

Tien Thao Cong Phan; Tri Quan Dang; Nguyen Thanh Luan

Conference Paper — Published Version

A customer value satisfaction, and loyalty perspective of mobile payment app.

Suggested Citation: Tien Thao Cong Phan; Tri Quan Dang; Nguyen Thanh Luan (2023) : A customer value satisfaction, and loyalty perspective of mobile payment app., In: Phan Ngoc Chinh (Ed.): Proceedings The International Conference on Business Based on Digital Platform (BDP-3), ISBN 978-604-79-4008-0, Finance Publishing House, Hung Yen, Vietnam, pp. 762-774

This Version is available at:

<https://hdl.handle.net/10419/279148>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

A customer value satisfaction, and loyalty perspective of mobile payment app.

Tien Thao Cong Phan¹, Tri Quan Dang¹, Nguyen Thanh Luan¹

Abstract.

Although the mobile payment application is very popular and spread all over the world, however, in the increasingly competitive market economy, its market dominance has been affected. To achieve a sustainable competitive advantage, a model has been studied on the views of customer value, satisfaction and loyalty towards mobile payment applications. Based on data analysis of 303 app users, we found that usage intent is a key to driving customer satisfaction and loyalty for mobile payment apps. The findings show that perceived usefulness, perceived ease of use, social influence, quality of service and attitude towards using, thereby driving user intention to use for mobile payment applications. The study provides theoretical insights and practical implications for the field of mobile payment services.

Keywords. *Perceived Usefulness, Perceived Ease of Use, Social influence, Quality of service, and Attitude Toward Using.*

1. Introduction

The IT industry has grown over time in tandem with the advancement of smart mobile devices. As a result, trade financiers must find solutions to become more and more outstanding and strive to reach out to be able to compete with previous generations by Chung and Liang. (2020). The next generation of payment technologies that are all based on information technology, such as quick response codes (QRs) or mobile payment app (Chang et al., 2022; Fu et al., 2022). Results from the report of Allied Market Research (2020), the global mobile payments market is expected to grow from 1.48 trillion USD in 2019 to 12.6 trillion USD in 2027, at an annual growth rate is 30.1%. Mobile apps are experiencing significant growth in Southeast Asia as evidenced by annual growth rates and daily usage hours. Over 6,000 apps are downloaded in Vietnam, spending over USD 900 every minute, contributing to 22% year-over-year growth by Data.ai. (2023).

In an increasingly competitive market, building customer loyalty is critical to gaining market share and achieving a sustainable competitive advantage. Therefore, it is imperative for mobile payment service providers to identify factors affecting user retention and take steps to retain existing customers and enhance loyalty (Zhong & Chen, 2023). Mobile payment trends are changing shopping habits in many Asian countries and are growing in popularity in Vietnam, according to a report by Asia Plus' research system Q&Me. In terms of popularity in Vietnam, MoMo is the top with 97%, ZaloPay is second with 68%, ViettelPay and Moca are third (62%) and fourth (46%) respectively by Asian Plus. (2020). Mobile payment apps have proven to be the preferred payment option for Southeast Asian consumers, with user numbers expected to grow by 58% from 2020 to 2025 (Kaur et al., 2020).

The advent of mobile payment apps has revolutionized the way money is transacted, offering unprecedented convenience and proficiency these days. However, so far, many studies have mainly focused on the history of acceptance behaviour of mobile payment users, and specific studies on user loyalty in this context are still rare (Yuan et al., 2020). This paper uses a virtual system of the Technology Acceptance Model (TAM) to examine customer appreciation, fulfilment, and loyalty to a distinctive mobile payment app: mobile payment apps. Therefore, we felt the need to shift the focus of current mobile payments research from initial rollout to consumer behaviour and focus on customer value, satisfaction, and loyalty for mobile payment applications.

Customer retention is still understudied and needs further attention in this particular market (Yuan et al., 2020).

