Accounting 6 (2020) 1391–1402

Contents lists available at GrowingScience

Accounting

homepage: www.GrowingScience.com/ac/ac.html

Analysis of customer behavioral intentions towards mobile payment: Cambodian consumer's perspective

Nam Hung Do[a*], Jacquline Tham[a], S. M. Ferdous Azam[a] and Abdol Ali Khatibi[a]

[a]*Management and Science University (MSU), Malaysia*

C H R O N I C L E

Article history:
Received: April 29, 2020
Received in revised format: July 30 2020
Accepted: August 10, 2020
Available online: August 10, 2020

Keywords:
Mobile payment (m-payment)
Perceived transaction speed
Performance expectancy
Social influence
Behavioral intention

A B S T R A C T

The research was developed with main objective of verifying the effect of perceived transaction speed, performance expectancy and social influence on behavioral intention towards mobile payment services of Cambodian users. A research model was developed in which behavioral intention of mobile payment users was influenced directly by perceived transaction speed, performance expectancy and social influence. The effects of perceived transaction speed on performance expectancy and social influence were analyzed in the research. A successful 210 questionnaires were collected from real mobile payment users in Cambodia. It was identified that behavioral intention was significantly and positively influenced by perceived transaction speed, performance expectancy and social influence. However, the effects of perceived transaction speed on performance expectancy and social influence were not statistically significant. Based on these findings, some recommendations to government, commercial banks and private mobile payment providers in Cambodia were proposed.

1. Introduction

Mobile payment is a payment supporting services which help an individual receive and transfer the money virtually through his/her mobile communication devices (Vilmos & Karnouskos, 2004). The development of mobile payment is traced back to 1990s period with the development of electronic commerce with online shopping activities to be carried out and it brought a dramatical change in the process of purchasing and paying for goods and services (Bezhovski, 2016). The customers today prefer to use their mobile devices to shop for goods and services in quicker and more convenience ways of payment modes (Nielsen, 2016). Mobile payment is determined as a key driver of electronic and mobile commerce and it is being facilitated by strong use of smartphone, the shift from traditional shopping to online shopping behavior, and higher mobile network speed (McKinsey & Company, 2018). Global mobile payment market size in 2016 was captured at US$601 billion and it would be growing up to US$4,574 billion by 2023 (Applied Market Research, 2018). The establishment of mobile payment brings the convenience to people today since they can use their mobile communication devices such as smartphone to pay for transportation services, to buy goods and services, etc. (Market Watch, 2018). The global development of mobile payment is driven by strong growing mobile payment demands in Asia Pacific (Detrixhe, 2019). Currently, there are some big mobile payment service providers in Asia Pacific such as WeChat Pay, AliPay, PayPal, Samsung Pay, and Apple Pay (Mordor Intelligence, 2019). Among the countries in Asia Pacific, Cambodia is a dynamic market in term of mobile payment service development (National Bank of Cambodia, 2013). This country has 16.2 million people as total population with gross domestic product generated in

* Corresponding author.
E-mail address: hungdn999@gmail.com (N.H. Do)

doi: 10.5267/j.ac.2020.8.010

2018 stood at US$24.54 billion and annual gross domestic product (GDP) growth rate has been always higher than 7% since 2011 (World Bank, 2020). Among other countries, annual GDP growth rate of Cambodia is highest and it surpassed other emerging economies such as Vietnam and Thailand (Asian Development Bank, 2020). The mobile payment market in Cambodia was started in 2008 since National Bank of Cambodia initiated some actions to renovate the country's payment system such as implementation of cheque standards, payment clearing process, and the encouragement of joining into ASEAN's financial system (National Bank of Cambodia, 2020). Currently, there are eight common mobile payment services providers in Cambodia, including Wing, Smart: SmartLuy, Pay&Go, Pi Pay, TrueMoney, ABA Bank: E-Cash, and Metfone: E-Money (CryptoAsia, 2020). The development of mobile payment in Cambodia is explained by several reasons. According to Fintech Singapore (2018), mobile payment in Cambodia is growing strongly since the country has the highest mobile connectivity compared to other countries in ASEAN but only 5% of the population is now having banking accounts. The development of mobile payment in Cambodia is supported by strong actions from Cambodian Government in enhancing payment infrastructure and encouraging the development of alternative payment systems (Global Data, 2018). Mekong Business Initiative (2017) published a report to provide detailed findings about factors affecting adoption of electronic commerce and mobile payment in Cambodia and key factors were technical and operational processes, socio-economic and culture, and legal and government involvement. However, there were not so many empirical evidence to explore behavior intention of Cambodia users towards mobile payment services. In this context, the study will be developed to explore key factors influencing behavior intention to use mobile payment in Cambodia.

2. Literature Survey

Mobile payment is defined as a payment process in which its steps to be processed through wireless devices such as smartphones and its objective is to bring the convenience to users, to reduce transaction fees, and to increase the security of transaction (Hoofnagle et al., 2012). It is considered as useful information channel to the services providers in different industries to get more knowledge about their customers throughout their payment actions (Bezhovski, 2016). The establishment of mobile payment services unleashes potential huge development in electronic and mobile commerce since all payments of the customers can be processed conveniently, speedily and in security (Karnouskos, 2004; Ramezani, 2008). Through mobile payment, individual user can proceed a monetary value transmitted through mobile telecommunication networks on users' mobile devices in return for expected goods and services (Raina, 2014). Mobile payment is also simply defined as a payment method with both payment request and payment confirmation to be processed in a mobile device and this payment method is not limited to geographical location (Huber, 2004). Key technology used in mobile payment is Near Field Communication (NFC) or mobile network and it involves major parties, including individuals, mobile network operators, merchants, etc. (Karthikeyan, 2012). By using mobile payment, individuals can reduce the risk to carry cash and it enables higher transparency in transactions (PwC, 2019). Behavior intention is immediate antecedent of any consumer behavior (Kiriakidis, 2015). It refers to the willingness of an individual to use a product or service or to perform a certain action (Mamman et al., 2016). Behavioural intention also refers to the measurement of a personal intention strength to conduct behaviors (Phua et al., 2012). To measure behavioral intention of user, some theories were developed by different researchers over the time. Theory of Reason Action (TRA) was developed by Fishbein & Ajzen (1975) and it emphasized that intention directed the behavior of a person. Theory of Planned Behaviour (TPB) was invented by Ajzen (1985) and it explains why a person conducts particular action. In expansion of TRA, Davis (1989) proposed Technology Acceptance Model (TAM) and it explains that the behaviors towards certain technology is influenced by both subjective norms and attitudes. Behavior intention towards mobile payment has been explored by different researchers. Aslam et al. (2017) obtained empirical evidence in which Pakistan users' behavior intention towards mobile payment services was influenced by subjective norms, perceived compatibility, and perceived usefulness. Liu & Tai (2016) studied about behavioral intention towards mobile payment services in Vietnam and they confirmed the role of perceived convenience of mobility, knowledge related mobile payment services, and perceived compatibility. Cheng et al. (2018) explored the role of brand knowledge that is constructed by brand image and brand awareness on the behavioral intention to use digital payment methods in Cambodia.

