



Intention to reuse M-Payment services: Lessons from the pandemic times

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Abstract

Mobile Payment (M-payment) is a relatively new type of service in developing nations, but it presents a vital role in the growth of economics in general. Therefore, evaluating the adoption level of mobile payment in the developing economy like Vietnam remains a meaningful topic. This study contributes a new explanation of the intention to reuse (INR) of individual consumers for M-payment services. Data has been analyzed using SmartPLS 3.3 that showed all seven hypotheses were to be supported. The finding of the study explains up to 56 percent INR of M-payment service. Moreover, the output contributes an outline strengthening of the reasonable combinations of Technology Readiness (TR), Customer Participation (CUP), Customer Empowerment (EMP), Customer Satisfaction (SAS), and Customer Trust (TRU) to Intention to Reuse (INR). Finally, the study proposes some crisis management insights and lessons for the banking sector during and after the COVID-19 pandemic.

JEL Code: G41, O16, O32

Keywords: Technology readiness; Customer participation; Customer empowerment; Intention to reuse

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Introduction

Consumers' payment behavior is shifting as a result of the COVID-19 explosion, giving from the study of ResearchAndMarkets.com. Nearly 60% of global providers were applying for digital payments compare to before the pandemic, and many of them plan to remain to do so (Researchandmarkets.com, 2020). M-payment is the top digital payment solution benefitting from this innovation, as consumers use less cash and spend more money on purchases online. In Vietnam, non-cash payment solution like QR codes, internet and mobile banking, e-wallets, and mobile payments are becoming more common. Due to Vietnam's recent rapid and strong economic growth, demand for services is increasing significantly, especially in the finance sector. However, notwithstanding these high numbers, most people are timid about downloading mobile payment apps, with the average number of downloads at a deficient level per month (Kang, Mun, & Johnson, 2015). Additional study has shown that 81 % of users do not use the mobile apps they have downloaded after a few months because they bother about security and privacy (Balapour, Nikkiah, & Sabherwal, 2020). Among there are many reasons why users were hesitant to install or reuse mobile apps; users care about privacy and security risks that were found to be the most noticeable and further merit study (Mombeuil, 2020). With the speedily increasing worldwide economy and pandemic, smartphones are becoming an essential commodity for a citizen. Likely, the internet has also become an essential part of life for many people. This trend has increased smartphone penetration and internet users worldwide, driving the growth of the M-payment market. In the 21st century, M-payment is considered as the vital advances have been in the area of digital banking. Mobile banking defines as "the use of mobile terminals such as smartphones and tablets to access banking networks via the internet connection" Mobile banking, if adopted, could have a notable impact in developing, Asian countries where abundances of users cannot access to traditional banking services or the cost of such services are restrictive since the issue of distance and costs (Gutierrez & Singh, 2013). Despite exceptional advantages, the usage penetration of m-banking services by traditional banking establishments is still limited in many nations (Baptista & Oliveira, 2016). Many scholars have explored several factors to explain the reasons why M-payment services are too slow in development all over the world, such as lack of trust, challenging to learn how to use, security, risk, etc in m-banking providers, repugnance to or misperception with modernizations and specific characteristics relating to the smart-devices. The search for explanations and solutions for low rates of innovation adoption remains available for extensive study (Agenyi, 2013). That is remarkably true in developing, as Vietnam as almost all theories and models focusing on technology adoption and acceptance; however, lack of research about reuse or loyalty (Hassan & Wood, 2020). This research has three main objectives. Firstly, this research was designed to fill these gaps by investigating the relationships among six constructs namely: Technology Readiness (TR), Customer Participation (CUP), Customer Empowerment (EMP), Customer Satisfaction (SAS), Customer

Trust (TRU), and Intention to Reuse (INR) in context of M-payment services. Secondly, this study attempted to provide insights into the relationships between TR and CUP. Lastly, it examines the influence of customer perception on three determinate factors (CUP, SAS, and TRU) that affected to INR M-payment services. From the theoretical aspect, this research can fill gaps in the literature regarding behavioral intent to reuse M-payment, the new roles of the TR, and CUP when studying consumer behavior intercommunications in the field of M-payment. This information will show academic and practical implications in the relatively new field of M-payment. Moreover, this research was conducted in Vietnam, a developing country with a young and active population with limited research about this topic.

The rest of our research is organized as follows. Part two reviews the related pieces of literature that describe the theoretical background and suggests the hypotheses; part three explains the research method; part four analyzes the data and summarizes the outcomes of research; the final part conducts the related discussion, limitations, and future research extensions.