Our inquiry about addresses holes in understanding versatile payment devotion by considering components such as esteem, quality, framework quality, data quality, and benefit quality as indicators of seen esteem. We utilize TAM models and auxiliary examinations to comprehensively evaluate client appraisals, satisfaction, and believe in versatile payment applications. This consideration uncovers qualities and ranges for change within the app's effect on customers' lives. It contributes to showcasing

and client behavior inquire about by analyzing client devotion from a mental esteem viewpoint, giving understanding into buyer behavior in portable installments past detail and quality concepts. Moreover, our investigate progresses the understanding of the relationship between multidimensional values, satisfaction, and devotion, and investigates how elective fascination may direct the affiliation between satisfaction and dependability..

2. Literature review

In this area, we begin with displaying a diagram of ATM and clarify the most structure (e.g. esteem and fulfilment). We at that point present the use of TAM within the IS field and summarize the three fundamental issues underlying previous investigations utilizing TAM. Another, we talk about the structures of our investigative show, expanding and building upon the first TAM.

2.1 Existing mobile payment app studies

Numerous researchers have been working within the field of information systems (IS) (Wenbo Yang, 2019; Dawu Gu, 2019; Silas Formunyuy Verkijika, 2021; Avinash Kumar, 2023; Ganesh Dash, 2023). Various fields of research on information systems (IS) have been applied such as business management (Maghsoudi, 2023), information technology (Pawar, 2022), organizational behavior (Lakshmi, 2023), economics (Takeda, 2022), sociology (Wang, 2023). To emphasize the mechanism of information systems as well as explain different psychological perspectives, recent IS studies such as performance amid COVID-19 (Saad, 2023) have shown this to be an interesting topic for many scholars and clarified in various articles. Some latest literature reviews on IS are summarised in Table 1.

Table 1. Previous studies

Authors	Category	Factors	Descriptions
(Maghsoudi, 2023)	Business Management	Business intelligence, system dynamics, implementation of business intelligence, information systems	This research aims to offer profitable bits of knowledge into the variables impacting organizational acknowledgment
(Pawar, 2022)	Information technology	Small and medium enterprise (SME), cybersecurity, cybersecurity controls, information systems	This article will give an outline of the significance of cybersecurity for SMEs and the dangers they confront within the advanced time
(Lakshmi, 2023)	Organizational behaviours	Information systems, e-learning, AI-based online education system,	The rise of advanced learning instruments has the potential to convert instruction, making it more adaptable, intuitively, and individualized
(Takeda, 2022)	Economics	COVID-19, micro, small and medium enterprises (MSMEs), employment, sales, information systems, Cash shortage, digitalization	This study aims to fill this crevice by analysing study information from MSMEs in eight creating nations over South, Southeast, and Northeast Asia
(Wang, 2023)	Sociology	Digitalization, public health, income inequality, information	This study aims to examine the relationship between digitalization and public health,

		systems, developing countries	considering the mediating effect of income inequality.
(Chakraborty, 2022)	Mobile payment applications	Information systems, customer involvement (COI), identified functional (FUV)	The study contributes to the existing literature by expanding the application of the theory of consumption values in the context of MPAs and exploring the role of trust and customer involvement

In the use of mobile payment applications, very little research has been done on the factors affecting people's information systems (Liu, 2023). Regardless, one such study on IS was done in India in the field of mobile payment applications (Chakraborty, 2022). This research looked at how natural components affected consumers. This study examines how natural ingredients influence consumer value, satisfaction, and loyalty in mobile payment applications. For mobile payment application usage. Another article studying the influence of IS did a systematic study of the world's largest smartphone and mobile payments market – China (Wenbo Yang, 2019). As a result, it is basic to utilize IS hypothesis to investigate a customer value, satisfaction, and loyalty perspective of mobile payment app in HCMC, Vietnam.

2.2 Hypotheses development

2.2.1 Perceived Usefulness (PU)

A certain technology can help the user to identify and complete a certain task well that is one of the manifestations of usefulness (Verkijika & Neneh, 2021a). Effective experiences when users use mobile payment applications often have a positive effect on their technology usefulness (Singh et al., 2020; Yan et al., 2021a). It saves time and effort; improve the ability to effectively manage financial transactions; process payments actively and efficiently and provide fast and convenient customer support services. In today's market, e-wallets are increasingly developing with fierce competition between companies, the higher the utility, the more customers will be attracted (Karim et al., n.d.-a). Because customers are the ones who have the right to choose the products and services they want. Because the person who has the right to choose products and services is the customer. In summary, the present study hypothesizes that:

H1. Perceived Usefulness (PU) positively influences the Attitude Toward Using (AT) mobile payment app.

