

# **EVALUATING CUSTOMERS' CONTINUANCE INTENTION FOR USING MOBILE PAYMENT: CONSUMPTION VALUE THEORY PERSPECTIVE**

Qian Huang, Mahbubur Rahim and Misita Anwar  
*Monash University. 900 Dandenong Rd, Caulfield East VIC, Australia*

## **ABSTRACT**

Use of mobile payment applications (m-payment) has been growing over the past decade. However, much of the existing studies generally: a) focus on participants chosen from a single cultural background, b) rely on using the traditional attitude-oriented theories (e.g., TRA, TAM), and c) are concerned with use attitudes and/or intention to use. Hence, studies about the effect of national culture (differing among various nationalities) on m-payment are scarce. In this paper, using value orientations theoretical perspective we report on a study that focuses on understanding the key factors that could possibly affect customers' continuance intention for using m-payment from a cross-nationality perspective. A research model is proposed to investigate whether four specific value factors, as conceptualized in the theory of consumption value, affect m-payment continuance intention as well as whether the influence of such factors are perceived differently among two different nationalities (i.e., India, China). Our findings reveal that the m-payment continuance intention is largely indirectly explained by emotional value. In addition, the effects of social value differ between Indian and Chinese students. The research findings offer insights to m-payment providers in terms of the culture-based m-payment application strategy related to designing content and interface, so as to properly guide the momentum.

## **KEYWORDS**

M-payment, Continuance Intention, The Theory of Consumption Value, Cross-Nationality, Students with Indian and Chinese Background, Survey

## **1. INTRODUCTION**

M-payment is now considered as a more competitive payment method in the global society because: a) the high prevalent of mobile devices use provides more opportunities for mobile users to use m-payment, b) m-payment provides customers with increased convenience because they are not required to go to banks and c) customers find it easier to ubiquitously manage their money whenever and wherever they want (Al-Saedi et al., 2020). Despite such benefits, uptake

of m-payment varies widely across countries. While m-payment has attracted popularity in some countries, its adoption rate is relatively lower in other countries (Johnson et al., 2018). For example, 68.67% of the total transactions on TaoBao (the largest online shopping website in China) was completed through m-payment during the “double eleven” online shopping festival (Cao et al., 2018). Whereas, the usage rate of m-payment in the USA is only about 12%. Similar trend of low usage rate is also observed in UK and France (Slade et al., 2015). In Australia, while m-payment method had not been widely accepted in the past, recent Australian reports showed the use of this method is on the rise (Gao and Waechter, 2017).

In response to the wide variation in the acceptance of m-payment across various countries, several scholars have conducted research to explain the uptake of m-payment by individuals. Most studies are concerned with adoption intention of customers, whereas studies on the post-usage intention of m-payment is scarce. Decisions on continuance intention qualitatively differ from those of m-payment adoption since users have had immediate prior experience with m-payment at the post-adoption phase (Chen and Li, 2017). In addition, most of the studies on m-payment have been conducted from one single country. For example, Cao et al. (2018) studied the continuance intention of m-payment from trust perspective and find that trust has a significant influence on post-adoption intention in China. Johnson et al. (2018) report on the influence of perceived complexity and security, relative advantage, visibility on the usage intention of m-payment in USA. In another study, Upadhyay and Jahanyan (2016) report that the quality of mobile payment system and perceptions from customers (e.g. perceived usefulness, perceived ease of use, perceived innovativeness) are related to usage intention of customers in India. However, factors that influences continuance intention for m-payment may vary across cultures (Lin et al., 2019). This calls for further research on comparing factors that effect on continuance intention for m-payment use in terms of different cultures. Furthermore, most studies largely rely on the perspective of customers (e.g. perceived ease of use, perceived security) to explain their m-payment adoption behavior. The financial, social desirability, quality, emotional, and context-specific values related to customers were not addressed. Much research in IS domain shows that perceived customer value is regarded as the important factor in customers’ decision processes in pay-per-use service behavior (Turel et al., 2007). As a result, seeking the underlying values that drives customers to consume technology is essential.

Against this backdrop, we seek to evaluate continuance intention to m-payment applications (apps) by addressing the following research questions: a) how do various key factors affect continuation intention for m-payment apps? and b) does the continuation intention for m-payment differ based on nationality (reflecting cultural backgrounds)? Using a quantitative method, our study seeks to identify and empirically assess a set of factors that influence the continuation intention for using m-payment from a contrastive perspective on the moderating influence of Indian and Chinese customers’ experience on m-payment continuance intention. Based on our research findings, m-payment apps providers can learn how a set of integrated factors jointly influence continuation intention for this service use. Awareness of these factors would help providers customize their m-payment apps according to culture and their behavior, which would increase customer satisfaction, and hence promote the continuation intention of m-payment apps use.

## 2. LITERATURE REVIEW

### 2.1 Continuance Behaviors for m-Payment

M-payment refers to the payment method for goods and services using mobile devices through wireless and other communication technologies (Al-Saedi et al., 2020). Some examples of m-payment apps are: Apple Pay, and mobile banking application. Continuance intention of m-payment is defined as degree to which an individual currently using a m-payment has developed conscious plans to continue using it in the future (Setterstrom et al., 2013). Understanding m-payment continuance intention is important because of two reasons: 1) most of factors that influence continuance intention do not exist in initial intention. Given customers have had immediate prior experience with IT, which exerts an influence on their continuance intention decision (Chen and Li, 2017). 2) m-payment continuance intention of consumers is crucial to the m-payment company's survival since previous papers have shown that the eventual success of a new IS depends heavily on continued use rather than initial adoption (Lim and Ting, 2014). A high-level summary of some recent studies about m-payment continuance intention is shown in Table 1.