Literature review and hypotheses

Technology Readiness

Technology is available everywhere, and mobile phones have become an essential part of everyday life. Customers eliminate new technology if they are not pleased with and not willing to accept the technology. Therefore, as new technologies want to attract users, it is vital to explore customers' readiness to use them. Parasuraman (2000) originally intellectualized TR as personalities' general thoughts about state-of-the-art technology and service; TR can be described as "people's tendency to adopt and use new technologies for achieving purposes in their home life and workspace" (Parasuraman, 2000). TR has been received by marketing and technology adoption researchers and has been used in various contexts to assess multiple dimensions of the relationship between TR and approval of different technologies (Parasuraman & Colby, 2015). The TR construct includes four subsets that predict people's technology-related behavior; firstly, optimism – "an optimistic trust of technology and credence that it offers users enlarged control, elasticity, and proficiency in their lives"; secondly, innovativeness – "a tendency to be a technological pioneer and thought leader". On the other hand, discomfort and insecurity that obstruct acceptance of new technology/services; thirdly, discomfort – "a supposed under of control over technology and feeling of a feeling of being tired physically or mentally by it"; fourthly, insecurity – "distrust of technology, stemming from skepticism about its ability to work appropriately and concerns about its possibly harmful results" (Parasuraman, 2000). Accordingly, Lin et al. (2007) extend the original TAM by intensifying it with the TR individual-specific constructs into the new model, namely Technology Readiness and Acceptance

Model (TRAM) (Lin, Shih, & Sher, 2007). TRAM attempts to explain how people adopt new technologies (Simiyu, 2019). Some researchers have demonstrated the role of TR that increases the acceptance level of individuals use up-to-date technology or services, including Internet payment, mobile application, chatbot, self-services, teleworking, billing payment, and cloud computing services (Blut & Wang, 2020; Van Doorn et al., 2017). Researchers (Walczuch, Lemmink, & Streukens, 2007), (Godoe & Johansen, 2012) and (Parasuraman & Colby, 2015) have used the TR to investigate the effect of TR on technology acceptance in numerous contexts and determined that TR has influenced (direct or indirect) on choosing and using modern technology (Lai, 2017). The development of M-payment is one of the most applied interest since M-payment expresses significant commercial and other e-services, so a knowledge of how the use of M-payment develop is crucial (Heinonen & Pura, 2006). In the M-payment context, research focusing on the relationship between TR and CUP is still underdeveloped. Drawing on these above studies, we offer a below hypothesis:

H1: TR has a positive impact on CUP

The role of Customer Participation

In traditional service and e-service, there are many similar constructs, such as co-production, co-creation, and customer engagement. CUP is distinct from co-production as well as co-creation in that "CUP is a more covering terminology than co-production" (Dong & Sivakumar, 2017). CUP is together with the domain of co-production but not vice versa. That is, co-production is a subset of CUP in those actions that can be considered as co-production are CUP, but actions that involve CUP do not need a co-production. For instance, self-service technologies (e.g., airdrome self-service and ATMs, respectively) are recognized as CUP but not co-production (Dong & Sivakumar, 2017). That is, the CUP can appear whenever a customer is solo or associating with the service provider. CUP is gaining control of the proactive role of customers as partly employees (Mills & Morris, 1986), who keep the role of co-creators of value (Ranjan & Read, 2016; Vargo & Lusch, 2004). The locus of core abilities conversions from business to improved networks that embrace buyers (Prahalad & Ramaswamy, 2000). This investigation suggests that the CUP concept can partly abode the interaction between buyers and employees and how the modified role of buyers can be leveraged as the "next frontier in competitive advantage effectiveness" (Bendapudi & Leone, 2003). CUP implies a transformation in the power balance between employees and buyers as shoppers take increasing control in the seller-buyer relationship by collecting the information and feedback. Although, there are many studies on how customers need to be monitoring and controlling as human resources by linking them in the process of creation and distribution of services in businesses (Bowen, 1986) as a means of developing products and improving service operations (Nicod, Llosa, &

Bowen, 2020). Based on these findings, this study postulates that when the CUP is confirmed, then the customer's perception is increased for the INR E-payment services. Hence, we suggest a hypothesis as follows:

H2: CUP has a positive impact on EMP

H3: CUP has a positive impact on SAS

H4: CUP has a positive impact on TRU

Customer Empowerment

The EMP is varying from community psychology literature, and it is based on the argument that participation and empowerment are intrinsically correlated (Speer, Peterson, Armstead, & Allen, 2013). In essence, empowerment can be known as a "process by which individuals increase power or control over their own lives and ... involvement in the life of their community" (Zimmerman & Rappaport, 1988). In business, EMP has been well-defined as "the variety to which a business gives its customers avenues to (1) link with the business and actively shape the nature of dealings and (2) join and collaborate with other customs by distribution information; commendation; evaluation; instruction; and opinions about its products, services, and procedures" (Ramani & Kumar, 2008). Accordingly, we describe EMP as the grade to which customers distinguish that their involvement has praiseworthy and is impactful to businesses. Therefore, EMP displays customers' perceptions of how the CUP is honored and beneficial to the organization. According to Gazzola et al. (2017), EMP is relevant to customer liability to drive productivity, competition, and innovation depended on the level of education, knowledge about information technology, and ability to use the information and making decisions (Gazzola, Colombo, Pezzetti, & Nicolescu, 2017). After that, EMP can be estimated by the level of information access and the ability to use it to make appropriate decisions as a customer of the organization's products or services. In this research, the following hypothesis is proposed:

H5: EMP has a positive impact on INR

Customer Satisfaction

In general, SAS of particular services is "an evaluation of customers between the performance of provided services and the expected performance evaluation of the services" (Nimako, 2012). When customers are provided with specific services that satisfy their predictable calculations, they will have definite convictions and feel positive emotions. Consequently, the impact of customer satisfaction on customer

behaviour, such as an intention to repurchase, services revisit, but also the influence of customer trust (Belanche, Casaló, & Guinalú, 2012). SAS has been defined and explained in numerous ways and environments in new marketing areas, considering various evaluation methodologies (Gruca & Rego, 2005). Thus, customer behaviour in service context studies has considered SAS with particular services as one of the core determinants of users' INR the services. In the academic perspectives about customer service, SAS is one of the significant frequently employed concepts for commercial accomplishment (Park, 2019). Whenever retail customers use online services, they view purchase value as a significant attribute in ranking satisfaction, and they are more satisfaction-sensitive when making repurchase decisions than when they purchase on the traditional market (Singh, Sinha, & Liébana-Cabanillas, 2020). Thus, the current study offers the following hypothesis on the relationship between SAS and the INR:

H6: SAS has a positive impact on INR

Customer Trust

TRU has been considered as "confidence that [one] will find what is desired [from others] rather than what is feared" (McKnight & Chervany, 1996). TRU is often investigated in terms of various levels: the individual, expectation level, and institutional level (Beldad, De Jong, & Steehouder, 2010). Trust has become known as an essential factor in online sales and a useful forecast of purchase intention in e-commerce (Beldad et al., 2010). This evolution of trust is studied in terms of the relationship's individuals have with one another. As an institution, trust is related to "a property of collective units" (Bradach & Eccles, 1989). Several factors affect consumer trust: the business, seller, goods, service, marketing, supply chain (Komiak & Benbasat, 2004). Trust affects consumer's judgments, attitudes, and behaviour approaching retailers. It also functions to promote consumer's confidence in their decision-making (D. J. Kim, Ferrin, & Rao, 2008). TRU is a primary predictor of customer's shopping and intention to reuse (T. T. Kim, Kim, & Kim, 2009) as well as corporate reputation (Keh & Xie, 2009), customer loyalty (Park, Kim, & Kwon, 2017) and purchase intention (Oghazi, Karlsson, Hellström, & Hjort, 2018). Therefore, construction purchaser trust is critical for service providers because trust points to cooperative consumer consequences (Punyatoya, 2019). Thus, it is hypothesized that:

H7: TRU has a positive impact on INR

Intention to Reuse

The behavioral intention of a customer to continue to use a product or service from a supplier that they have previously used is referred to as intention to reuse. In the customer behaviour literature, e-service accomplishment is to guarantee that online customers keep using an e-service provider, an application or e-commerce website, buying, payment, and without changing to another e-service provider, which is also termed ‘e-loyalty’ (Park et al., 2017). Behaviour intention serves as a realistic proxy for real behaviour in marketing research (Leon, 2018); hence, the terms ‘intention to continuous use’, ‘intention to reuse’ and ‘repurchase’ all have implications similar to ‘e-loyalty’ (Chen, Yen, Pornpriphet, & Widjaja, 2015). This study takes ‘INR’ as the vital consequence variable, signifying online banking, and repurchase intentions use M-payment services (Khan & Fasih, 2014). In particular, the INR denotes the behaviour intention of online customers to use M-payment services in Vietnam (Sullivan & Kim, 2018). The above literature reviews could be summarized into a conceptual framework as per picture and into the research hypothesis as follows:

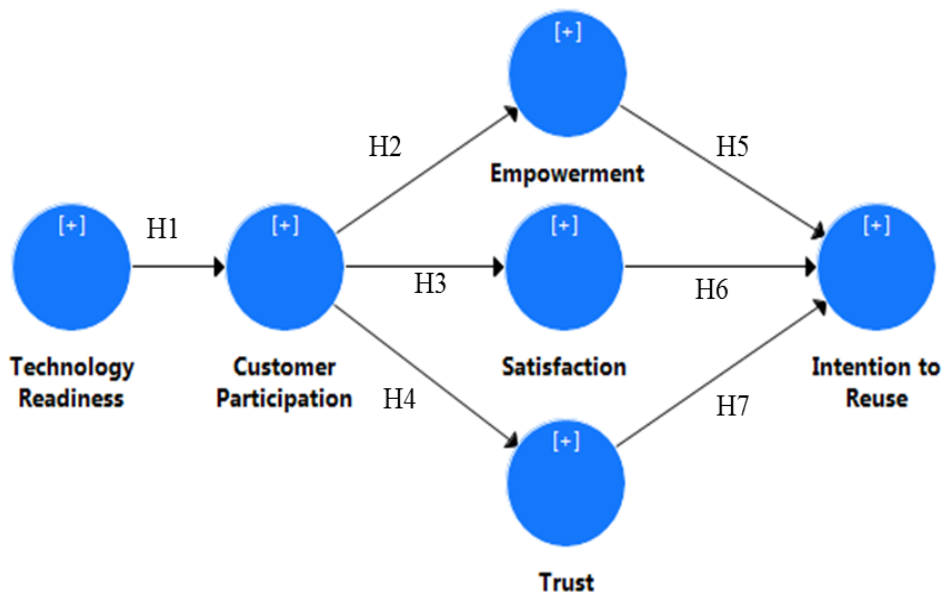


Figure 1. Model research

Methodology

Procedure and sample

This study was empirically based on primary data collecting from the study participants living in Vietnam who had previously used any online banking services. The data are collected through convenience sampling via surveys distributed in 2 common forms - Google Form and paper survey. The questionnaire was distributed in the various online platform as forums and Facebook groups, email and direct survey. With more than 255 responses after a 3-month survey (from January to April 2020), after removing all disqualified responses, the author has collected 220 eligible responses for the next analysis.

Measures

The data from respondents was collected using an appropriate questionnaire. The factors were built based on recent research on new technology and online services (Lin et al., 2007); (Elliott, Meng, & Hall, 2012). Firstly, the dimensions of the four TR factors, including optimism, innovativeness, insecurity, and discomfort that were referenced and modified from (Elliott et al., 2012). Secondly, we used a five-item scale adopted by (Auh, Menguc, Katsikeas, & Jung, 2019) to measure CUP. Thirdly, the measures of the EMP were adopted and modified from (Füller, Mühlbacher, Matzler, & Jaweck, 2009) and (Alshibly, 2014). Next, measures of CUS and TRU were taken and modified from (Ribbink, Van Riel, Liljander, & Streukens, 2004). Finally, the INR was taken and modified from (Arahita & Hatammimi, 2015). Besides, some demographic variables also collected (i.e., gender, age, and educational level). The scale used in this paper is the seven-point Likert-type scale for attitude measurement, where (1) strongly disagrees, and (7) strongly agrees. Any item that receives a high score (agree or strongly agree) shows that the participant shows a higher level of perception and approval toward the item in the questionnaire. Based on the context of the research in Vietnam, items were adapted to suit the M-payment service and interpreted use of Vietnamese using standard back translation practices. Table 2 detail items for each construct in the model research.

Data analysis

This study applied partial least squares–structural equation modelling (PLS-SEM) administered by SmartPLS 3.0 (Ringle, Da Silva, & Bido, 2015). According to (Hair Jr, Hult, Ringle, & Sarstedt, 2016), PLS-SEM standards are slightly less demanding in terms of measurement scales, small sample size, and

residual distributions compare with Covariance-Based SEM. Following the guideline of (Hair Jr, Sarstedt, Ringle, & Gudergan, 2017), data analysis was performed in two main stages. Firstly, the validity and reliability of the measures used to assess the model (including discrimination validity and convergence validity). Secondly, the structural model was estimated by exploratory collinearity, variance inflation factor (VIF), R^2 explanation of endogenous latent variables, and the significance and relevance of path coefficients. Some descriptive analyses were completed to summary data using IBM SPSS 22.