2.2.2 Perceived Ease of Use (PEU)

Ease of use refers to the focus on the user's view of a certain technology with the utmost expression and effort; the use can see the simplicity, user-friendliness of the mobile payment application and it also plays a very important role in the adoption of new technologies such as the mobile payment application (Yan et al., 2021b). Users say they love some mobile payment applications because of the ease of use such as easy account registration, easy to use functions and easy to learn; users can also see that every transaction becomes simple and easy to understand (Verkijika & Neneh, 2021b). By assessing users' recognition of the ease of use of the app, we gauge their initial experience and potential boundaries for selection. In summary, the present study hypothesizes that:

H2. Perceived Ease of Use (PEU) positively influences the Attitude Toward Using (AT) mobile payment app.

2.2.3 Social influence (SI)

Individuals perceive work based on a view of social influence to achieve feelings of belonging, satisfaction, and loyalty (Dzandu et al., 2022). Social influence is the degree to which a person perceives that people important to them think they should use new information (Xu et al., 2015). Individuals tend to be influenced by people around them such as friends, family; influencers also prefer to use mobile payment apps over cash. Each construct has the explicit or implicit implication that people's behavior will be influenced by their own views of how others will perceive them when they use a particular technology

(Argo & Dahl, 2020). Recommendations from trusted people and the support of mobile payment apps by influencers can serve as a solid spark for customers to embrace your apps and payment agreements. In summary, the present study hypothesizes that:

H3. Social influence (SI) positively influences the Attitude Toward Using (AT) mobile payment app.

2.2.4 Quality of service (QS)

Service quality can help consumers visualize which is the most important factor in creating customer loyalty and continued use of mobile payment services (Darko et al., 2023). This structure assesses how easy it is to pay utility bills, ability to identify problems with proficiency, ease of middleman payments, and the ability to integrate the Mobile Payments app with services; banking and various applications. With the development of information technology by Lv et al. (2022), social networks by Cao et al. (2021) and artificial intelligence (AI) by Olan et al. (2021), the experience of quality consumer service quality can be easily understood and transformed by service providers (Darko et al., 2023). The user's experiences with the app's ability to pay in installments and the intuitive rationalization of their money are the fundamental components that determine their overall satisfaction. In summary, the present study hypothesizes that:

H4. Quality of service (QS) positively influences the Attitude Toward Using (AT) mobile payment app.

2.2.5 Attitude Toward Using (AT)

Attitude can be defined as the belief that an individual has regarding the outcome that will be given when adopting certain behaviours and his assessment of the possible outcome, it focuses on the user recognition of the security, stable quality and comfort of the mobile payment application (Dash et al., 2023). In destinations around the world where mobile payment methods are adopted, customers' actual use of mobile payment methods increases as they respond positively to them (L.-T. Nguyen, Dwivedi, et al., 2022; L.-T. Nguyen, Nguyen, et al., 2023). It takes into consideration the app's security measures, advancements, and motivations that improve the client encounter, as well as the ease of making instalments at different retail foundations. Understanding users' demeanours toward mobile payment apps is significant in surveying their general fulfilment and the probability of proceeded utilization. In summary, the present study hypothesizes that:

H5. Attitude Toward Using (AT) positively influences the Intention to Use (IU) mobile payment app.