Table 1. A high-level summary of some recent studies about m-payment

Source	Country	Theory
Zhao and Bacao (2020)	China	the unified theory of acceptance and use of technology model (UTAUT), Expectation Confirmation model (ECM)
Chopdar and Sivakumar (2019)	India	UTAUT
Shao et al. (2019)	China	Innovation Diffusion Theory (IDT)
Humbani and Wiese (2019)	South Africa	Technology readiness index (TRI), ECM
Lin et al. (2019)	China, Korea	the unified theory of acceptance and UTAUT, the information systems success model (D&M ISS)
Cao et al. (2018)	China	Trust transfer theory
Johnson et al. (2018)	USA	diffusion of innovation theory
Kazan et al. (2018)	UK	No
Ma et al. (2018)	China	TAM
Upadhyay and Jahanyan (2016)	India	theory of reasoned action
Lu et al. (2017)	China, USA	UTAUT
Slade et al. (2015)	UK	UTAUT
Zhao and Kurnia (2014)	China	TAM

Publications on m-payment in top level of IS journals are scarce. A couple of examples are the papers of Mallat (2007) and Kazan et al. (2018). Mallat (2007) investigated factors that influence m-payment adoption using a qualitative study, which has been widely cited (e.g., google scholar citations: 1063) by other scholars. Kazan et al. (2018) used m-payment platforms in UK as examples to discuss disentangling digital platform competition. We find satisfaction as the most prominent factor for the context of customers' post-adoption of m-payment. While utilizing different theories, existing studies often treat satisfaction as either a mediating factor or a driver directly influencing post-adoption intention. For example, Cao et al. (2018) apply satisfaction element from the extended theory of reasoned action to investigate the relationship between trust and continuance intention of m-payment. They report that satisfaction mediate between the trust and post-adoption of m-payment. Since satisfaction has been proven as a significant mediating factor for m-payment continuance intention by many existing papers in terms of different contexts, it is included in our study to allow us to investigate other factors that indirectly influence the continuance intention of using m-payment.

Few extant literatures have considered factors that influence continuance intention in terms of different countries. For example, the study of Lu et al. (2017) investigate the difference of continuance intention toward m-payment between Chinese and American and found culture has a significant influence on m-payment continuance decision process both at the macro (country) and micro (individual) level. The study by Lin et al. (2019) also suggest factors that influences continuance intention for m-payment may be different in terms of different cultures. For example, Korean customers are more sensitive to privacy and service quality whereas Chinese users are more attracted by some functions (e.g. red envelop) provided by m-payment. It is necessary for m-payment providers to study consumer mindset differences in terms of different cultures, and to propose a suitable product designs and marketing strategies in order to ignite adoption rates of m-payment (Hung and Hsieh, 2010).

Although there exist several studies that focus on the m-payment in China and India context. For example, Zhao and Kurnia (2014) conducted a study by assessing the reasons that may influence the individual adoption decision on m-payment in China and they found system quality and service quality plays an important role on it. Ma et al. (2018) conducted their study in China based on TAM model. The perceived risk was divided into perceived financial risk and perceived information risk. The result of this study indicates that perceived information risk, perceived ease of use positively influences the adoption intention of m-payment but perceived usefulness has no influence on the adoption intention of m-payment. Similarly, Thakur (2013) also studying factors influencing customers' adoption intention of using m-payment based on TAM in India context. Unlike the results of Ma et al. (2018), perceived usefulness, perceived ease of use are found that have significant impact on mobile payment services adoption among the consumers in India context. The findings of these two studies indicate that the influence of same factor or theory on customers' behavior to use m-payment may differ for India and China context although these two cultures are often considered to be similar. None of these studies have made the comparison between these cultures. With the mobile penetration is quite high in both China and India, it is fair to say that m-payment has a huge potential in both countries. As a result, it is necessary to understand mindset differences of customers between China and India.

The most used theory in customers' continuance intention of m-payments from the literature is UTAUT proposed by Venkatesh et al. (2003). For example, Lu et al. (2017) focused on perceived effort expectancy, performance expectancy, social influence, grouping variables (age, gender, experience) in UTAUT as the key determinants to investigate continuance intention in China and the USA. The study found the perceived effort expectancy and social influence were

as mediating to impact on continuance intention of customers across two countries by influencing performance expectancy. The performance expectancy is a significant impact on customers' post-adoption intention whereas the grouping variables have weak influences on customers' behaviors. Slade et al. (2015) applied UTAUT to analyze customers' continuance intention of using m-payment in the UK. Their study reveals that performance expectancy and social influence has a significant influence on the continuance intention of using m-payment in the UK. However, UTAUT is developed to investigate the initial adoption decision rather than to explain disconfirmation of customer's beliefs or satisfaction changes. As a result, it is not strong enough to discover continuance decision scenario (Almazroa and Gulliver, 2018).

## 2.2 The Consumption Value Theory

The Consumption Value Theory (CVT) is used to capture the different value-oriented elements that affect the behavior choice of customers. Understanding the issue of how customer perceptions and factors that influence the customers' satisfaction and the adoption of various innovation represent a significant market research task (Ray et al., 2020). CVT was originally developed by Sheth et al. (1991) understand the customers' choices of whether to buy or not buy in the marketing field (Biswas and Roy, 2015). Sweeney and Soutar (2001) modified the original model to evaluate buyers' perception of the value of consumer durable goods. Following its successful implementation, Turel et al. (2007) have employed the modified model in the mobile commerce field. We however use the modified version of model since it has been adapted into technology adoption context by removing or adding some new variables (Spink et al., 2011). According to Sweeney and Soutar (2001), CTV is a model that integrates components of various customers value models based on the assumption that customer choice is a function for multiple consumption values. Value is a subjective concept that contains some intrinsic needs such as knowledge concern, emotional aspects, as well as some implicit factors (e.g. experiential need or prestige associated with the component purchase) (Biswas and Roy, 2015).

Four dimensions are included in the CTV model, which encompass perceived value of a person towards her/his intention to engage in a behavior. Functional value dimension is fundamental value resulting from the fulfillment of products for functional, beneficial purposes required by customers. Emotional value dimension is the value relevant to emotion of customers affected by products or services. Regarding value for money, one of the dimension measures perception of consumers about the product performance with respect to price. Social value dimension is relevant to perceived utility derived from social groups that the consumer is in relation with. All four dimensions exert an effect on outcomes of behaviors (Turel et al., 2007). CVT has been used in the several domains to investigate the choice behavior of customers, including social media brand communities (Kaur et al., 2018), music products (Wu et al., 2017). Although CVT has not been used in m-payment, it has been served as an influential underpinning theory to explain mobile behavior of the customers (Aulia et al., 2016). A high-level summary of some recent studies that used CMV for m-commerce contexts is shown in Table 2.