Result

Descriptive análisis

Beginning the analysis process, we conduct a summary of data. After eliminating incomplete answers, only 220 accurate surveys have been collected out of the 255 received respondents. In summary, the number of respondents who joined the research was dominated by the male (55 per cent, $n=121$). In term of ages, between the ages of 20 and 25 (50 per cent, $n=110$), and most of them are students or graduated (80 per cent, $n=176$). The detailed demographic information of the respondents is exhibited in Table 1.

Table 1
Sample Demographics

Characteristics	Frequencies (N=220)	Percentages (%)
Age		
Under 20	66	30%
From 20 - 25	110	50%
From 26 – 40	33	15%
Over 40	11	5%
Gender		
Female	99	45%
Male	121	55%
Education Level		
No Degree	11	5%
Student	110	50%
Graduated	66	30%
Post Graduate	22	10%

Measurement model evaluation

In PLS-SEM, convergent validity indicates to the model's ability to interpret the indicator's variance. The convergent validity and discriminant validity use to measure the measurement model; this study examines the outer loadings, average variance extracted (AVE), Cronbach's α , composite reliability (CR), and discriminant validity applying the strategies of (Hair Jr et al., 2017). As summarised in Table 2, all factor loadings ranged between 0.723 and 0.913 for significantly high items. The AVE can provide evidence for convergent validity (Fornell & Larcker, 1981). (Bagozzi & Yi, 1988) suggest an AVE threshold level of 0.5 as confirmation of the convergent validity of the model. All factors met these requirements, thus indicating convergent validity for all constructs. The Cronbach's α coefficients of all constructs were acceptably high, greater 0.70 that means all measures gained high levels of internal consistency reliability (Hair Jr et al., 2016), and the values of CR exceeded the criterion (0.60) (Bagozzi & Yi, 1988). Besides, the values of Dijkstra–Henseler's ρ was also significantly high, over 0.7 (Dijkstra & Henseler, 2015).

Discriminant validity has been evaluated through Discriminant Validity (Fornell & Larcker, 1981) and Heterotrait–Monotrait (HTMT) ratios of correlations (Hair Jr et al., 2017). Table 3 presents the diagonal (in bold) values, which depicts the AVE and the squared correlations of reflective constructs according to Fornell Larcker approach. Ordinarily, the square roots of the AVEs for the reflective were higher than the correlations of these constructs. HTMT criterion supports an alternative and preferred way for assessing discriminant validity. When the value of HTMT is lesser 0.90, discriminant validity has been established between two reflective constructs (Henseler, Ringle, & Sarstedt, 2015). As data are displayed in Table 3, HTMT output between two reflective constructs was below 0.90, confirming discriminant validity.

Table 2
 Construct Reliability and Validity

Constructs	Item	Item Loading	VIF	Cronbach's Alpha	rho_A	CR	AVE
CUP	CUP1	0.805	1.510	0.779	0.788	0.872	0.695
	CUP2	0.900	2.249				
	CUP3	0.792	1.751				
Discomfortable	DIS1	0.871	2.280	0.838	0.852	0.891	0.673
	DIS2	0.737	1.587				
	DIS3	0.846	1.878				
	DIS4	0.822	2.032				
Empowerment	EMP1	0.828	1.629	0.784	0.789	0.874	0.698
	EMP2	0.855	1.658				
	EMP3	0.823	1.616				
Innovativeness	INN1	0.859	1.497	0.731	0.757	0.880	0.786
	INN2	0.913	1.497				
Insecurity	INS1	0.796	1.772	0.765	0.776	0.865	0.682
	INS2	0.893	2.123				
	INS3	0.784	1.393				
Optimism	OPT1	0.837	1.881	0.732	0.729	0.849	0.653
	OPT2	0.845	1.915				
	OPT3	0.738	1.206				
SAS	SAS1	0.877	2.054	0.788	0.821	0.876	0.704
	SAS2	0.723	1.370				
	SAS3	0.905	2.223				
Trust	TRU1	0.840	2.207	0.810	0.818	0.875	0.637
	TRU2	0.752	1.910				
	TRU3	0.773	1.561				
	TRU4	0.823	1.850				
INR	INR1	0.853	2.798	0.814	0.833	0.877	0.641
	INR2	0.854	2.906				
	INR3	0.707	1.453				
	INR4	0.779	1.388				

