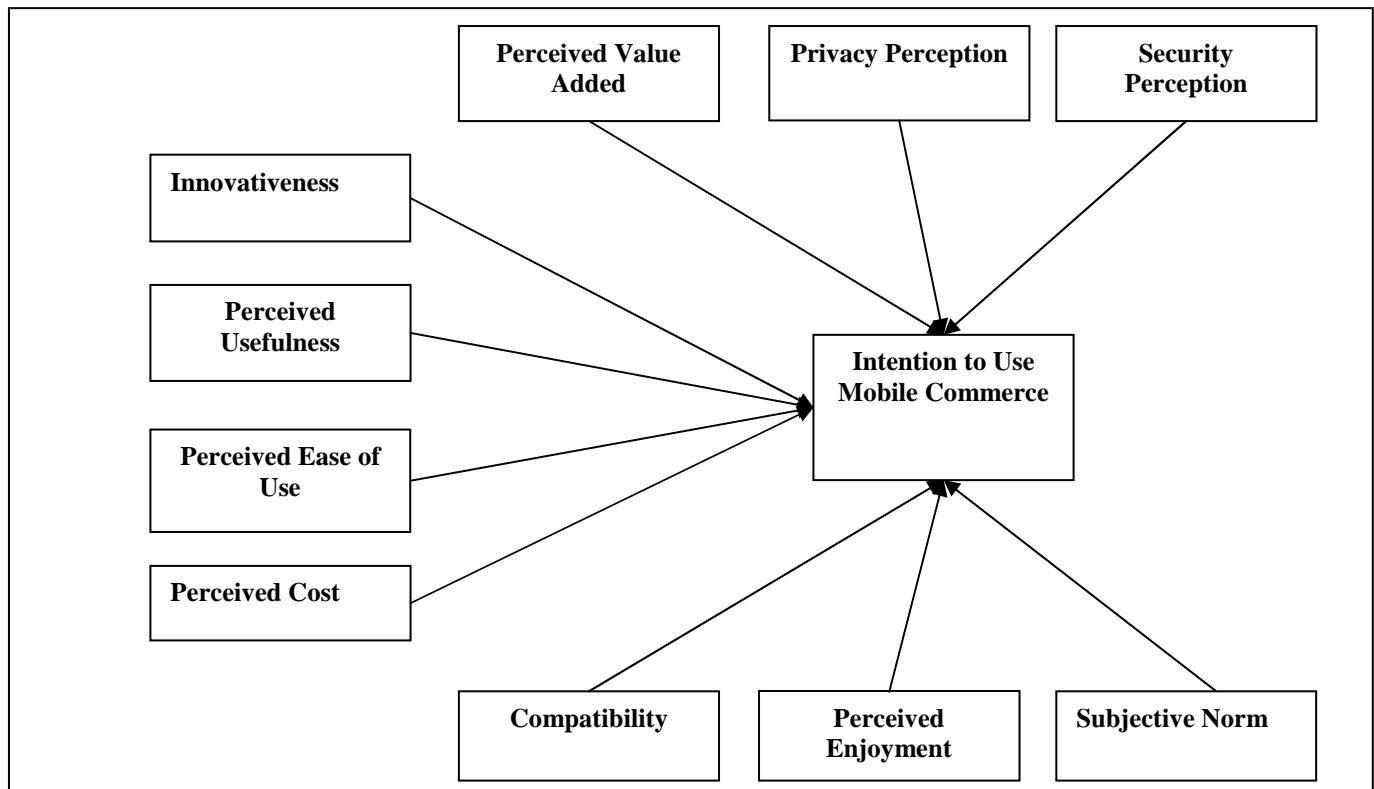
**Mobile Commerce in China**

According to Kshetri and Cheung (2002), China is undergoing the mobile miracle. China is rapidly heading towards the largest mobile communications network in the world for both cellular and paging operations (Lu et al, 2003). China’s telecommunication market reached 182.4 billion in revenues in 2006. China has over 800 million telecom subscribers and the teledensity is 49.21. Of the 800 million telephone lines, fixed lines are around 367.81 million while the remaining are mobile users. These 2006 numbers are over 60 million compared to 2005.