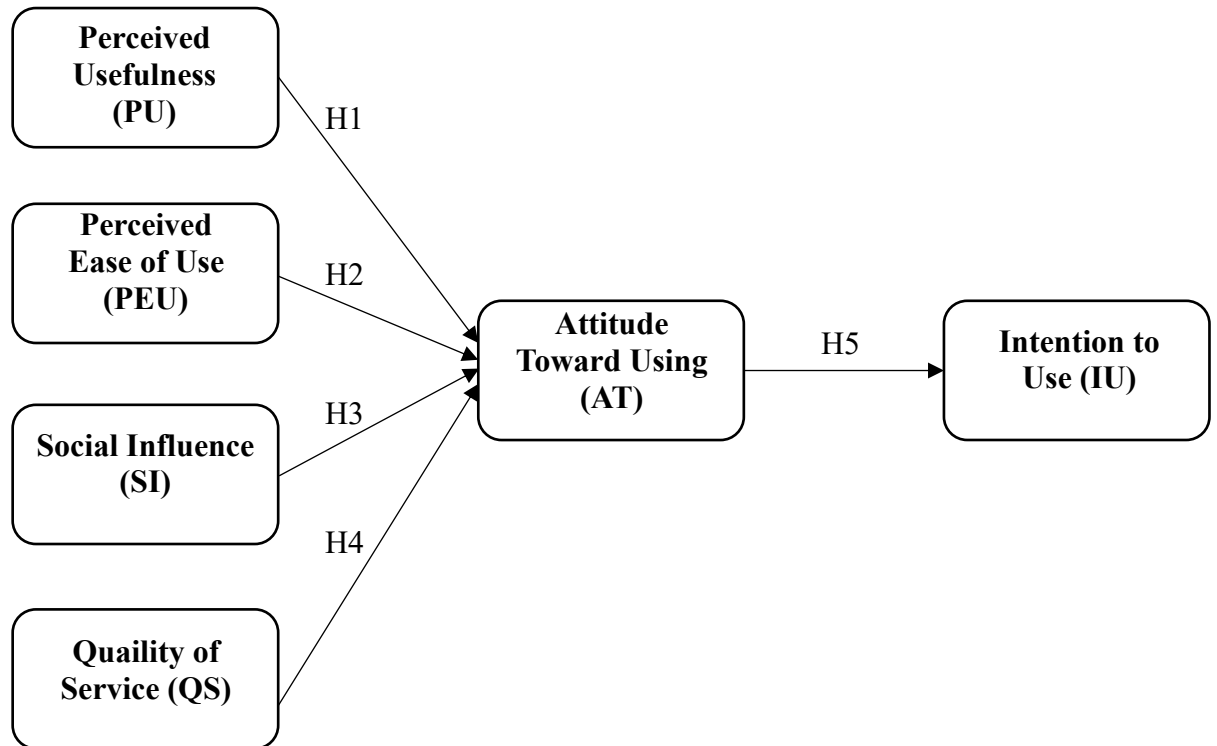


Figure 1. Proposed model

3 Research methodology

3.1 Data collection

This logical article looks at client esteem, satisfaction, and devotion towards portable payment applications. It analyses theories based on existing speculations and utilizes a quantitative strategy to recognize investigate questions (D. T. V. Dang et al., 2022; Phan et al., 2023). The consider studied about 9 million individuals in Ho Chi Minh City, Vietnam, in July 2023, employing a non-probabilistic testing strategy due to viable confinements. Ho Chi Minh City was chosen as the study location since of its huge populace with noteworthy get to to innovation and portable payment applications (Tien, Tri, et al., 2023). The study included statistic questions deciphered into Vietnamese for superior understanding and precision (T. Q. Dang et al., 2023; H.-B. Nguyen & Nguyen, 2021). Moreover, the survey things were changed and upgraded based on a comprehensive writing audit.

3.2 Measures

In this study, we have developed measurements, hypotheses that have been derived from previous surveys. In the study, we used survey questionnaires through Google Form software to test 5 constructs with a 24-item scale (L.-T. Nguyen, Nguyen, et al., 2022). We have collected the questionnaires from previous studies and updated and expanded the survey content from this study. This questionnaire was started in English and then we converted the questionnaire from English to Vietnamese - the official and most widely used language in Vietnam; We finally translated the survey from Vietnamese to English to ensure the most complete and accurate research. In depth, it covers about Perceived Usefulness (PU), Perceived Ease of Use (PEU), Social influence (SI), Quality of service (QS), and Attitude Toward Using (AT). We rate all questions using a 7-point Likert scale, from 1 "strongly disagree" to 7 "strongly agree". According to G*Power statistical software version 3.1, the effect size is $f^2 = 0,15$, probability of error $\alpha = 0,05$, power level $1 - \beta = 0,8$ and the number of predictors = 5, it resulted in a minimum sample size of 92. Based on the current ideas and the results of previous research papers, the purpose of this study

is the view of customer value, satisfaction and loyalty towards mobile payment application. Therefore, the quantification of this study is consistent with the objective of this paper.