Table 3
 Discriminant Validity (Fornell and Lacker's criterion)

	CUP	DIS	EMP	INN	INS	INR	OPT	SAS	TRU
CUP	0.834								
DIS	0.340	0.820							
EMP	0.206	0.647	0.836						
INN	-0.048	0.050	-0.061	0.887					
INS	-0.129	-0.097	-0.189	-0.106	0.826				
INR	0.232	0.661	0.570	-0.074	-0.115	0.801			
OPT	0.257	0.363	0.455	-0.065	-0.166	0.601	0.808		
SAS	0.356	0.581	0.682	-0.149	-0.227	0.682	0.589	0.839	
TRU	0.416	0.575	0.455	-0.175	0.091	0.643	0.342	0.602	0.798

Table 4
 Discriminant Validity (HTMT criterion)

	CUP	DIS	EMP	INN	INS	INR	OPT	SAS	TRU
CUP									
DIS	0.432								
EMP	0.261	0.795							
INN	0.066	0.109	0.092						
INS	0.161	0.175	0.261	0.141					
INR	0.298	0.778	0.691	0.135	0.184				
OPT	0.347	0.449	0.596	0.088	0.232	0.771			
SAS	0.466	0.692	0.854	0.194	0.295	0.803	0.799		
TRU	0.506	0.708	0.567	0.235	0.256	0.765	0.424	0.720	

Structural model

The VIF use to verify potential collinearity Before assessing the structural model. The results showed all VIF values between 1.206 and 2.906, being much lower than 5, implying that there is no issue related to collinearity (Hair Jr et al., 2017).

After verifying VIF, PLS algorithm procedures were implemented to analyze the hypothesized relationships in our research model (detail in Figure 2). The PLS bootstrapping algorithm (using 5,000

subsamples) was used to test the significance of hypothesized relationships. Table 5 describes the details result of hypotheses testing.

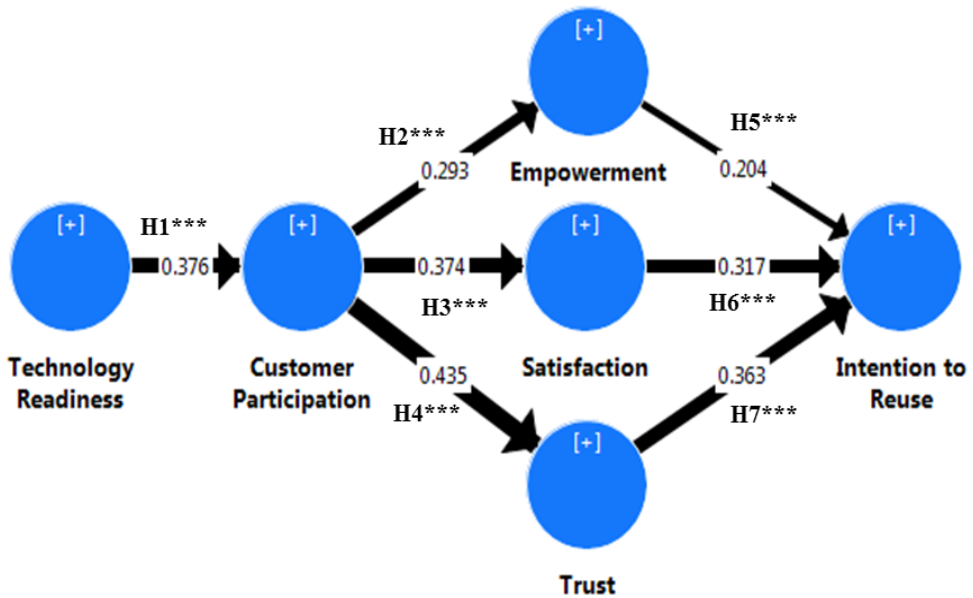


Figure 2. Model results

Table 5
Hypothesis results

	Hypotheses	Original β	Mean β	STDEV	T Statistics	P Values	Result
<i>H1</i>	$TR \rightarrow CUP$	0.376	0.390	0.104	3.604	0.000	Accepted
<i>H2</i>	$CUP \rightarrow EMP$	0.293	0.294	0.097	3.018	0.003	Accepted
<i>H3</i>	$CUP \rightarrow SAS$	0.374	0.377	0.095	3.938	0.000	Accepted
<i>H4</i>	$CUP \rightarrow TRU$	0.435	0.441	0.072	6.025	0.000	Accepted
<i>H5</i>	$EMP \rightarrow INR$	0.204	0.202	0.062	3.282	0.001	Accepted
<i>H6</i>	$SAS \rightarrow INR$	0.317	0.321	0.064	4.988	0.000	Accepted
<i>H7</i>	$TRU \rightarrow INR$	0.363	0.359	0.057	6.352	0.000	Accepted