Table 2. A high-level summary of some recent studies that used CVT for various contexts

Dimensions of CVT	Measurement of each dimension	Domain of application of CVT
Functional value	7 items (Goh et al., 2014, Burucuoglu and Erdogan, 2016, Zolkepli et al., 2020, Hung and Hsieh, 2010) 4 items (Turel et al., 2007), 5 items (Wang et al., 2013)	Mobile banking (Goh et al., 2014, Burucuoglu and Erdogan, 2016), mobile application (Zolkepli et al., 2020, Wang et al., 2013), short messaging service (Turel et al., 2007), m-commerce (Hung and Hsieh, 2010)
Emotional value	5 items (Goh et al., 2014, Burucuoglu and Erdogan, 2016, Turel et al., 2007, Wang et al., 2013, Hung and Hsieh, 2010), 12 items (Zolkepli et al., 2020)	Mobile banking (Goh et al., 2014, Burucuoglu and Erdogan, 2016), mobile application (Zolkepli et al., 2020, Wang et al., 2013), messaging service (Turel et al., 2007), m-commerce (Hung and Hsieh, 2010)
Value for money	4 items (Turel et al., 2007)	messaging service (Turel et al., 2007)
Social value	3 items (Goh et al., 2014), 4 items (Turel et al., 2007, Wang et al., 2013) 5 items (Burucuoglu and Erdogan, 2016), 6 items (Hung and Hsieh, 2010), 7 items (Zolkepli et al., 2020)	Mobile banking (Goh et al., 2014, Burucuoglu and Erdogan, 2016), mobile application (Zolkepli et al., 2020, Wang et al., 2013), messaging service (Turel et al., 2007), m-commerce (Hung and Hsieh, 2010)

For example, the study of Turel et al. (2007) suggested all of consumption values (i.e. functional value, social value, emotional value and value for money) affect users' acceptance of mobile-based SMS. Zolkepli et al. (2020) also deployed CVT to investigate consumption values on the behavior for mobile applications (mobile apps). They found that the rating of mobile apps is highly dependent on the four dimensions and consumers are likely to pay for mobile apps if they have reasonable rating. Existing studies in IS suggest the effect of

dimensions vary in terms of different culture contexts. For example, Hung and Hsieh (2010) found Taiwanese customers regard the functional value highly than Japanese customers whereas Japanese customers put more focus on emotional value than Taiwanese customers in mobile commerce usage context.

### 3. MODEL DEVELOPMENT

For this study, CVT was chosen to explain users' continuance intention with respect to the use of m-payment for two reasons. First, CVT has been found to provide valid explanations for individual's behavior in relation to using different m-commerce applications by the existing literature. This is especially true in the pay-per-use context where value tradeoffs (i.e., price, social, emotional and quality) are essential drivers in the intention decision (Turel et al., 2007). M-payment app(s) is used in such a context. For example, before using a m-payment app, users should make the tradeoff between the cost of data to run the m-payment app(s) and expected benefits from the m-payment app(s). Second, the existing research has indicated the need for new theoretical framework to understand customers' continuance intention in the context of the m-payment (Marinković et al., 2020). The existing literature mainly address the continuance intention from the "function-oriented" perspective (e.g. each of use, performance expectancy) rather than the "value-oriented" perspective (Kaur et al., 2018). CVT is a well-known framework for understanding customers' behavior from "value-oriented" perspective and it provides a balanced approach through deploying both intrinsic (e.g. emotional value) and extrinsic dimensions (e.g. social value) to investigate customers' consumption-related behavior (Aladwani, 2014). As a result, CVT is considered as the theoretical base for our conceptual model (Figure 1).

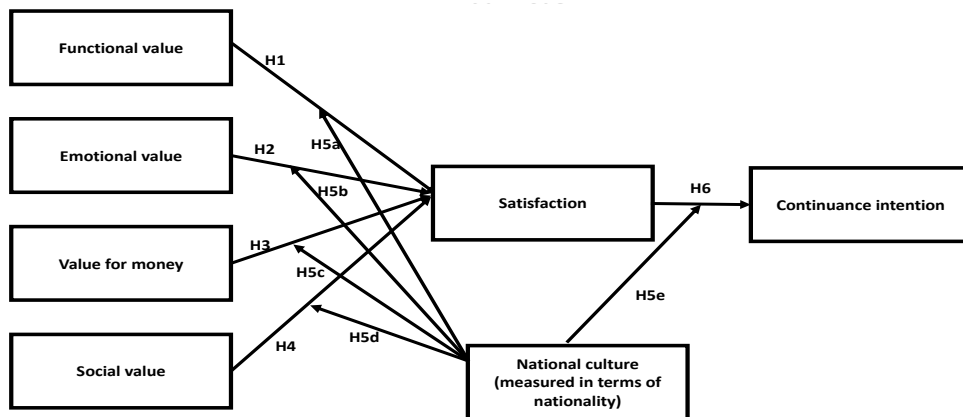


Figure 2. Conceptual research model

As indicated in previously, the customers' continuance intention for m-payment need to be empirically evaluated in terms of the key constructs included in CVM. We have therefore derived eight hypotheses (shown in our research model - Figure 1) which are briefly described below.

**Functional value:** It refers to the perceived utility obtained from the efficient, consistent and effective performance of the services or products (Sheth et al., 1991). Functional value generally is more associated with the functional aspects of the service platforms (e.g. website, application) (Ray et al., 2020). There are studies regarding that the functional value influences mobile services (Turel et al., 2007), use of mobile application (Zolkepli et al., 2020, Spink et al., 2011), information systems (Tzeng, 2011). M-payment involves multiple functions like m-payment, such as making a payment, browsing transaction history, people use it frequently. When customers find the m-payment application allows them to use these functions anytime and anywhere, they will satisfy his functional value by using it. We believe that the perception of customers about functional quality value would positively affect their satisfaction. Hence, the following hypothesis is proposed:

H1: Functional value positively influences customers' satisfaction.