3. Research model and hypotheses

The research model is depicted in Fig. 1. The figure proposes a research model which is initiated from perceived transaction speed of mobile payment services. This factor is expected having direct impact on behavioral intention of mobile payment users. The study also proposes two mediators in the research model, namely performance expectancy and social influence. These two mediators are put in between perceived transaction speed and behavioral intention to investigate whether there is significant moderate effect from performance expectancy and social influence into the relationship between perceived transaction speed and behavioral intention in mobile payment services. Proposed research model, therefore, contains five hypotheses and each hypothesis is discussed below:

a. Perceived transaction speed and its influence on behavioral intention, performance expectancy and social influence in mobile payment services

Perceived transaction speed in mobile payment services is defined as the perception of users towards how mobile payment can help them to improve the speed of a transaction (Chen, 2006). It is also determined as a subjective assessment when users compare the time of conducting and fulfilling a payment in mobile payment with other traditional payment methods (Haanperä, 2012). Mobile payment service is speedier than traditional payment method (i.e. cash) with the adoption of new technologies such as NFC (Balan et al., 2009; Massoth & Bingel, 2009).

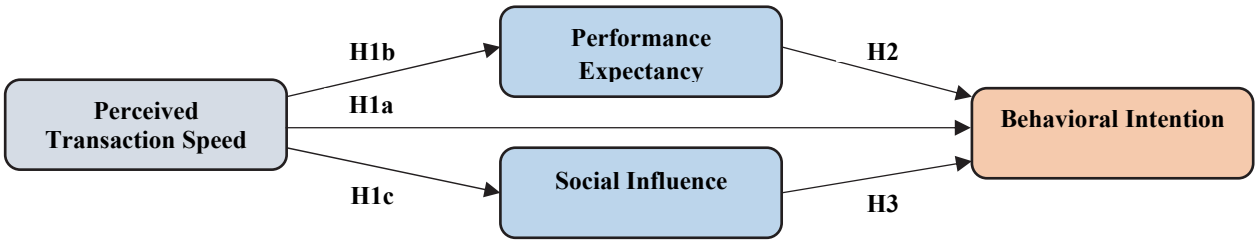


Fig. 1. Research model

Empirical evidence affirmed the effects of perceived transaction speed on performance expectancy, social influence, and behavioral intention. Mao et al. (2005) confirmed the role of perceived transaction speed on behavioral intention in mobile phone services in U.S. Chen (2006) developed a research framework in which perceived transaction speed was important construct of perceived usefulness and it indirectly affected behavioral intention to use mobile payment. Abadzhmarinova (2014) obtained empirical evidence in which perceived transaction speed has large quantitative impact on behavioral intention to use mobile payment. Therefore, the first hypothesis is proposed:

H_{1a}: Perceived transaction speed affects positively and significantly behavioral intention.

Behind of the empirical confirmation for the effect of perceived transaction speed on behavioral intention to use mobile payment services, other researchers also delivered their empirical findings related to the effects of this factor on performance expectancy and social influence. A definition of performance expectancy was given by Venkatesh et al. (2003) as the use of new technologies will significantly improve job-related performance of the users. It means that when the users have an expectation of the development new technologies and their actual usage unleash higher performance of jobs that they are doing (Min et al., 2008; Jambulingam, 2013). The concept of performance expectancy is different to the concept of effort expectancy which refers to the easiness level when the users use a technology (Venkatesh et al., 2003). A technology reaches positive effort expectancy when it does not create difficulties to the users or the users are able to use this technology without adopting new operating skills (Gholami et al., 2010). Social influence is defined as the effect from one user to encourage other users to try using a technology (Venkatesh et al., 2003; Gholami et al., 2010; Do et al., 2019). Empirical evidence from Teo et al. (2015) affirmed the role of perceived transaction speed on performance expectancy and social influence in mobile payment era. Therefore, the second and the third hypothesis is proposed:

H_{1b}: Perceived transaction speed affects positively and significantly performance expectancy.

H_{1c}: Perceived transaction speed affects positively and significantly social influence.

b. Performance expectancy and its effects on behavioral intention in mobile payment services

The effect of performance expectancy on behavioral intention in mobile payment services has been explored by different researchers. Sair and Danish (2018) measured the effect of performance expectancy on behavioral intention among Pakistan's users and they identified that both factors had significant effect and the effect of effort expectancy was smaller than the effect of performance expectancy. Dawi (2019) examined intensively literatures about behavioral intention to use mobile payment services and constructed a research model in which both performance expectancy had direct effect on behavioral intention of users. Sfenrianto (2015) explored mobile payment market in Indonesia and proposed a research framework in which behavioral intention to use mobile payment was influenced by performance expectancy. Tan (2013) denoted that performance expectancy of users towards electronic website services was important driver or users' behavioral intention. Chao (2019) obtained empirical evidence in which the effect of performance expectancy on behavioral intention to be confirmed in significant way. Therefore, the fourth hypothesis is proposed:

H_2: Performance expectancy affects positively and significantly on behavioral intention.