As depicted in Figure 2 and Table 5, firstly, the paths from positive TR to CUP were statistically and positively significant ($\beta_{TR \rightarrow CUP} = 0.376$, $t=3.604$, $p<0.001$). Thus, H1 was supported. Secondly, from CUP to EMP ($\beta_{CUP \rightarrow EMP} = 0.293$, $t=3.018$, $p<0.01$), from CUP to SAS ($\beta_{CUP \rightarrow SAS} = 0.374$, $t=3.938$, $p<0.001$), and from CUP to TRU ($\beta_{CUP \rightarrow TRU} = 0.435$, $t=6.025$, $p<0.001$) were positively significant. Thus, H2, H3, and H4, which proposed that CUP relates positively to EMP, SAS, and trust, respectively, were

supported. Finally, three last hypotheses from H5 to H7 (H5: $\beta_{EMP \rightarrow IRN} = 0.204$, $t=3.282$, $p<0.01$), (H6: $\beta_{SAS \rightarrow IRN} = 0.317$, $t=4.988$, $p<0.001$) and (H7: $\beta_{TRU \rightarrow IRN} = 0.363$, $t=6.352$, $p<0.001$), which proposed that EMP, SAS and trust positive and significant influences on INR.

Conclusion

Cash and coins are falling in usage for years, and pandemic COVID-19 is making this trend faster. From both providers' and customers' perspective, traditional payment methods are more costly to manage, are easy theft targets, a lot slower, and easy to infect virus via hand than using M-payments services. In this study, we have explored reasons for individuals to continuously use M-payment services in Vietnam by considering a set of factors influencing M-payment identified from the literature. The most challenging aspect of managing during a pandemic is not knowing how long the situation will last or how it will end. When the future is so unpredictable, it is tough to prepare ahead. In order to decrease risks and gain competition, services should integrate with M-payment services that do not require face-to-face contact. Furthermore, the banking sector continues to develop massive credit services, such as forbearance and expanded access to online loan facilities. The banking industry has also been instrumental in disseminating various governments' fiscal packages via mobile and internet platforms.

The results of this research indicates users' INR M-payment services in Vietnam is directly affected by various factors, including empowerment, satisfaction and trust. Among them, trust and satisfaction regarding availability have strong impacts. Moreover, the study also finding the important roles of TR and customer participation in the relationship to users' INR M-payment services. By exploring the influence of these factors on INR M-payment services, we can better understand why individuals decide to use or not to reuse M-payment services. The findings of this study provide several theoretical and practical implications. The model examined the R^2 value that research accounts for significant variance in users' INR M-payment services ($R^2=0.559$). (Hair Jr et al., 2017) has been recommended that R^2 values of 0.20 are significantly high in the consumer behaviour discipline, indicating that the model provides an effective means for predicting users' INR M-payment services. The details and implications of these findings are discussed below.

Theoretical implication

This research contributed some ideas to the knowledge gaps in the field of M-payment acceptance in both standards and Vietnam. The outcomes of this research indicate that users' INR M-payment in Vietnam is affected by various factors, including users' TR, CUP, empowerment, SAS, and trust. This research has

been confirmed the role of TR in the ICT context (Lin et al., 2007). This study goes further to test the relationship between TR and CUP, which can be considered a distinct feature of this research. Moreover, the relationship between TR and CUP have been discovered as an essential determinant factor affecting the INR M-payment services. Among them, TRU ($\beta_{TRU \rightarrow IRN} = 0.363$) and SAS ($\beta_{SAS \rightarrow IRN} = 0.317$) have the most significant impacts that align with previous researches (Ribbink et al., 2004); (Chiou & Droge, 2006). Lastly, this is the first research that combines three determinant factors: CUP, SAS, and TRU, to predict the INR. However, to demonstrate the effects of this proposal, we should extend some more researches. By examining the influence of these factors on M-payment acceptance, other researchers can better understand why individuals decide to use or not to reuse M-payment as well as extend some more researches about this topic.