**Emotional value:** It is defined as the level of enjoyment, pleasure or anxiety a customer receives through using products or services (Sheth et al., 1991). It is related to the ability of products or services to mobilize the emotions. Emotional value is considered as an effective factor in building a loyal customer (Turel et al., 2007, Zolkepli et al., 2020, Tzeng, 2011). The more positive emotion derived from a product or service, the more likely that customers' satisfaction will be increased (Goh et al., 2014). When using m-payment, customers are allowed to make payment and anytime and anywhere, which is time-saving and convenient. Customers may receive high level of enjoyment and pleasure after using it. They will feel the emotional value of using m-payment is satisfied and then they will be more likely to be satisfied with m-payment. As a result, we believe that emotional value would positively affect their satisfaction. Hence, the following hypothesis is proposed:

H2: Emotional value positively influences customers' satisfaction.

**Value for money:** Turel et al. (2007) defined value for money as the tradeoff between the quality of products or services (take) versus the cost of products or services (give). This should have a strong influence on the overall perceived value of m-payment, because it represents the main "take" component in the overall assessment. That is, the fee (e.g. fee for Internet connection) is charged and, in return, m-payment users receive emotional, social and function value (Spink et al., 2011, Turel et al., 2007). Customers are going to consider cost, time and effort spent in using m-payment and these economic factors are regarded as the important aspect of customers' usage for information systems. (Deng et al., 2010). For example, most of m-payment applications (e.g. Apply pay, Alipay) only charges for the GPRS network traffic fee. When customers perceive these charges are acceptable and reasonable, they would feel the value for money of using m-payment is satisfied. They are more likely to be satisfied with this service. As a result, we believe that value for money would positively affect their satisfaction. Hence, the following hypothesis is proposed:

H3: Value for money positively influences customers' satisfaction.

**Social value:** It is defined as the value consumers gain from using products or services would increase their social status and approval (Turel et al., 2007). Adopting m-payment has growingly become a business trend as the mobile era evolves. Some potential users express uncertainty about the consequences of using m-payment; hence they may consult opinions or experiences from actual consumers through social networks (Liébana-Cabanillas et al., 2013). Social value is realized through the status enhancement and self-esteem. Sharing the experience of using m-payment and interacting with potential users enable actual customers to acquire more sense of self-identification (Gan and Wang, 2017). High level of social value increases customers' satisfaction toward m-payment and strengthens their continuance intention. The impact of social



EVALUATING CUSTOMERS' CONTINUANCE INTENTION FOR USING MOBILE PAYMENT:  
CONSUMPTION VALUE THEORY PERSPECTIVE

value on users' attitudes (e.g. satisfaction) about IS continuance intention has been confirmed by several studies. For example, the study of Hsiao et al. (2016) suggests satisfaction plays a mediation effect between social value and continuance usage of mobile social applications. Gan and Wang (2017) investigated the influence of social value on satisfaction and continuance intention towards the social commerce and confirmed the significant impact of both. As a result, we believe that social value would positively affect customers' satisfaction. Hence, the following hypothesis is proposed:

H4: Social value positively influences customers' satisfaction.

National culture: There have been multiple definitions of culture exist, but the most popular one is developed by Hofstede (1980). According to Hofstede (1980), culture is defined as the collective programming of the mind which differs the members of one group from another. Within the IS field, researchers have observed and confirmed the adoption intention of using IS are often directly influenced by cultural background. For example, culture was found to be a strong antecedent of using social networks (Pookulangara and Koesler, 2011). Extant literature reveals the relationship between CVT variables to determine the moderating effect of national culture. Through an evaluation of Korea and Japan, Lee et al. (2002) reported values of the mobile Internet users significantly differ between two countries. For example, Korean users regard the emotional value highly than other values whereas functional value is considered as the most important value for Japanese users. Similar study also conducted by Hung and Hsieh (2010) and they found the culture has mediating influence on CVT from Japan and Taiwan context. According to exiting literatures, we can argue that some differences exist in the national role that moderates four dimensions influence on satisfaction. Furthermore, the effect of culture on the impact of satisfaction on adoption intention in IS also has been observed and confirmed by Researchers. For example, Cyr (2008) studied the moderating effect of culture on the impact of satisfaction on the online loyalty in Canada, Germany, and China, and found a strong support from the empirical data. Hence, the following hypotheses are proposed:

H5a: The influence of functional value on satisfaction differs between Chinese and Indian consumers.

H5b: The influence of emotional value on satisfaction differs between Chinese and Indian consumers.

H5c: The influence of value for money on satisfaction differs between Chinese and Indian consumers.

H5d: The influence of social value on satisfaction differs between Chinese and Indian consumers.

H5e: The influence of satisfaction on customers' continuance intention between Chinese and Indian consumers.

Satisfaction: In the IS field, user satisfaction is defined as the entire customers experience cycle from retrieving information through purchasing, paying, receiving and serving (Delone and McLean, 2003). Satisfaction is the main predictors of continuance intention (Yuan et al., 2016). These two core constructs have been repeatedly tested and confirmed in many m-commerce studies, such as MIN (Oghuma et al., 2016), mobile travel booking service (Zhong et al., 2015). The relationship between satisfaction and continuance intention also has been found in m-payment area. For example, Cao et al. (2018) found satisfaction is served as a mediating between the trust and post-adoption of m-payment. Gao et al. (2015) found satisfaction has significant influence on continuance intention of using m-payment. Satisfied customers will have a higher usage level of m-payment than those who are not satisfied, and they are more likely to possess a stronger continuance intention and to recommend m-payment

to their friends and relatives. Therefore, based on a review of the relevant literature, the following hypothesis was developed:

H6: Satisfaction will positively influence customers' continuance intention to use m-payment.