C. Social influence and its effects on behavioral intention in mobile payment services

Like performance expectancy, the effect of social influence on behavioral intention in mobile payment services has been explored by different researchers. In Indonesia, social influence is expected having direct effect on behavioral intention to use mobile payment services (Sfenrianto, 2015). Odeh (2019) conducted a survey with 322 small and medium enterprises in Jordan and obtained the empirical evidence of which social influence had positive and significant effect on behavioral intention towards financial information systems. Therefore, the last hypothesis is proposed:

H_3: Social influence affects positively and significantly on behavioral intention.

4. Research methodology

To verify five proposed hypotheses in previous section, quantitative research method must be utilized. It refers to a process of analyzing information retrieved from a numerical dataset so that causal linkage between is measured along with reliability and validity of obtained data (Halcomb & Hickman, 2015; Daniel, 2016; Saunders et al., 2019; Do et al., 2020). Numerical data was collected from the survey with respective respondents who have been using mobile payment in Cambodia. The survey was designed with questionnaires development in which each factor was operationalized by various items (Table 1).

Table 1
Operationalization of factors

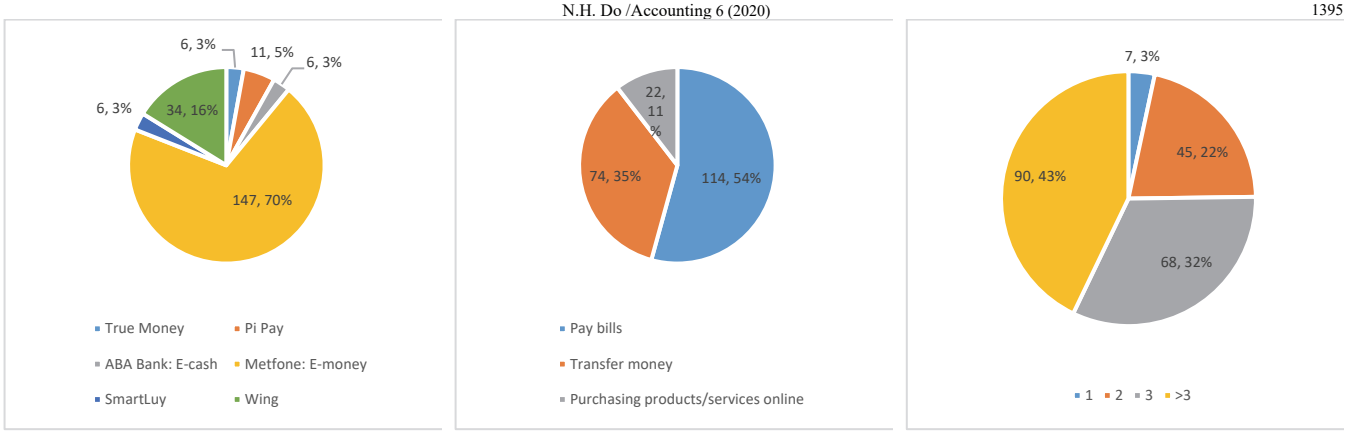
Perceived Transaction Speed	Performance Expectancy	Social Influence	Behavioural Intention
[PTS1]. The process through mobile payment service is fast	[PE1]. Mobile payment services allow me to do my business better	[SI1]. My family member supports me to use mobile payment service	[BI1]. The choice of mobile payment service over cash payment is obviously to me
[PTS2]. I do not have to spend time to queue for paying something	[PE2]. Personal budget is well tracking through mobile payment services	[SI2]. My friends always use mobile payment service when they transfer money to me	[BI2]. If I have opportunity, I will recommend other people to use mobile payment service
[PTS3]. I receive the transaction result immediately in mobile payment services	[PE3]. For me, mobile payment services increase my job performance efficiency	[SI3]. My co-workers ask me to use mobile payment service for daily transaction	[BI3]. My payment problems have been solved since I utilized mobile payment service
[PTS4]. Mobile payment service providers do not take time to me for registration	[PE4]. Mobile payment service has helped me a lot when I need to transfer money to someone in time constraint	[SI4]. Cambodian government pushed positive effort to encourage Cambodian people to use mobile payment service	[BI4]. I do not mind to use mobile payment when I need to pay something
[PTS5]. Download speed of mobile payment service is blazing	[PE5]. Mobile payment service allows me to inquiry suspect transaction		

Each item in Table 1 was evaluated by Cambodian mobile users through Likert scale of 5 points. This scale was used to measure the level of agreement or disagreement with given contextures. In addition, demographic information and mobile payment usage of the respondents were collected through the questionnaire. Frequency analysis and descriptive statistics were adopted to explore demographic characteristics and mobile payment usage of the respondents. Reliability test and exploratory factor analysis (EFA) were conducted to check internal consistency and the adequateness of proposed research model. Structural equation modeling (SEM) was finally applied to verify five proposed hypotheses.