Unlike USA, e-commerce practices in China can hardly reach low-income earners that constitute a majority of the population due to limited household possession of wired personal computers (Hu, 2000). However, many existing mobile users have an established comfort level with mobile device functionality. This may alleviate reluctance to conduct m-commerce activities (Lu et al, 2003). Thus, m-commerce has a potentially exceptional future in China, driven by the need for cheaper alternatives to Internet connectivity. Mobile Internet might be the way to bring e-commerce to China (Chavaja et al, 2001).

**PROPOSED RESEARCH MODEL**

Based on TAM and recent published literature on mobile internet or service adoption (Lu et al, 2003; Rosenbaum and Kleber, 2004; Mao et al, 2004; Kim and Stenfield, 2004), we have developed an integrative research framework (figure 1) that identifies ten major factors as significant antecedents of consumer intention to use mobile commerce.



**Figure 1: Proposed Research Model**

**Perceived Value-Added**

Perceived value added means that mobile commerce creates value for customers in a different manner from conventional business; besides, it provides services and additional benefits when compared to traditional ecommerce applications (Mobilocity, 2000; Tsalgatidou and Pitoura, 2001).

**Security Perception**

Salisbury et al (2001) define perceived web security as the extent to which one believes that the World Wide Web is secure for transmitting sensitive information. In the mobile context, failing to provide a secure system of m-commerce will significantly dampen consumer adoption rates (Ghosh and Swaminatha, 2001).

**Privacy Perception**

Consumer reluctance to use mobile commerce is partly due to the fact that the barrier to shopping on the Internet is relatively high (Udo 2001). Websites usually require personal information from the users for the purposes such as membership, newsletter subscription, feedback forms, order forms, etc.

**Innovativeness**

Consumer innovativeness has been used to study adoption behavior of new products and services (Wood and Swait, 2002). Citrin et al. (2000) indicated that innovativeness predicts consumer adoption of Internet shopping. Furthermore, recent studies on consumer adoption of wireless application protocol (WAP) also indicate that personal innovativeness can predict adoption of M-commerce (Hung et al., 2003).

**Perceived Usefulness**

Borrowed from TAM, perceived usefulness (PU) refers to a "prospective user's subjective probability that using a specific application will increase his or her ... performance". It has been proved that perceived usefulness or benefits play a crucial role in the adoption of technology (Iacovou et al., 1995).

**Perceived Ease of Use**

Perceived ease of use is an important determinant of user satisfaction (Baroudi et al. 1986). It refers to "the degree to which the prospective user expects the target system to be free of effort". This internal belief ties to an individual's assessment of the mental effort involved in using a system.

**Perceived Cost**

Depending on the provider, there are different rates, plans, extra charges for advanced mobile phone services. According to Kim and Steinfield (2004), an inappropriate and unacceptable mobile Internet service charge is undoubtedly a key predictor of mobile users' overall service satisfaction.

**Compatibility**

Gera and Chen (2003) defined compatibility as the "degree to which the innovation is consistent with existing facilities and practice". Malhotra and Segar (2003) defined two types of compatibility: behavioral compatibility and needs compatibility. For behavioral compatibility to be achieved, the innovation (Wireless Web) must be consistent with adopters' existing values and past experiences related to the current technology. Needs compatibility is associated with the ability of the innovation to meet the needs of the adopters.

### **Perceived Enjoyment**

Igbaria et al (1996) defined enjoyment as “the intrinsic reward derived through the use of the technology or service studied”. Nysveen et al (2005) addressed that perceived enjoyment stands out as an important motive for using experiential mobile services.

### **Subjective Norm**

Subjective norm refers to the perceived social pressure to perform or not certain behavior (Ajzen 1991). Several studies confirm that subjective norms affect the on-line shopper’s behavior (Chen and Dhillon 2003; Shim et al. 2001). Moore and Benbasat (1991) defined it as the extent to which use of an innovation is perceived as enhancement of one’s status in a social system.

### **Intention to Use Mobile Commerce**

Intention to use has been used as a good predictor of actual used in prior studies. Mobile commerce encompasses many more activities than merely online purchasing. This study would investigate individual consumers’ intention to use different kind of mobile commerce activities that include browsing, shopping, banking, and mobile entertainment.