#### **4. METHODOLOGY**

Continuance intention in this study is considered as a post-adoption intention of an individual for protracted use of a mobile payment application. This can be measured at any time once an individual user's initial adoption of that application has already taken place. Our study employs a quantitative research method. An online questionnaire was used as an instrument of data collection. Closed-ended questions, with a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), were included in the questionnaire. The questions involved in the questionnaire were totally from the extant literature (i.e. Gao et al. (2015), Yang et al. (2016), Chong (2013)). A total of 150 online survey were randomly distributed among international students at an Australian university. 76 survey were given to Chinese students and the rest were given to Indian students. 125 completed responses were received. This yields a response rate of 83.3%, which is considered quite satisfactory (Baruch and Holtom, 2008). Thirteen responses indicate that they are not m-payment app(s) users and remaining 112 are m-payment app(s) users. Therefore, thirteen responses were excluded from the analysis. We note that a slight majority of the m- payment app(s) users are female (54.5%), a large percentage (71.4%) of the participants are aged between 24-29 years.

#### **5. DATA ANALYSIS**

Survey findings were analyzed using factor, reliability and regression analysis. An exploratory iterative factor analysis was applied to the survey data collected from m-payment app(s) users (n=112) for the purpose of determining the discriminant validity of the research variables (Murtagh and Heck, 2012). Factor analysis was used to provide a description of variability among observed, correlated variables based on a potentially lower number of unobserved variables called factors (Sheppard, 1996). The reliability of each independent construct was also measured using Cronbach Alpha.

##### **5.1 Reliability and Validity**

An exploratory analysis was performed on sixteen items (e.g. two items for emotional value, 3 items for social value) representing five underlying independent constructs. According to the results, three factors (i.e. emotional value and social value, satisfaction) are empirically supported whereas five items (3 items for functional value, 2 items for value for money) representing integrated value loaded on a single factor. The results are shown in Table 3. It was noted that all the Cronbach Alpha values of these constructs are above 0.7, which is satisfactory (Murtagh and Heck, 2012). Drawing on the results of factor analysis and reliability analysis, most of factors in the research model were retained.

EVALUATING CUSTOMERS' CONTINUANCE INTENTION FOR USING MOBILE PAYMENT:  
CONSUMPTION VALUE THEORY PERSPECTIVE

Table 3. The reliability of each of key variables

Key variable	No of items	Reliability (Cronbach Alpha)
Emotional value	<b>2 items</b>	0.71
Integrated value	<b>5 items</b>	0.826
Social value	<b>3 items</b>	0.739
Satisfaction	<b>4 items</b>	0.764
Continuance intention	<b>2 items</b>	0.859

## 5.2 Results

A regression analysis was applied to empirically evaluate relationships involved in the research model (Figure 1). The results indicate that emotional value has a large (88.6%) and significant ( $p < .05$ ) influence on satisfaction for participants, whereas satisfaction has a considerable variance effect on continuance intention (42.3%) and statistically significant ( $p < .05$ ) effect on continuance intention. However, the analysis results find limited explanatory power of integrated value and social value on the variation in satisfaction, and it is insignificant ( $p > .05$ ). Three possible reasons potentially explain this result. Firstly, the sample size was not very large (e.g. not over 500). Secondly, there may be factors other than integrated value and social value that may also affect satisfaction, which were not included in the model. This is because our study is concerned with CVT to investigate continuation to use m-payment, rather than other factors that are excluded from CVT. Thirdly, our study did not include participants from other cultural backgrounds. There is a possibility that this study could have provided dissimilar findings if it had also surveyed students from other cultural backgrounds (like Arab, English). Drawing on the survey results discussed above, the conceptual research model (Figure 1) has been further refined and are shown in Figure 2a.

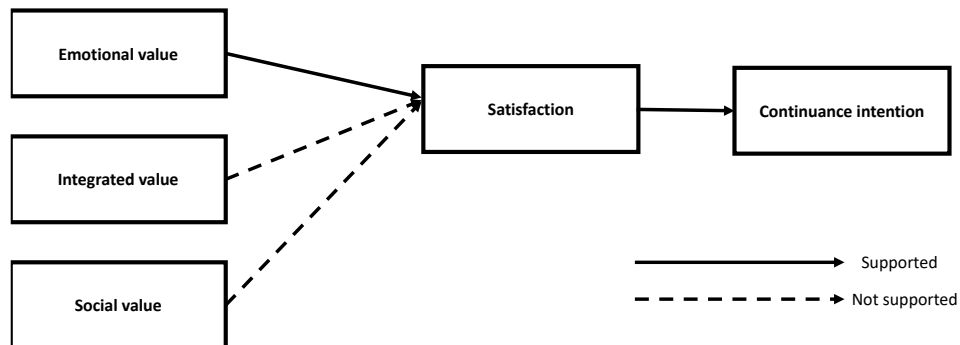


Figure 2a. The revised research model

In order to test whether national culture has a moderating impact, another two rounds of regression analysis based on nationality were performed. First round involved participation of participants from China (61) and second regression analysis involved participation of the remaining 51 participants from India. The results suggest that: a) For participants from India, emotional value and social value has statistically significant influence ( $p < .05$ ) on satisfaction and satisfaction also has statistically significant influence ( $p = .00$ ) on continuance intention. For them, integrated value has no effect on satisfaction ( $p > .05$ ). b) For participants from China,

however the effect of emotional value has a significant impact on satisfaction ( $p = .00$ ) and the satisfaction also has statistically influence ( $p = .00$ ) on continuance intention. But integrated value and social value has no impact on satisfaction ( $p > .05$ ). Drawing on the survey results discussed above, the revised research model in terms of Chinese and Indian context have been further refined and are shown in Figure 2b.