5. Empirical Analysis

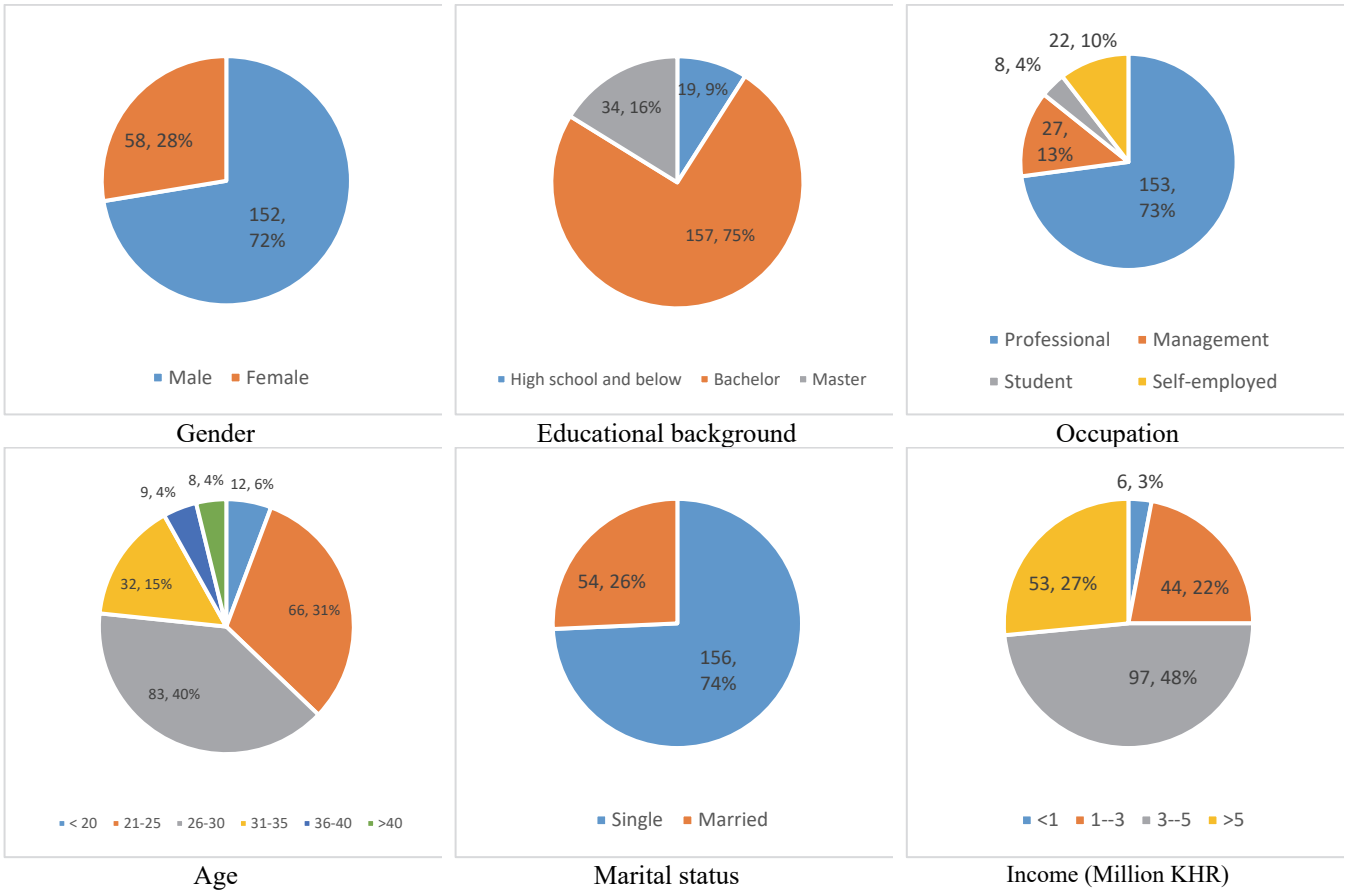
5.1. The characteristics of the respondents

The characteristics of the respondents is firstly explored through their mobile payment usage that is illustrated in Fig. 2. As we can observe from the figure, it shows that 70% of the respondents in the survey are currently using mobile payment services provided by Metfone: E-money. It is equivalent to 147 respondents out of 210 involving people. It is also identified that more than half of the respondents are currently using mobile payment services to pay their monthly bills (114 respondents or 54.3%). A significant number of respondents (74 people or 35.2%) is using mobile payment services for transferring money. Descriptive statistics for mobile payment usage behavior of the respondents also explores the highest number of respondents using this service for more than three times per month (90 respondents or 42.9%). Demographic characteristics of the respondents is then explored and obtained result is illustrated in Fig. 3.



Main mobile payment service provider | Purpose of using mobile payment services | Frequency of transactions per month

Fig. 2. Payment usage description



Gender | Educational background | Occupation

Age | Marital status | Income (Million KHR)

Fig. 3. Personal characteristics of the participants

According to Fig. 3, mobile payment services is attractive to male users rather than females since the number of male respondents is dominating the number of female respondents. The age of mobile payment users is quite young, showing through the fact that 91.9% of the respondents having ages less than 35 years old. The survey was participated by the respondents who have different education level but nearly three-fourth of the respondents obtained education background at bachelor's degree. The respondents who participated into the survey are mostly single with 156 respondents or 74.3% and majority of the respondents are professional as main occupation (153 respondents or 72.9%). Finally, mobile payment services are being used by those who have different monthly income level. However, a significant number of respondents having monthly income between 3-5 million KHR (97 people or 46.2%). Finally, mean and standard deviation which are calculated for each item are presented in Table 2.

Table 2
The results of some basic statistics

Items	Mean	Standard Deviation
[PTS1]. The process through mobile payment service is fast	3.43	1.114
[PTS2]. I do not have to spend time to queue for paying something	3.47	1.120
[PTS3]. I receive the transaction result immediately in mobile payment services	3.27	1.139
[PTS4]. Mobile payment service providers do not take time to me for registration	3.51	1.163
[PTS5]. Download speed of mobile payment service is blazing	3.37	1.069
[PE1]. Mobile payment services allow me to do my business better	3.13	1.141
[PE2]. Personal budget is well tracking through mobile payment services	3.28	1.067
[PE3]. For me, mobile payment services increase my job performance efficiency	3.11	1.180
[PE4]. Mobile payment service has helped me a lot when I need to transfer money to someone in time constraint	3.02	1.178
[PE5]. Mobile payment service allows me to inquiry suspect transaction	3.44	1.062
[SI1]. My family member supports me to use mobile payment service	3.75	0.932
[SI2]. My friends always use mobile payment service when they transfer money to me	3.63	0.990
[SI3]. My co-workers ask me to use mobile payment service for daily transaction	3.62	0.942
[SI4]. Cambodian government pushed positive effort to encourage Cambodian people to use mobile payment service	3.61	1.035
[BI1]. The choice of mobile payment service over cash payment is obviously to me	2.58	0.791
[BI2]. If I have opportunity, I will recommend other people to use mobile payment service	1.69	0.791
[BI3]. My payment problems have been solved since I utilized mobile payment service	2.64	0.658
[BI4]. I do not mind to use mobile payment when I need to pay something	2.63	0.653

Table 2 shows that only one item [BI2] has mean value of 1.69 and it is less than 2.50 or the respondents do not want to recommend other people to use mobile payment service. Among the remaining 17 items, there are 5 items, including [PTS4], [SI1], [SI2[, [SI3] and [SI4], having mean values at 3.51, 3.75, 3.63, 3.62 and 3.61 and they are higher than 3.50. All other items have mean values between 2.50 and 3.50. It is concluded that the respondents highly agree with the timeless required in mobile payment services and they receive good support from family's member, friends, co-worker, and Cambodian government to further use mobile payment services.