## **METHODOLOGY**

To empirically test our model, a survey instrument was developed based on prior research as discussed in the next subsection.

### **Measures**

An English version of the questionnaire was developed based on the research model and exhaustive literature review. The purpose of each item on the instrument was to give the consumers the opportunity to express their opinions concerning their perceptions of the constructs, e.g., security and privacy. The items were simple statements of concerns for which the participants were asked to indicate their opinions on a scale of ‘strongly disagree to strongly agree’. All items were generated from literature review on m-commerce and key word searches of m-commerce, wireless internet, technology acceptance, innovation adoption. There are also some measures from MIS survey instrument in the AIS website. Demographics and variables of experience were adopted from previous studies related to TAM. All items were measured on a seven-point Likert scale.

### **Pretest**

The survey instrument was tested on several experienced mobile/electronic commerce college students. The aim was to test the feasibility of the instrument and gain qualitative feedback from the respondents. Based on this feedback, changes were made to improve the layout and phrasing of some survey questions.

### **Pilot study**

A pilot study was conducted at one big university in USA. Sixteen American students and faculty were asked to complete the questionnaire. The questionnaire was also distributed to 14 international students. The respondents gave verbal and written feedback. They were asked to make notes on the surveys of items that were unclear. A few changes were made as a result.

### **Data Collection**

The revised questionnaires were distributed in a big university in USA. 89 respondents filled the survey. The English version questionnaire was subsequently translated into Chinese-Mainland version. The Chinese version was distributed through email to people in several large cities in China where m-commerce is well diffused and promoted by vendors. 109 responses were

collected from China. After removing incomplete questionnaires, we finally got 84 surveys from USA and 106 from China. The sample characteristics are displayed in table 2:

	Full Sample		China		US	
	Number	Percentage	Number	Percentage	Number	Percentage
Total	190	100%	106	55.79%	84	44.21%
Male	115	60.53%	74	38.95%	41	21.58%
Female	75	39.47%	32	16.84%	43	22.63%

Table 1: Sample Characteristics

**Exploratory Factor Analysis**

We factor analyzed the 190 usable records. This analysis resulted in ten factors: *Perceived Value-added, Innovativeness, Security and Privacy Perceptions, Perceived Usefulness, Perceived Ease of Use, Perceived Cost, Compatibility, Perceived Enjoyment, Subjective Norms and behavioral Intentions*. Table 2 shows the factor loading.

	Factor										
	1	2	3	4	5	6	7	8	9	10	11
P1	.458										
P2	.847										
P3	.924										
P4	.643										
S1		.415									
S2		.812									
S3		.653									
S4		-.053									
I1			.675								
I2			.694								
I3			.487								
I4			.865								
PVA1				.710							
PVA2				.853							
PVA3				.711							
PVA4				.530							
PVA5				.483							
PU1					.624						

PU2				.690					
PU3				.825					
PU4				.699					
PU5				.756					
PEOU1					.597				
PEOU2					.601				
PEOU3					.599				
PEOU4					.530				
PEOU5					.472				
PC1						-.072			
PC2						.341			
PC3						.671			
PC4						.874			
COM1							.473		
COM2							.579		
COM3							.540		
PE1								.656	
PE2								.715	
PE3								.696	
PE4								.716	
PE5								.502	
SN1									.740
SN2									.866
SN3									.700
BI1									.712
BI2									.723
BI3									.538
BI4									.529

Table 2: Exploratory Factor Analysis

**Testing the Measurement Model**

Structural equation modeling (SEM) was used to analyze the data for both the measurement model and structural model. The software we use is PLS-Graph since Partial least square (PLS) places minimal restrictions on measurement scales, sample size, and residual distributions (Chin et al. 2003).

*Reliability*

Based on the results of exploratory factor analysis, we refined our measurements. Items that loaded less than 0.50 or cross-loaded were discarded. Reliability was assessed using internal consistency scores, calculated by the composite reliability



scores (Werts et al. 1974). Internal consistencies of all variables, except security, are considered acceptable since they exceed .70 (Table 3). So we removed the security construct from further analysis.