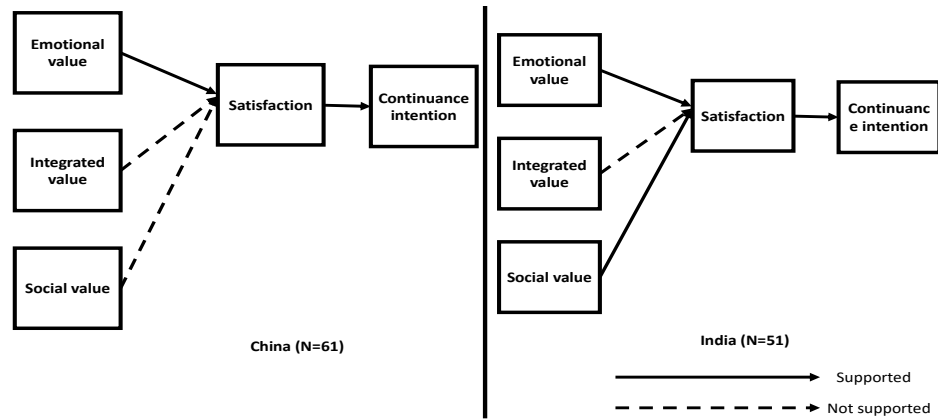


Figure 2b. The revised research model in terms of Chinese and Indian contexts

The final research model is shown in Figure 2c. In this final model, the impacts of integrated value and social value on satisfaction are not considered as significant and hence it is shown as dotted line. However, further studies involving larger sample size will be done in the next stage to investigate this relationship.

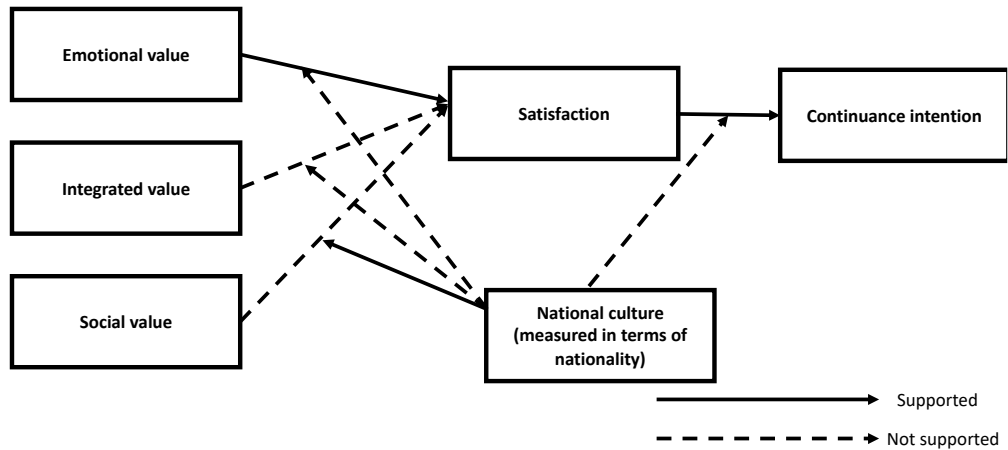


Figure 2c. The final research model

## 6. DISCUSSION

Drawing on the analysis results, we provide insights into three main findings. First, out of ten proposed hypotheses (H1 to H4, H5a to H5e, and H6), five (H2, H5d and H6) were empirically supported by our survey findings. The implication is that CVT, in its current format, is partially able to explain customers' continuance intention. We found emotional value does play an important role in satisfaction for m-payment. The implication is that Chinese and Indian customers would experience more satisfaction when they receive high level of enjoyment, pleasure through using this service. This finding is consistent with Hsiao et al. (2016) and Deng et al. (2010) who confirmed emotional value contributes to generating customer satisfaction with using m-commerce (e.g. mobile social applications). However, this finding is different compared to those of Turel et al. (2007) since they have not examined how each value dimension relates to students' intentions and they do not focus on Chinese or Indian context. In contrast, two particular value perceptions (i.e., integrated value and social value) with respect to m-payment continuance intention were not significant. This is inconsistent with Zolkepli et al. (2020) who found functional value, value for money as well as social value have a positive influence on mobile app's usage. The possible reason is that functional value can be achieved by using other alternative ways. In addition, the price of using m-payment is very low, which only costs network traffic. Many customers perceive this price as acceptable. In this case, integrated value (i.e. functional value and value for money) cannot significantly predict customer satisfaction. On the other hand, using m-payment cannot fulfil customers' social needs, thus the perception of social value has no significant influence on satisfaction.

Second, this study confirms that satisfaction also appeared to be a key and significant factor in explaining the continuance intention of using m-payment. This observation is consistent with views expressed in literature, which find satisfaction determines continuance intention of using m-payment (Cao et al., 2018, Chen and Li, 2017, Gao et al., 2015). On the matter of culture's moderating effect on satisfaction's influence on continuance intention, it is observed that satisfaction seems to be important in its effect to satisfactions' influence to continuance intention in both cultures. This implies that Chinese and Indian customers are willing to continue using m-payment if they are satisfied with the performance (e.g. effective, efficiency) of m-payment or they would consider it is worthy to deploy m-payment after the trade-off estimation between the price made by some risks (e.g. privacy risk) and continuing with deploying m-payment. If a m-payment provider can keep satisfying the needs of them better than its competitors, it is easier to maintain their customers.

Third, we can conclude that value structures, as derived from CVT, are somewhat different between Chinese and Indian participants. Results indicate that social value has an influence on satisfaction for m-payment for Indians but no influence for Chinese. This implies that Indian customers' satisfaction would increase when their social value is realized by using m-payment. The result makes sense that India customers are likely to gain approval from others to experience a sense of connection and community, in particular, in m-payment adoption. This result is consistent with Thakur (2013) who suggest the there is a significant relation between social value and m-payment adoption in India.