5.2 Reliability analysis

Reliability test is conducted to check internal consistency of each factor. Obtained result is presented as below:

Table 3
The results of reliability test

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's alpha	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SI1	53.43	76.247	0.823	0.317	0.819
SI2	53.55	75.321		0.348	0.817
SI3	53.56	76.793		0.279	0.821
SI4	53.57	75.299		0.329	0.819
PE1	54.05	73.347		0.390	0.816
PE2	53.90	73.704		0.406	0.814
PE3	54.07	73.096		0.386	0.816
PE4	54.16	73.725		0.355	0.818
PE5	53.74	75.888		0.285	0.821
PTS1	53.75	73.948		0.370	0.817
PTS2	53.71	72.578		0.443	0.812
PTS3	53.91	72.529		0.436	0.813
PTS4	53.67	72.501		0.426	0.813
PTS5	53.81	71.753		0.518	0.808
BI1	54.60	75.006		0.613	0.808
BI2	55.49	73.801		0.578	0.807
BI3	54.54	74.680		0.630	0.808
BI4	54.55	74.660		0.638	0.807

Table 3 shows that each factor qualifies the requirements for internal consistency. The first requirement refers to Cronbach's alpha higher than 0.70. The second requirement refers to corrected item-total correlation must be higher than 0.3 and the last requirement emphasizes the condition of Cronbach's alpha value after deleting an item must be lower than Cronbach's alpha value. It is identified that overall Cronbach's alpha is 0.823 > 0.70 of internal consistency of all factors are good.

5.4. EFA analysis

EFA analysis is used to verify internal construct of items in the data. To use EFA analysis, rotation technique will be used as Varimax. Moreover, the number of new component and its belonged items will be generated. Obtained result is presented as below:

Table 4
EFA analysis result after Varimax rotation

KMO = 0.835; Approximate Chi-square = 3214.947; P-value = 0.000				
Items	***Component***			
	1	***2***	***3***	***4***
BI2	0.955			
BI3	0.948			
BI4	0.943			
BI1	0.829			
PE5		0.908		
PE2		0.839		
PE4		0.813		
PE1		0.792		
PE3		0.634		
PTS5			0.829	
PTS1			0.795	
PTS2			0.759	
PTS4			0.759	
PTS3			0.750	
SI2				0.903
SI4				0.869
SI1				0.854
SI3				0.851

EFA analysis is only usable when Kaiser-Mayer-Olkin (KMO) value higher than 0.50 and the chi-square test returns p-value less than 0.05. Obtained result shows that both two indexes qualify the requirement in which KMO value is 0.835 > 0.50 while p-value is 0.000 < 0.05. Four components are extracted after EFA analysis. The detail construct in each component confirms proposed research model. Component 1, Component 2, Component 3 and Component 4 are named as behavioral intention, performance expectancy, perceived transaction speed, and social influence. Each item inside these components have specific factor loading value and all items have factor loading value higher than 0.50.

5.4. Measurement model (MM) analysis

MM analysis for the relationship between perceived transaction speed, performance expectancy, social influence and behavioral intention is depicted as below:

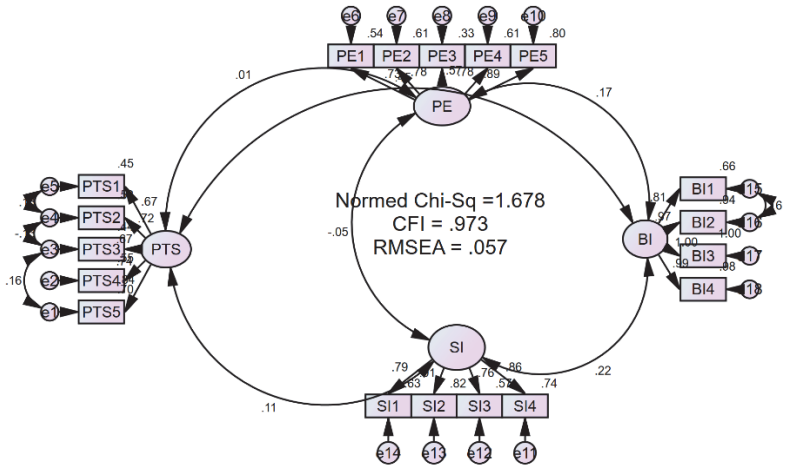


Fig. 4. MM analysis framework

Then, model fit in SEM analysis is evaluated through three goodness of fit statistics, namely Normed Chi-Square, Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA).

Table 5
The results of statistical tests for MM analysis

Goodness of fit statistics	Initial Model	Modified Model	Threshold value for the fit indices	Comments
Normed Chi-Square	1.678	No Modifications	< 5.0	Qualify the benchmark
CFI	0.973	No Modifications	> 0.9	Qualify the benchmark
RMSEA	0.057	No Modifications	< 0.08	Qualify the benchmark

Obtained result from model fit in SEM analysis shows that normed chi-square has value of 1.678 and it is less than a threshold value which is set at 5.0. In addition, CFI value and RMSEA value are calculated at 0.973 and 0.057 and they are both satisfying the benchmarks. In more detail, the benchmark for CFI value is higher than 0.9 while the benchmark for RMSEA is less than 0.08. Since all goodness of fit statistics pass related benchmarks, the model is no need to modify through modification indices technique.