Table 2. Constructs and items to measure constructs

Perceived Usefulness (PU)		
No	Items	Sources
PU1	I use Mobile payment apps to make payments, which saves me time and effort.	(Silas Formunyuy Verkijika, Brownhilder Ngek Neneh, 2021), (Sedigheh Moghavvemi, Tan Xin Mei, Seuk Wai Phoong, Seuk Yen Phoong, 2021),
PU2	Mobile payment apps improve my capacity to effectively manage my financial transactions.	
PU3	I think using Mobile payment apps makes handling payments more productive for me.	
PU4	Mobile payment apps's transaction system has no fees and quick customer support.	
Perceived Ease of Use (PEU)		
No	Items	Sources
PEU1	Signing up for a Mobile payment apps account is very easy.	(Debarun Chakraborty, Aaliyah Siddiqui, Mujahid Siddiqui, Nripendra P. Rana. Ganesh Dash , 2022)
PEU2	I find using Mobile payment apps to be simple to learn.	
PEU3	Mobile payment apps's features and functions are easy to use and navigate through.	
PEU4	Using the Mobile payment apps, I found transactions to be simple.	
Social Influence (SI)		
No	Items	Sources
SI1	People around me (friends, family,...) all use Mobile payment apps and e-wallets to pay.	(Norman Shaw, Brenda Eschenbrenner, Benedikt M. Brand, 2022)
SI2	Mobile payment apps's promotions in the media attracted me.	
SI3	People recommend me to buy online with Mobile payment apps e-wallet instead of Cash on Delivery.	
SI4	Influencers are using Mobile payment apps e-wallet for payment.	
Quality of Service (QS)		
No	Items	Sources
QS1	I can easily pay bills for electricity, water, landline phone, cable TV, internet,... with Mobile payment apps e-wallet.	(Niklas Eriksson, Ates Gökhan, Minna Stenius, 2021) (Chien-Chiang Lee, , Pei-Fen Chen, Pin-Jie Chu , 2023)
QS2	Mobile payment apps always receive information and handle problems as quickly and efficiently as possible.	
QS3	Mobile payment apps are linked with many utility services, banks, and applications, so it is very convenient to make intermediary payments for users.	
QS4	I can easily book air tickets, bus tickets, train tickets, and VETC with the Mobile payment apps e-wallet without going to the place.	
Attitude Toward Using (AT)		
No	Items	Sources

AT1	I find using the Mobile payment apps very safe and reliable.	(Mian Wu, Yulong (David) Liu, Sajjad M. Jasimuddin, Zuopeng (Justin) Zhang, 2023)
AT2	Mobile payment apps offer many good promotions and incentives for users.	
AT3	Mobile payment apps help me pay at convenience stores, supermarkets, coffee shops, milk tea, and restaurants,... quickly and easily.	
AT4	I can buy goods online or transfer money to friends and relatives conveniently by Mobile payment apps.	
Intention to Use (IU)		
No	Items	Sources
IU1	I can pay for anything with the Mobile payment app e-wallet anytime and anywhere, regardless of time and space limitations.	(Puneet Kaur, Amandeep Dhir, Naveen Singh, Ganesh Sahu, Mohammad Almotairi, 2020)
IU2	I will be using the Mobile payment app often.	
IU3	I will recommend the Mobile payment application to my friends and relatives.	
IU4	I will plan to continue using e-wallets in the future.	

4. Results and discussion

4.1 Demographics

Table 3. Respondent profile

Demographic Characteristics		Frequency (Total: 303)	Percentage
Gender	Male	137	45.21%
	Female	166	54.79%
Age	Below 20 years old	19	6.27%
	21–25 years old	198	65.35%
	26–30 years old	77	25.41%
	Above 30 years old	9	2.97%
Occupation	Student/College	255	84.16%
	Working	48	15.84%
Monthly Income	Less than or equal to \$200	181	59.74%
	\$200 to \$500	72	23.76%
	\$500 to \$1000	27	8.91%
	\$1000 and above	23	7.59%
Experience using mobile payment app	Less than 6 months	36	11.88%
	From 6 months to 1 year	54	17.82%
	From 1 year to 2 years	77	25.4%
	Over 2 years	136	44.9%

Note n=303

Table 3 shows that women account for a larger share than men (women: 54.79%, men: 54.21%). This sample is mainly people from 21-25 years old, accounting for 65.35%. Students/College are the majority, accounting for about 84.16%. In terms of monthly income, mainly people with incomes less than

\$200, then people with incomes between \$200-\$500. The majority of experience using mobile payment applications is more than 2 years.