Variables	Reliability	Variables	Reliability
Privacy	0.8197	Perceived cost	0.8023
Security	0.4798	Compatibility	0.8682
Innovativeness	0.7790	Perceived Enjoyment	0.9101
Perceived of Value added	0.8590	Subjective Norms	0.9148
Perceived Usefulness	0.9070	Behavior intentions	0.8202
Perceived Ease of Use	0.9034		

**Table 3: Results of Reliability Tests**

According to Chin (1998) and Pavlou et al. (2006), “Convergent validity and Discriminant Validity could be inferred through PLS analysis when (1) loadings are much higher on their hypothesized factor than on other factors (own-loadings are higher than cross-loadings), and (2) when the square root of each construct’s average variance extracted (AVE) is larger than its correlations with other constructs”. The item loadings and the AVE for each construct are shown in Table 4.

Construct	Items	Loadings	AVE	Square root of AVE
Privacy	P1	0.8246	0.732	0.8556
	P2	0.9209		
	P3	0.7994		
Innovativeness	I1	0.8639	0.720	0.8485
	I2	0.8984		
	I3	0.7797		
Perceived Value-Added	PVA1	0.8474	0.789	0.8883
	PVA2	0.9161		
	PVA3	0.8998		
Perceived Usefulness	PU1	0.8569	0.778	0.8820
	PU2	0.8929		
	PU3	0.8654		
	PU4	0.9116		
Perceived ease of use	PEOU1	0.8889	0.858	0.9263
	PEOU2	0.9623		
Perceived cost	PC1	0.8859	0.834	0.9132

	PC2	0.9396		
Perceived enjoyment	PE1	0.8681	0.782	0.8843
	PE2	0.9201		
	PE3	0.8472		
	PE4	0.9000		
Compatibility	COM1	0.8700	0.799	0.8939
	COM2	0.8924		
	COM3	0.9191		
Subjective Norm	SN1	0.9140	0.851	0.9225
	SN2	0.9418		
	SN3	0.9108		
Behavioral Intentions	BI1	0.8440	0.590	0.7681
	BI2	0.8767		
	BI3	0.5822		
	BI4	0.7343		

**Table 4 Items loading and AVE for principal constructs**

All items loaded well on their respective factors. The square roots of all AVEs are above 0.75 which are much larger than all the cross-correlations. The above tests demonstrate adequate convergent and discriminant validity.

*Testing the mean values*

To compare the two cultural groups: China and USA, t-tests were conducted. The results are summarized in Table 5.

Construct	GROUP	N	Mean	Std. Deviation	Std. Error Mean	T-Statistics	P-value
Privacy	China	106	5.5692	1.48217	.14396	.705	.482
	US	84	5.4222	1.35769	.14814		
Innovativeness	China	106	4.4044	1.21306	.11782	-1.448	.149
	US	84	4.6578	1.17738	.12846		
Perceived Value-added	China	106	5.4065	1.15169	.11186	-1.143	.254
	US	84	5.6071	1.26233	.13773		
Perceived Usefulness	China	106	4.9555	1.13740	.11047	.354	.724
	US	84	4.8916	1.35100	.14741		
Perceived Ease of Use	China	106	4.5868	1.22039	.11853	-1.339	.182

	US	84	4.8333	1.30876	.14280		
Perceived Cost	China	106	5.1698	1.25109	.12152	2.271	.024
	US	84	4.7744	1.11225	.12136		
Compatibility	China	106	4.4969	1.28339	.12465	-1.522	.130
	US	84	4.7816	1.27818	.13946		
Perceived Enjoyment	China	106	3.9405	1.13649	.11039	-3.753	.000
	US	84	4.6139	1.33523	.14569		
Subjective Norms	China	106	3.7515	1.30853	.12710	-2.672	.008
	US	84	4.2819	1.42016	.15495		
Behavior Intentions	China	106	4.4164	1.16031	.11270	.014	.989
	US	84	4.4137	1.45799	.15908		

**Table 5: US-China Construct Comparisons**

The results demonstrate that there are significant differences in consumers' perceptions of cost, enjoyment, and subjective norm between China and USA. The values of perceived security, perceived enjoyment, and subjective norms of USA are higher than China whereas the mean value of the perceived cost in China is higher than USA.