5.5. Structural equation modelling (SEM) analysis

SEM analysis for the relationship between perceived transaction speed, performance expectancy, social influence and behavioral intention is depicted as below:

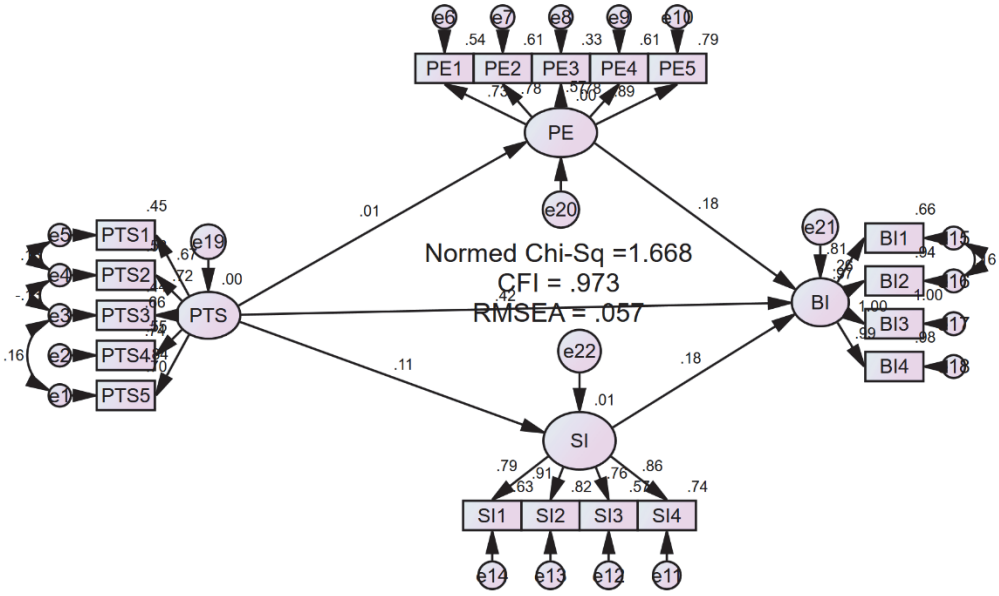


Fig. 5. SEM analysis framework

Then, model fit in SEM analysis is evaluated through three goodness of fit statistics, namely Normed Chi-Square, Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA).

Table 6
Model fit in SEM analysis

Goodness of fit statistics	Initial Model	Modified Model	Threshold value for the fit indices	Comments
Normed Chi-Square	1.668	No Modifications	< 5.0	Qualify the benchmark
CFI	0.973	No Modifications	> 0.9	Qualify the benchmark
RMSEA	0.057	No Modifications	< 0.08	Qualify the benchmark

Obtained result from model fit in SEM analysis shows that normed chi-square has value of 1.668 and it is less than a threshold value which is set at 5.0. In addition, CFI value and RMSEA value are calculated at 0.973 and 0.057 and they are both satisfying the benchmarks. In more detail, the benchmark for CFI value is higher than 0.9 while the benchmark for RMSEA is less than 0.08. Since all goodness of fit statistics pass related benchmarks, the model is no need to modify through modification indices technique.

5.6 .Hypothesis testing

Finally, five hypotheses will be verified as below

Table 7
Hypothesis testing

Hypothesis			Estimate	S.E.	C.R.	P	Comment
PE	←	PTS	0.012	0.074	0.159	0.873	Rejected
SI	←	PTS	0.110	0.078	1.415	0.157	Rejected
BI	←	SI	0.107	0.039	2.785	0.005	Accepted
BI	←	PE	0.111	0.041	2.676	0.007	Accepted
BI	←	PTS	0.249	0.043	5.768	***	Accepted

H_{1a}: Perceived transaction speed affects positively and significantly behavioral intention.

In the relationship between perceived transaction speed and behavioral intention, the coefficient is estimated at 0.249. P-value of statistical test to verify null hypothesis of the coefficient is equal to zero is less than 0.05. Since the coefficient is positive value and p-value is less than 0.05. H1a is accepted. Quantitatively speaking, if perceived transaction speed of mobile payment services is improved by 1 unit, behavioral intention towards this service will be increased by 0.249 unit.

H_{1b}: Perceived transaction speed affects positively and significantly performance expectancy.

In the relationship between perceived transaction speed and performance expectancy, the coefficient is estimated at 0.012. P-value of statistical test to verify null hypothesis of the coefficient is equal to 0.873 and it is higher than 0.05. Since the coefficient is positive value and p-value is higher than 0.05. H1b is rejected. Quantitatively speaking, if perceived transaction speed of mobile payment services is improved by 1 unit, performance expectancy of users towards this service will be increased by 0.012 unit but this effect is not statistically significant at accepted confidence level.

H_{1c}: Perceived transaction speed affects positively and significantly social influence.

In the relationship between perceived transaction speed and social influence, the coefficient is estimated at 0.110. P-value of statistical test to verify null hypothesis of the coefficient is equal to 0.157 and it is higher than 0.05. Since the coefficient is positive value and p-value is higher than 0.05. H1c is rejected. Quantitatively speaking, if perceived transaction speed of mobile payment services is improved by 1 unit, performance expectancy of users towards this service will be increased by 0.110 unit but this effect is not statistically significant at accepted confidence level.

H_2: Performance expectancy affects positively and significantly on behavioral intention.

In the relationship between performance expectancy and behavioral intention, the coefficient is estimated at 0.111. P-value of statistical test to verify null hypothesis of the coefficient is equal to 0.007 and it is less than 0.05. Since the coefficient is positive value and p-value is less than 0.05. H2 is accepted. Quantitatively speaking, if performance expectancy of mobile payment services is improved by 1 unit, behavioral intention of users towards this service will be increased by 0.111 unit.

H_3: Social influence affects positively and significantly on behavioral intention.

In the relationship between social influence and behavioral intention, the coefficient is estimated at 0.107. P-value of statistical test to verify null hypothesis of the coefficient is equal to 0.005 and it is less than 0.05. Since the coefficient is positive value and p-value is less than 0.05. H3 is accepted. Quantitatively speaking, if social influence of mobile payment services is improved by 1 unit, behavioral intention of users towards this service will be increased by 0.107 unit.