4.2 Measurement model assesment

These days, researchers are all seeking to use standardized reports, and it helps to demonstrate more structured models (B.-T. H. Nguyen, Le, et al., 2023). First, the reliability of the structure must be determined by the Composite reliability (CR) and Dijkstra-rho Henseler's (rho_a) confidence (L.-T. Nguyen, Duc, et al., 2023).

Table 4. Loading, cronbach's alpha, Dijkstra Henseler, composite reliability, and average variance extracted

Constructs	Items	Loading	Cronbach's alpha	Composite reliability (rho_a)	CR	Average variance extracted (AVE)
AT	AT1	0.828	0.848	0.850	0.898	0.688
	AT2	0.844				
	AT3	0.862				
	AT4	0.782				
IU	IU1	0.866	0.838	0.850	0.892	0.675
	IU2	0.833				
	IU3	0.845				
	IU4	0.735				
PEU	PEU1	0.849	0.832	0.833	0.887	0.664
	PEU2	0.845				
	PEU3	0.820				
	PEU4	0.740				
PU	PU1	0.775	0.852	0.858	0.900	0.693
	PU2	0.855				
	PU3	0.856				
	PU4	0.840				
QS	QS1	0.924	0.927	0.927	0.948	0.821
	QS2	0.924				
	QS3	0.891				
	QS4	0.885				
SI	SI1	0.920	0.938	0.938	0.956	0.844
	SI2	0.915				
	SI3	0.924				
	SI4	0.915				

Table 5. Hetero-Trait-Mono-Trait Assessment (0.90)

	AT	IU	PEU	PU	QS	SI
AT						
IU	0.829					
PEU	0.805	0.740				
PU	0.503	0.557	0.686			
QS	0.795	0.861	0.661	0.545		
SI	0.813	0.840	0.652	0.478	0.816	

According to the previously reported tables, the rho_a values and the composite reliability CR must be above 0.7, as it shows that the structure meets the high confidence (B. H. T. Nguyen, Le, et al., 2023). Table 4 shows that CR values are all above 0.7 (L.-T. Nguyen, 2023). The study used extracted mean average variance extracted (AVE) and item factor loading (FL) to test convergence validity (Fornell & Larcker, 1981). As a rule of thumb, the factor loading should be greater than 0.7, and the AVE should be greater than 0.5, and Table 4 should satisfy that need. Therefore, the convergent values of all variables are appropriate (C. N. B. Dang et al., 2023; Tien, Luan, et al., 2023).

Table 6. Cross loadings

	AT	IU	PEU	PU	QS	SI
AT1	0.828	0.583	0.659	0.440	0.560	0.586
AT2	0.844	0.582	0.513	0.338	0.619	0.626
AT3	0.862	0.590	0.611	0.345	0.642	0.637
AT4	0.782	0.576	0.504	0.309	0.518	0.556
IU1	0.653	0.866	0.524	0.414	0.693	0.698
IU2	0.549	0.833	0.446	0.355	0.636	0.625
IU3	0.599	0.845	0.451	0.377	0.607	0.641
IU4	0.491	0.735	0.645	0.414	0.557	0.482
PEU1	0.530	0.517	0.849	0.484	0.451	0.464
PEU2	0.494	0.430	0.845	0.455	0.406	0.393
PEU3	0.531	0.451	0.820	0.461	0.479	0.479
PEU4	0.655	0.588	0.740	0.494	0.554	0.542
PU1	0.351	0.358	0.423	0.775	0.413	0.361
PU2	0.335	0.386	0.505	0.855	0.410	0.317
PU3	0.323	0.363	0.474	0.856	0.367	0.333
PU4	0.416	0.453	0.540	0.840	0.422	0.413
QS1	0.631	0.686	0.550	0.477	0.924	0.697
QS2	0.650	0.688	0.507	0.391	0.924	0.737
QS3	0.644	0.668	0.558	0.425	0.891	0.649
QS4	0.635	0.716	0.527	0.473	0.885	0.673
SI1	0.660	0.673	0.568	0.424	0.706	0.920
SI2	0.656	0.672	0.530	0.365	0.705	0.915
SI3	0.670	0.701	0.533	0.392	0.676	0.924
SI4	0.681	0.713	0.525	0.407	0.708	0.915