### The Structural Model

Two SEM analyses were conducted to compare the path coefficients of the structural model for Chinese sample and US sample (Figures 2 and 3).

In the China model, innovativeness, perceived usefulness, perceived ease of use, perceived cost, and subjective norms significantly influence consumers' intention to use mobile commerce, among which perceived usefulness and subjective norm have higher impacts on consumers' intention ( $p < 0.01$ ). All antecedents in the China model explain 52.3% of consumers' intention.

In the USA model, consumer privacy perceptions, innovativeness, perceived usefulness, perceived enjoyment, and compatibility have significant impact on consumers' intention to use mobile commerce. 38.7% of the variance is explained in US model.

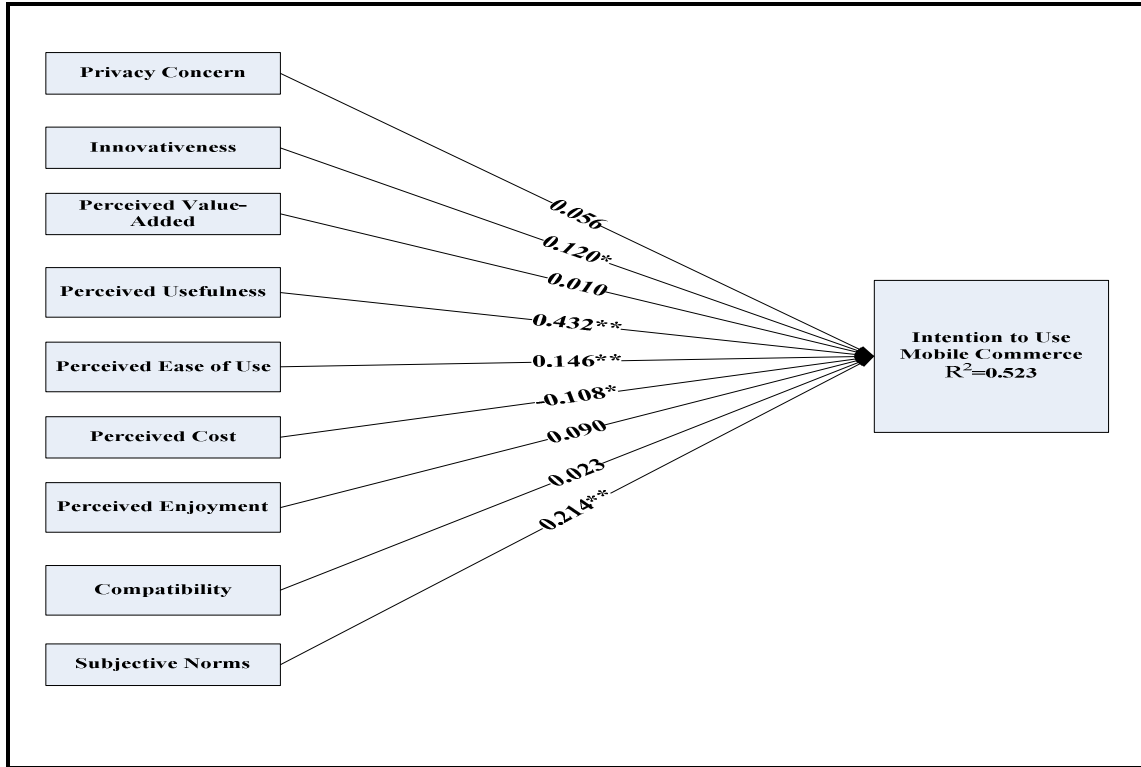


Figure 2: The China Model

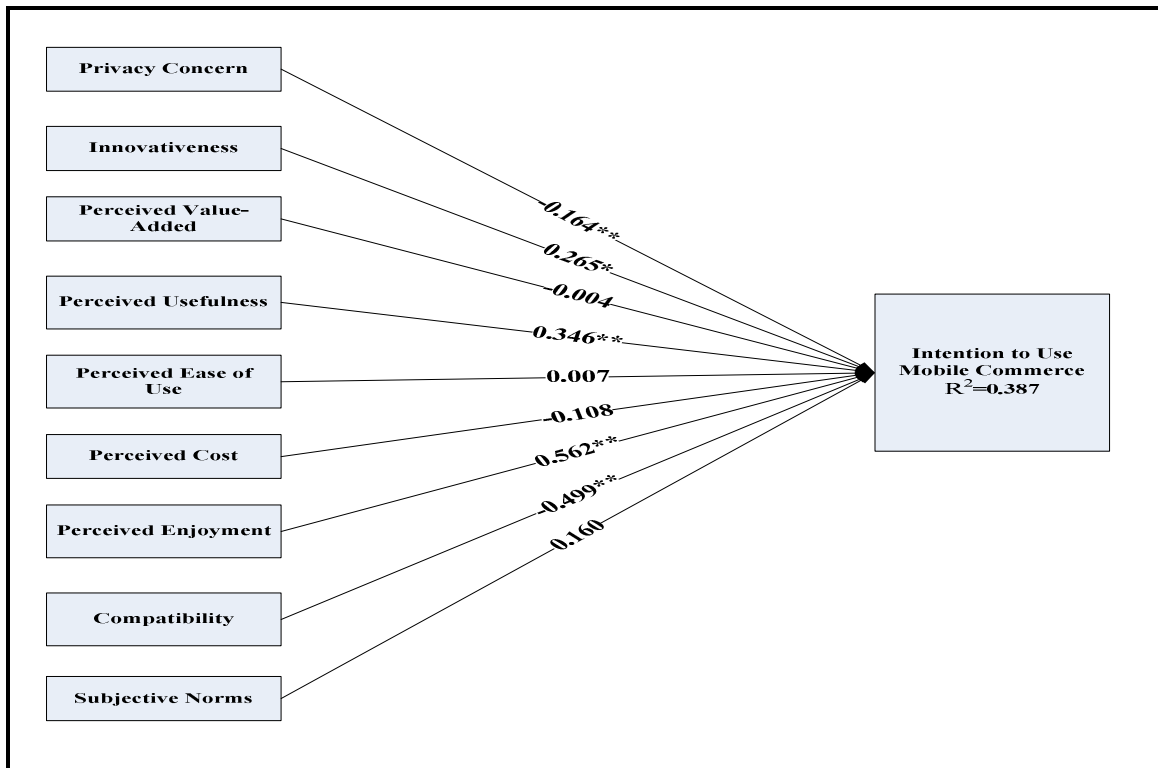


Figure 3: The USA Model

## DISCUSSION

This study investigated consumer adoption of mobile commerce using an extended version of Theory of Reasoned Action and Technology Acceptance model. We also drew from theories in information systems, social psychology, economics, and culture to propose, operationalize, and empirically test a comprehensive model that explains consumers' intention to adopt mobile commerce in two distinct cultural contexts: China and United States.

Our work tries to investigate the differences in factors that influence intentions to adopt m-commerce services in China and USA. Our results would inform practitioners in developing focused different managerial and marketing strategies for consumers based on their intentions and preferences in two distinct markets.

### Differences in Constructs

There are significant differences in consumers' perceptions of cost, enjoyment, and subjective norm between China and USA. The values of perceived enjoyment, and subjective norms of the US sample are higher than those of the Chinese sample. In USA, the playfulness of the mobile commerce services and social influences are given higher values. On the other hand, the Chinese consumer has high concern for the cost. A plausible explanation is the lower income level of the consumers especially the younger generation in China which is less than 100 dollars per month. Currently the price for mobile web access is 200 Chinese RMB (\$27) per month. This expense is not affordable for many people in China.

### Path Analysis

In China, our model was able to explain 52.3% of the variance in consumers' behavioral intention. The technology acceptance model is supported by our study. Both perceived usefulness and perceived ease of use have significant impacts on consumers' intention to use mobile commerce. Additionally, our study added perceived cost and subjective norms as important antecedents of Chinese consumers' intention. These findings suggest that the Chinese people consider the functional characteristics and expenses before deciding to use mobile commerce.