## 7. CONCLUSION

Retaining users and facilitating their continuing use are crucial for m-payment service providers. Drawing on the theoretical justification, this research identified factors affecting continuance intention of m-payment use from cross-nationality perspective. A conceptual research model was developed based on CVT. A survey was then conducted and was statistically analyzed for model evaluation. We were able to obtain useful findings to further refine the model. Results confirm that continuation intention is largely explained by satisfaction and indirectly explained by emotional value. In contrast, social value and integrated value has no significant impact on satisfaction. In addition, cultural background (as represented by nationality) has a strong moderating effect on social value and satisfaction, but does not have significant influence on emotional and integrated value's effect on satisfaction. Due to the page limitation, the differences between these two cultures are not discussed in details. This study has several contributions. From a theoretical perspective, this study deploys CVT to address the continuance intention for the m-payment context using cross-nationality perspective. This is the first attempt not only to distinguish m-payment continuance intention across-culture, but also to explain these differences from cross-cultural perspectives with the CVT. For practical contribution, given the value structures are different between cultures, m-payment providers are required to consider some factors for specific country e.g., social value is more important for India customers. While this study considers only the background context of users, we acknowledge that there bound to be interactions with the m-payment context itself and this may have bearing on identified factors. This particular aspect is thus recommended for future studies.

## REFERENCES

- Al-Saedi, K., Al-Emran, M., Ramayah, T. & Abusham, E. 2020. Developing a general extended UTAUT model for M-payment adoption. *Technology in Society*, 62, 101293.
- Aladwani, A. M. 2014. Gravitating towards Facebook (GoToFB): What it is? and How can it be measured? *Computers in Human Behavior*, 33, 270-278.
- Almazroa, M. & Gulliver, S. Understanding the usage of mobile payment systems-The impact of personality on the continuance usage. 2018 4th International Conference on Information Management (ICIM), 2018. IEEE, 188-194.
- Aulia, S. A., Sukati, I. & Sulaiman, Z. 2016. A review: Customer perceived value and its Dimension. *Asian Journal of Social Sciences and Management Studies*, 3, 150-162.
- Baruch, Y. & Holtom, B. C. 2008. Survey response rate levels and trends in organizational research. *Human relations*, 61, 1139-1160.
- Biswas, A. & Roy, M. 2015. Leveraging factors for sustained green consumption behavior based on consumption value perceptions: testing the structural model. *Journal of Cleaner Production*, 95, 332-340.
- Burucuoglu, M. & Erdogan, E. 2016. An empirical examination of the relation between consumption values, mobil trust and mobile banking adoption. *International Business Research*, 9, 131-142.
- Cao, X., Yu, L., Liu, Z., Gong, M. & Adeel, L. 2018. Understanding mobile payment users' continuance intention: a trust transfer perspective. *Internet Research*.
- Chaurasia, S. S., Verma, S. & Singh, V. 2019. Exploring the intention to use M-payment in India. *Transforming Government: People, Process and Policy*.

EVALUATING CUSTOMERS' CONTINUANCE INTENTION FOR USING MOBILE PAYMENT:  
CONSUMPTION VALUE THEORY PERSPECTIVE

- Chen, X. & Li, S. 2017. Understanding continuance intention of mobile payment services: an empirical study. *Journal of Computer Information Systems*, 57, 287-298.
- Chong, A. Y.-L. 2013. Understanding mobile commerce continuance intentions: an empirical analysis of Chinese consumers. *Journal of Computer Information Systems*, 53, 22-30.
- Chopdar, P. K. & Sivakumar, V. 2019. Understanding continuance usage of mobile shopping applications in India: the role of espoused cultural values and perceived risk. *Behaviour & Information Technology*, 38, 42-64.
- Cyr, D. 2008. Modeling web site design across cultures: relationships to trust, satisfaction, and e-loyalty. *Journal of management information systems*, 24, 47-72.
- Delone, W. H. & Mclean, E. R. 2003. The DeLone and McLean model of information systems success: A ten-year update. *Journal of management information systems*, 19, 9-30.
- Deng, Z., Lu, Y., Wei, K. K. & Zhang, J. 2010. Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China. *International journal of information management*, 30, 289-300.
- Gan, C. & Wang, W. 2017. The influence of perceived value on purchase intention in social commerce context. *Internet Research*.
- Gao, L. & Waechter, K. A. 2017. Examining the role of initial trust in user adoption of mobile payment services: an empirical investigation. *Information Systems Frontiers*, 19, 525-548.
- Gao, L., Waechter, K. A. & Bai, X. 2015. Understanding consumers' continuance intention towards mobile purchase: A theoretical framework and empirical study—A case of China. *Computers in Human Behavior*, 53, 249-262.
- Goh, T. T., Suki, N. M. & Fam, K. 2014. Exploring a consumption value model for Islamic mobile banking adoption. *Journal of Islamic Marketing*.
- Hofstede, G. 1980. Motivation, leadership, and organization: do American theories apply abroad? *Organizational dynamics*, 9, 42-63.
- Hsiao, C.-H., Chang, J.-J. & Tang, K.-Y. 2016. Exploring the influential factors in continuance usage of mobile social Apps: Satisfaction, habit, and customer value perspectives. *Telematics and Informatics*, 33, 342-355.
- Humbani, M. & Wiese, M. 2019. An integrated framework for the adoption and continuance intention to use mobile payment apps. *International Journal of Bank Marketing*.
- Hung, C.-L. & Hsieh, C.-Y. 2010. Searching the fit pattern between cultural dimensions and consumption values of mobile commerce in Taiwan. *Asia Pacific Management Review*, 15, 147-165.
- Johnson, V. L., Kiser, A., Washington, R. & Torres, R. 2018. Limitations to the rapid adoption of M-payment services: Understanding the impact of privacy risk on M-Payment services. *Computers in Human Behavior*, 79, 111-122.
- Kaur, P., Dhir, A., Rajala, R. & Dwivedi, Y. 2018. Why people use online social media brand communities: A consumption value theory perspective. *Online Information Review*.
- Kazan, E., Tan, C.-W., Lim, E. T., Sørensen, C. & Damsgaard, J. 2018. Disentangling digital platform competition: The case of UK mobile payment platforms. *Journal of Management Information Systems*, 35, 180-219.
- Lee, Y., Kim, J., Lee, I. & Kim, H. 2002. A cross-cultural study on the value structure of mobile internet usage: Comparison between Korea and Japan. *J. Electron. Commerce Res.*, 3, 227-239.
- Liébana-Cabanillas, F., Muñoz-Leiva, F. & Sánchez-Fernández, J. 2013. The impact of risk on the technological acceptance of mobile payment services. *Global Business Perspectives*, 1, 309-328.
- Lim, W. M. & Ting, D. H. 2014. Consumer acceptance and continuance of online group buying. *Journal of Computer Information Systems*, 54, 87-96.