6. Discussion of empirical results

Hypothesis testing has shown that the effect of performance transaction speed on performance expectancy and social influence was rejected. This result was contradicted to empirical evidence provided by Teo et al. (2015) in which both performance expectancy and effort expectancy were influenced by perceived transaction speed and the influence level was statistically significant at 95% confidence. In different manner, perceived transaction speed, performance expectancy and social influence had positive and significant effect on behavioral intention to use mobile payment services in Cambodia. This empirical evidence was also found in empirical evidence provided by Mao et al. (2005), Chen (2006), Tan (2013), Abadzhmarinova (2014) and Odeh (2019). In addition, empirical evidence in the research supported research framework proposed by Tan (2013) and Sfenrianto (2015) in which behavioral intention was predicted well by perceived transaction speed, performance expectancy and social influence

7. Conclusion and future studies

The research was developed with main objective of verifying the effect of perceived transaction speed, performance expectancy and social influence on behavioral intention towards mobile payment services of Cambodian users. A survey was conducted, and it helped collecting 210 successful answer sheets from mobile payment users in Cambodia. Empirical evidence confirmed the role of perceived transaction speed, performance expectancy and social influence on behavioral intention and the effects were supported by statistically significant indictor. However, the effect of perceived transaction speed on performance expectancy and social influence were not statistically significant. It is explained by the fact that the recommendation to use mobile payment services from social influence persons is general and it does not address the positive side of using mobile payment services can

help to increase the money transferring process.

It is recommended that Cambodian government should increase the investment into telecommunication infrastructure to further support the speed of mobile payment services. A proper investment into 5G network and the strength of 4G network must be conducted with join-effort from different government departments in telecommunication industry. Cambodian government should issue the interest-free credit to mobile network operators to invest their information technologies systems to further support the speed of mobile payment services. Commercial banks in Cambodia and private mobile payment providers must recognize the importance of perceived transaction speed during daily usage of their customers. Therefore, they must design the system to support the speed of services as well as providing optimization in software development to reduce loading times of the services. Mobile payment providers may want to invest into cloud services from Amazon to over the operational and system issues when the number of mobile payment transactions increasing abnormally.

Acknowledgment

The authors are grateful to the anonymous referees of the journal for their extremely useful suggestions to improve the quality of the paper. Usual disclaimers apply**.**

References

Abadzhmarinova, R. S. (2014). *Exploring the effect of speed of purchase on consumers' intention to adopt NFC mobile payments*. Thesis. Copenhagen Business School.

Ajzen, I. (1985). *From intentions to actions: A theory of planned behavior*. In J. Kuhl & J. Beckmann (Eds.), Action control: From cognition to behavior. Berlin, Heidelber, New York: Springer-Verlag. (pp.11-39).

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211.

Amit Shanka, Biplab Datta (2018). Factors Affecting Mobile Payment Adoption Intention: An Indian Perspective. *Global Business Review*, 19(3), S72-S89

Applied Market Research. (2018). *Mobile payment market outlook: 2023*. Retrieved from https://www.alliedmarketresearch.com/mobile-payments-market. Accessed on 2nd January 2020.

Asian Development Bank. (2020). *Cambodia: Economy*. Retrieved from https://www.adb.org/countries/cambodia/economy. Accessed on 2nd January 2020.

Aslam, W., Ham, M., & Arif, I. (2017). Consumer behavioral intentions towards mobile payment services: An empirical analysis in Pakistan. *Market-Tržište, 29*(2), 161-176.

Balan, R. K., Ramasubbu, N., Prakobphol, K., Christin, N., & Hong, J. (2009). *mFerio: the design and evaluation of a peer-to-peer mobile payment system*. MobiSys'09 Proceedings of the 7th International Conference on Mobile Systems, Applications and Services.

Bezhovski, Z. (2016). The future of the mobile payment as electronic payment system. *European Journal of Business and Management, 8*(8), 127-132.

Chao, C-M. (2019). Factors determining the behavioral intention to use mobile learning: An application and extension of the UTAUT model. *Frontiers in Psychology, 10*, pp.1.

Chen, L-D. (2006). *A theoretical model of consumer acceptance of mPayment*. Americas Conference on Information Systems (AMCIS) 2006 Proceedings.

Cheng, F. M., Phou, S., & Phuong, S. (2018). *Factors influencing on consumer's digital payment adaption – A comparison of technology acceptance model and brand knowledge*. Proceedings of the 21st Asia-Pacific Conference on Global Business, Economics, Finance & Social Sciences (AP18Taiwan Conference) Taipei-Taiwan.

CryptoAsia. (2020). *The top mobile payment systems in Cambodia*. Retrieved from https://www.cryptoasia.co/top-mobile-payment-systems-cambodia/. Accessed on 2nd January 2020.

Daniel, E. (2016). The usefulness of qualitative and quantitative approaches and methods in researching problem-solving ability in science and education curriculum. *Journal of Education and Practice, 7*(15), 91-100.

Davis, F. D. (1989). Perceived usefulness, perceives ease of use and user acceptance of IT. *MIS Quarterly, 13*(3), 319-339.

Dawi, N. M. (2019). Factors influencing consumer intention to use QR code mobile payment – A proposed framework. *International Journal of Recent Technology and Engineering (IJRTE), 8*(2), 114-120.

Detrixhe, J. (2019). *Asia's payment companies generate more revenue than almost the rest of the world combined*. Quartz. Retrieved from https://qz.com/1715133/asia-generates-the-most-digital-payment-revenue-by-far-says-mckinsey/. Accessed on 2nd January 2020.

Deepak Chawla, Himashu Joshi (2020). *Role of Mediator in Examining the Influence of Antecedents of Mobile Wallet Adoption on Attitude and Intention*. Global Business Review.

Do, N., Tham, J., Khatibi, A., & Azam, S. (2019). An empirical analysis of Cambodian behavior intention towards mobile payment. *Management Science Letters, 9*(12), 1941-1954.

Do, N., Tham, J., Azam, S., & Khatib, A. (2020). The effects of factors influencing on user behavior intention to use mobile payment: Evidence from Cambodia. *International Journal of Data and Network Science, 4*(2), 213-224.