In USA, the model explained 38.7% of the variance and provided different sets of relationships compared to the China sample. Consumer privacy perceptions, innovativeness, perceived usefulness, perceived enjoyment, and compatibility are highlighted as influencing intentions to use. Consumers in USA emphasize the personal and hedonic characteristics of mobile commerce in their intention to use. There was a lack of support for impacts of perceived ease of use, which is comparable with several studies in the past.

### Comparative Analysis

There are significant differences in the factors affecting consumers' adoption of mobile commerce in two distinct cultural contexts. According to Hofstede (1991) and earlier findings, consumers in low uncertainty avoidance cultures like USA would have more willingness to embrace technology innovations, whereas in high uncertainty avoidance culture such as China, consumers would feel threatened by uncertain or ambiguous situations, and are likely to refrain from such technologies. Thus, innovativeness is a very important indicator of consumer intention to use mobile commerce in US.

The Hofstede(1991) study indicated that consumers from an individualistic country will use mobile services to showcase their individuality and opt to use services that are more personalized while consumers from collectivistic states may tend to use services which will enable them to feel better connected to other people. We found this is true with both China and USA. In USA, privacy, compatibility, and perceived enjoyment are the significant indicators people focus on individualistic needs, values, and goals. In China, people's intention to use is influenced by subjective norm which comes from their family and friends.

Some differences found across the U.S. and China can also be attributed to the disparity in economic environments. While price did not affect the American consumers, perceived high cost of mobile commerce did lead to a low level of intention to use for Chinese consumers. High cost is the key obstacle to adopt mobile commerce in China.

### Implications

The contributions of this study for practitioners is to help mobile business vendors identify and target groups of consumers who have a strong intention to adopt new applications and services in m-commerce. The idea of whether m-commerce should be provided to all customers for all products and services is too broad for developing effective marketing strategies. Corporations continue to evaluate how individual products and services should be offered for specific consumer groups based on their individual characteristics (Frolick and Chen, 2004). Our study demonstrates various factors need to be considered to find target mobile consumers in two different cultures.

In addition, this study provides managers of m-commerce services seeking to enter the Chinese and US marketplace specific information about users' intention to use m-commerce services based on individual characteristics. It thus informs managers' decisions on delivering targeted campaigns and specific m-commerce services for the Chinese and US consumers. Conversely, for those with low intentions to use, the implication for the business is to determine if alternative pricing strategies or new functions should be used.

For academics, this study contributes to the literature on m-commerce adoption by identifying characteristics of the m-commerce consumers in China and U.S. and their intentions to adopt m-commerce services. Besides, the comparison of consumers' perceptions and intentions between the Chinese and U.S market would be very useful for researchers to localize global m-commerce strategy recommendations.

This study also provides light on future research directions. One of our research agenda is to expand the current study based on an exhaustive literature review of marketing research and trust issues in mobile commerce adoption, and to conduct a close-up analysis of the factors affecting the customer's low intentions to adopt m-commerce. Another interesting work could be done in other cross-cultural contexts. In addition, the comparison of perceived critical success factors identified by successful m-commerce adopters and less successful adopters would give interesting insights.

### **Limitations and Conclusions**

Our study yielded meaningful results; however, some limitations are noted. The validity of our results strongly depends on the sampling of the surveyed subjects. We used student data to inform our analysis. Our samples are not random, and thus not be completely representative of typical users. However, students are more open to the kind of innovations found in mobile phone services and are the first to adopt such innovations. In addition, the generalizability of the results may be limited due to sample size. The sample size of each country is relatively small, however, partial least squares (PLS) largely overcomes that methodological issue.

This paper identified various factors affecting mobile commerce adoption based on the existing literature of mobile commerce and developed a comprehensive model of mobile commerce adoption. Factors that influence the adoption of mobile commerce are presented and applied into an adoption model in two different cultures. Our findings indicate that there are significant differences among antecedents and their impacts on consumers' intentions to use mobile commerce in different countries. The study also draws a number of practical insights and provides vendors seeking to enter the Chinese and US marketplace with specific information about the m-commerce users' perceptions and intentions.

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