Management implication

This research offers a reasonable enrichment to industry related to M-payment adoption. The COVID-19 pandemic shows a turning point for the payment service providers, as those companies that have invested heavily in digital and M-payment thrive. Regarding industry, the outcome of the study can potentially help banking providers to understand better consumers' expectations and factors that affect their decision to reuse M-payment services. As a result, better services can be provided, and better strategies for promoting M-payment can be devised. Customers with more significant TR tended to have higher CUP, while users with higher participation had a higher impact on EMP, SAS, and trust. Moreover, increasing CUP, SAS, and TRU would improve their INR M-payment services. For example, M-payment providers can promote the service by offering customers' participation that can help them not only enhance their SAS and TRU but also make them feel empowered.

Limitation, and extensions

Our study is also limited to some degree due to the relatively small sample size participant living in Vietnam because online surveys often have low response rates and variety. Further research in this area should strive to enlarge the sample size realized if at all possible. Moreover, only customers who have been used M-payment were chosen as the respondent. Others without the practice of using M-payment have not been included in this research. It would be useful to include non-users in future studies to investigate further the reasons for not using M-payment. Furthermore, the reality that other external constructs, such as customer innovation, customer engagement and service quality (Fragoso & Espinoza,

2017) in a particular country that could affect consumers' perceptions and attitudes acceptance M-payment service. Hence, future researches should consider these constructs to expanding our perception of innovation perception and agreement.

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Annex

Questions

Technology Readiness - Optimism	
OPT1	M-Payment services contribute to a better quality of life
OPT2	M-Payment services give me more freedom of mobility.
OPT3	M-Payment services give people more control over their daily lives.
OPT4	M-Payment services make me more productive in my personal life.
Technology Readiness - Innovativeness	
INN1	Other people come to me for advice on new M-Payment services.
INN2	In general, I am among the first in my circle of friends to acquire new M-Payment services when it appears.
INN3	I can usually figure out new M-Payment services without help from others.
INN4	I keep up with the latest M-Payment services developments in my areas of interest.
Technology Readiness - Discomfort	
DIS1	When I get technical support from a provider of M-Payment services, I sometimes feel as if I am being taken advantage of by someone who knows more than I do.
DIS2	M-Payment services support lines are not helpful because they don't explain things in terms I understand by ordinary people.
DIS3	Sometimes, I think that M-Payment services system are not designed for use.
DIS4	There is no such thing as a manual for M-Payment services that's written in plain language
Technology Readiness <i>Insecurity</i>	
INS1	People are too dependent on M-Payment services to do things for them.
INS2	Too much M-Payment services distract people to a point that is harmful.
INS3	M-Payment services lower the quality of relationships by reducing personal interaction.
INS4	I do not feel confident doing business with a place that can only be reached online.
Customer Participation	
CUP1	I spend a lot of time-sharing information about my needs and opinions with my provider during the M-Payment services process.
CUP2	I put a lot of effort into expressing my personal needs to my provider during the M-Payment services process.
CUP3	I always provide suggestions to my provider for improving the M-Payment services outcome.
CUP4	I have a high level of participation in the M-Payment services process.
CUP5	I am very much involved in deciding how the M-Payment services should be provided.

Empowerment	
PU1	In my dealings with this M-Payment services provider, I feel I am in control.
PU2	The ability to influence the M-Payment services of this provider is beneficial to me.
PU3	My influence over this M-Payment services provider has increased relative to the past.
PU4	I feel good because of my ability to influence the choice set offered to me by this.

Satisfaction	
SAS1	I am generally pleased with M-Payment services.
SAS2	I am very satisfied with M-Payment services.
SAS3	M-Payment services are good to do business with.
SAS4	Overall, I am satisfied with M-Payment services.

Trust	
TRU1	I am prepared to give private information to M-Payment services.
TRU2	I am willing to give my credit card number to M-Payment services.
TRU3	It is not a problem to pay in advance for purchased products/services over M-Payment services.
TRU4	M-Payment services providers intend to fulfill their promises.

Intention to Reuse	
IRE1	I am currently using the M-Payment services.
IRE2	It is likely that I will reuse the M-Payment services whenever I buy products/services.
IRE3	I will try every new M-Payment services application.
IRE4	I want to recommend the M-Payment services to my friends and families.