Fintech Singapore. (2018). Cambodia sees growing mobile payment industry. Retrieved from https://fintechnews.sg/23022/mobilepayments/cambodia-mobile-payment-industry-growing. Accessed on 2nd January 2020.
Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior. An introduction to theory and research*. Reading, MA Addison-Wesley.
Gholami, R., Ogun, A., Koh, E., & Lim, J. (2010). Factors affecting e-payment adoption in Nigeria. *Journal of Electronic Commerce in Organizations (JECO), 8*(4), 51-67.
Global Data. (2018). *Payments landscape in Cambodia: Opportunities and risks to 2021*. Retrieved from https://store.globaldata.com/report/fs0119ci--payments-landscape-in-cambodia-opportunities-and-risks-to-2021/. Accessed on 2nd January 2020.
Haanperä, T. M. (2012). Easy mobile person-to-person payments – End-users' perspective. Thesis. Aalto University.
Halcomb, E. J., & Hickman, L. (2015). *Mixed methods research*. University of Wollongong.
Hoofnagle, C. J., Urban, J. M., & Su, L. (2012). *Mobile payments: Consumer benefits and new privacy concerns*. BCLT Research Paper.
Huber, A. (2004). *Mobile payment – A comparison between the Europe and the US*. Thesis. University of Zurich.
Jambulingam, M. (2013). Behavioral intention to adopt mobile technology among tertiary students. *World Applied Sciences Journal, 22*(9), 1262-1271.
Karnouskos, S. (2004). Mobile payment: A journey through existing procedures and standardization initiatives, *IEEE Communications, Surveys and Tutorials, 6*(4), 44-66.
Karthikeyan, S. R. (2012). *Mobile payments: A comparative study between European and non-European market*. Thesis. KTH-Royal Institute of Technology Stockholm, Sweden.
Kiriakidis, S. (2015). Theory of planned behavior: The intention-behavior relationship and the perceived behavioral control (PBC) relationship with intention and behavior. *International Journal of Strategic Innovative Marketing, 3,* 40-51.
Liu, G-S., & Tai, P. T. (2016). A study of factors affecting the intention to use mobile payment services in Vietnam. *Economics World, 4*(6), 249-273.
Mamman, M., Ogunbado, A. F., & Abu-Bakr, A. S. (2016). Factors influencing customer's behavioral intention to adopt Islamic banking in Northern Nigeria: A proposed framework. *IOSR Journal of Economics and Finance (IOSR-JEF), 7*(1), 51-55.
Mao, E., Srite, M., Thatcher, J., & Yaprak, O. (2005). A research model for mobile phone service behaviors: Empirical validation in the U.S. and Turkey. *Journal of Global Information Technology Management, 8*, 7-28.
Market Watch. (2018). *Mobile wallet market evolution, revenue, demand, end users and forecast to 2024*. Retrieved from https://www.marketwatch.com/press-release/mobile-wallet-market-evolution-revenue-demand-end-users-and-forecast-to-2024-2018-09-26. Accessed on 2nd January 2020.
Massoth, M., & Bingel, T. (2009). Performance of different mobile payment service concepts compared with a NFC-based solution. Fourth International Conference on Internet and Web Applications and Services.
McKinsey & Company. (2018). *Global payments 2018: A dynamic industry continues to break new ground*. Retrieved from. Accessed on 2nd January 2020.
Mekong Business Initiative. (2017). *Ecommerce: Readiness and opportunities in Cambodia – Overview of Cambodia's ecommerce market landscape*. Retrieved from. Accessed on 2nd January 2020.
Min, Q. F., Ji, S. B., & Qu, G. (2008). Mobile commerce user acceptance study in China: A revised UTAUT model. *Tsinghua Science and Technology, 13*(3), pp.257-264.
Mordor Intelligence. (2019). *Mobile payments market – growth, trends, and forecast (2019-2024).* Retrieved from Accessed on 2nd January 2020.
National Bank of Cambodia. (2018). *NBC annual reports*. Online. Retrieved from. Accessed on 2nd January 2020.
National Bank of Cambodia. (2020). Background of payment systems. Retrieved from. Accessed on 2nd January 2020.
Nielsen. (2016). *Mobile money: From shopping to banking to payments, how mobile is transforming commerce around the world*. Retrieved from. Accessed on 2nd January 2020.
Nor Hazlina Hashim, Normalini, Norhazlina Sajali (2018). The Influence Factors Towards Mobile Advertising Message Content on Consumer Purchase Intention. *Global Business Review*, vol. 19, 5: pp. 1187-1206.
Odeh, M. H. (2019). Factors affecting the adoption of financial information systems based on UTAUT model. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 9*(2), pp.108-116.
Phua, P. L., Wong, S. L., & Abu, R. (2012). Factors influencing the behavioral intention to use the internet as a teaching-learning tool in home economies. *Procedia – Social and Behavioral Sciences, 59*, pp.180-187.
PwC. (2019). *Mobile payment report 2019*. Accessed on 2nd January 2020.
Raina, V. K. (2014). *Overview of mobile payment: Technologies and security*. Birla Institute for Technology, India.
Ramezani, E. (2008). *Mobile payment: E-business technology*. Retrieved from. Accessed on 2nd January 2020.
Sair, S. A., & Danish, R.Q. (2018). Effect of performance expectancy and effort expectancy on the mobile commerce adoption intention through personal innovativeness among Pakistani consumers. *Pakistan Journal of Commerce and Social Sciences, 12*(2), pp.501-520.
Saunders, M., Lewis, P., and Thornhill, A. (2019). *Research methods for business students*. (8th Ed.). Pearson Education Limited.

Sfenrianto, J. (2015). A model of factors influencing consumer's intention to use e-payment system in Indonesia. *Procedia Computer Science, 59*, pp.214-220.

Tan, P. J. B. (2013). Applying the UTAUT to understand factors affecting the use of English e-learning websites in Taiwan. *SAGE Open*, pp.1-12.

Teo, A., Tan, G., Ooi, K., Hew, T., & Yew, K. (2015). The effects of convenience and speed in m-payment. *Industrial Management & Data Systems, 115*(2), pp.311-331.

Tham, J., Ab Yazid, M. S., Khatibi, A. A., & Azam, S. F. (2017). Internet and data security–understanding customer perception on trusting virtual banking security in Malaysia. *European Journal of Social Sciences Studies*, *2*(7).

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425-278.

Vilmos, A., & Karnouskos, S. (2004). *Towards a global mobile payment service*. 3rd International Conference on Mobile Business 2004 (m>Business), 12-13 July 2004, New York City, U.S.A.

World Bank. (2020). Cambodia. Accessed on 2nd January 2020.