- Lin, X., Wu, R., Lim, Y.-T., Han, J. & Chen, S.-C. 2019. Understanding the Sustainable Usage Intention of Mobile Payment Technology in Korea: Cross-Countries Comparison of Chinese and Korean Users. *Sustainability*, 11, 5532.
- Lu, J., Yu, C.-S., Liu, C. & Wei, J. 2017. Comparison of mobile shopping continuance intention between China and USA from an espoused cultural perspective. *Computers in Human Behavior*, 75, 130-146.
- Ma, L., Su, X., Yu, Y., Wang, C., Lin, K. & Lin, M. What drives the use of M-Payment? an empirical study about alipay and WeChat payment. 2018 15th International Conference on Service Systems and Service Management (ICSSSM), 2018. IEEE, 1-6.
- Mallat, N. 2007. Exploring consumer adoption of mobile payments—A qualitative study. *The Journal of Strategic Information Systems*, 16, 413-432.
- Marinković, V., Đorđević, A. & Kalinić, Z. 2020. The moderating effects of gender on customer satisfaction and continuance intention in mobile commerce: a UTAUT-based perspective. *Technology Analysis & Strategic Management*, 32, 306-318.
- Murtagh, F. & Heck, A. 2012. *Multivariate data analysis*, Springer Science & Business Media.
- Oghuma, A. P., Libaque-Saenz, C. F., Wong, S. F. & Chang, Y. 2016. An expectation-confirmation model of continuance intention to use mobile instant messaging. *Telematics and Informatics*, 33, 34-47.
- Pookulangara, S. & Koesler, K. 2011. Cultural influence on consumers' usage of social networks and its impact on online purchase intentions. *Journal of Retailing and Consumer Services*, 18, 348-354.
- Ray, A., Bala, P. K. & Dwivedi, Y. K. 2020. Exploring values affecting e-Learning adoption from the user-generated-content: A consumption-value-theory perspective. *Journal of Strategic Marketing*, 1-23.
- Setterstrom, A. J., Pearson, J. M. & Orwig, R. A. 2013. Web-enabled wireless technology: an exploratory study of adoption and continued use intentions. *Behaviour & Information Technology*, 32, 1139-1154.
- Shao, Z., Zhang, L., Li, X. & Guo, Y. 2019. Antecedents of trust and continuance intention in mobile payment platforms: The moderating effect of gender. *Electronic Commerce Research and Applications*, 33, 100823.
- Sheppard, A. G. 1996. The sequence of factor analysis and cluster analysis: Differences in segmentation and dimensionality through the use of raw and factor scores. *Tourism analysis*, 1, 49-57.
- Sheth, J. N., Newman, B. I. & Gross, B. L. 1991. *Consumption values and market choices: Theory and applications*, South-Western Pub. Cincinnati, OH.
- Slade, E., Williams, M., Dwivedi, Y. & Piercy, N. 2015. Exploring consumer adoption of proximity mobile payments. *Journal of Strategic Marketing*, 23, 209-223.
- Spink, P., Rahim, M. M. & Singh, U. B. 2011. User intentions of downloading games on mobile phones: an empirical evaluation using consumption value model.
- Sweeney, J. C. & Soutar, G. N. 2001. Consumer perceived value: The development of a multiple item scale. *Journal of retailing*, 77, 203-220.
- Thakur, R. 2013. Customer adoption of mobile payment services by professionals across two cities in India: An empirical study using modified technology acceptance model. *Business Perspectives and Research*, 1, 17-30.
- Turel, O., Serenko, A. & Bontis, N. 2007. User acceptance of wireless short messaging services: Deconstructing perceived value. *Information & Management*, 44, 63-73.
- Tzeng, J.-Y. 2011. Perceived values and prospective users' acceptance of prospective technology: The case of a career eportfolio system. *Computers & Education*, 56, 157-165.
- Upadhyay, P. & Jahanyan, S. 2016. Analyzing user perspective on the factors affecting use intention of mobile based transfer payment. *Internet Research*.
- Venkatesh, V., Morris, M. G., Davis, G. B. & Davis, F. D. 2003. User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.



EVALUATING CUSTOMERS' CONTINUANCE INTENTION FOR USING MOBILE PAYMENT:  
CONSUMPTION VALUE THEORY PERSPECTIVE

- Wang, H.-Y., Liao, C. & Yang, L.-H. 2013. What affects mobile application use? The roles of consumption values. *International Journal of Marketing Studies*, 5, 11.
- Wu, C., Tao, Y.-H. & Lin, Y.-M. 2017. Repurchase decision for music products in Taiwan: physical versus online media. *Digital Policy, Regulation and Governance*.
- Yang, X., Li, Y. & Liao, Q. 2016. Exploring continued use of mobile shopping channel in China: the effects of active coping and its antecedents. *Electronic Commerce Research*, 16, 245-267.
- Yuan, S., Liu, Y., Yao, R. & Liu, J. 2016. An investigation of users' continuance intention towards mobile banking in China. *Information Development*, 32, 20-34.
- Zhao, Y. & Bacao, F. A comprehensive model integrating UTAUT and ECM with espoused cultural values for investigating users' continuance intention of using mobile payment. Proceedings of the 2020 3rd International Conference on Big Data Technologies, 2020. 155-161.
- Zhao, Y. & Kurnia, S. Exploring Mobile Payment Adoption in China. PACIS, 2014. 232.
- Zhong, Z., Luo, J. & Zhang, M. 2015. Understanding antecedents of continuance intention in mobile travel booking service. *International Journal of Business and Management*, 10, 156.
- Zolkepli, I. A., Mukhiar, S. N. S. & Tan, C. 2020. Mobile consumer behaviour on apps usage: The effects of perceived values, rating, and cost. *Journal of Marketing Communications*, 1-23.