A non-parametric bootstrap method was used to evaluate discriminant values and the Hetero-Trait-Monotrait Score (HTMT<0.90), as well as the HTMT inference rate of the correlations, was determined (T. Q. Dang et al., 2023; Tien, Luan, et al., 2023). All values in Table 5 are less than 1, with lower and upper limits of 95% confidence intervals, thus demonstrating adequate discriminant validity and the proposed variables to be statistically different from each other (Karim et al., n.d.-b). Statistical significance between each item in the sample is different according to this result. In addition, as shown in Table 7, the "Fornell-Larcker criterion test" (Fornell & Larcker, 1981) demonstrated that the coefficients have a lower correlation with the square root of AVE. The cross-load test is also presented in Table 6. The results show that the cross-load is high for connected structures and low for unrelated structures (Henseler et al., 2015).

Table 7. Fornell-Larker criterion

AT	IU	PEU	PU	QS	SI
----	----	-----	----	----	----

AT	0.829					
IU	0.703	0.821				
PEU	0.691	0.621	0.815			
PU	0.433	0.473	0.587	0.832		
QS	0.706	0.761	0.591	0.486	0.906	
SI	0.726	0.751	0.587	0.433	0.761	0.919

4.3 Structural model assessment

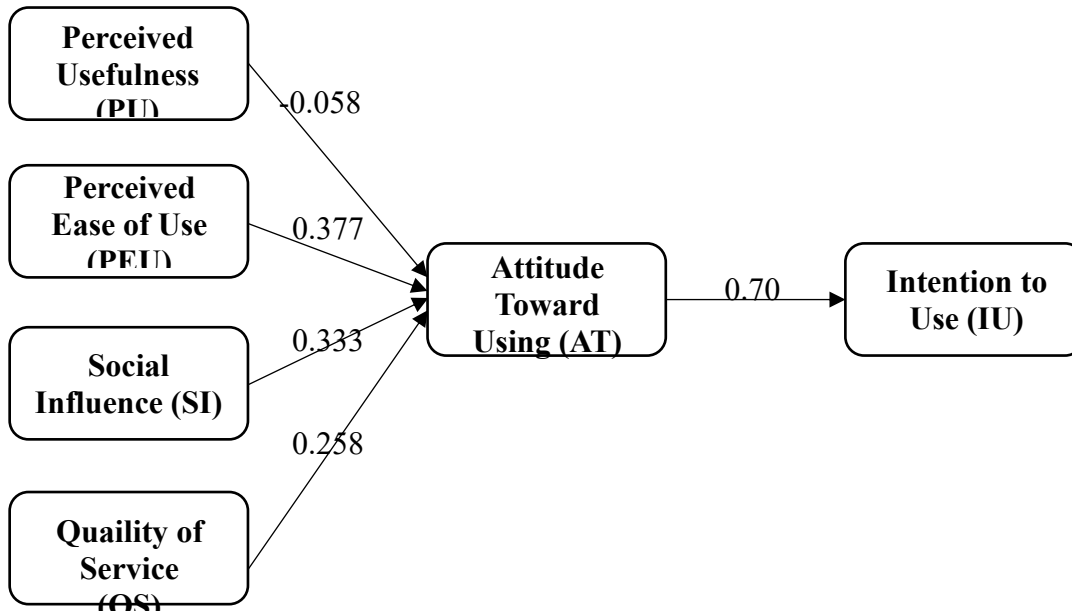


Figure 2. Structural model testing

Next, Standardized Root Mean Square Residual (SRMR) was used to assess the global fit of both the estimation model and the saturation model (Henseler et al., 2016). According to Table 8, the model is considered to be a good fit, because the results of the saturation and estimated models are both lower than 0.08 (Hu & Bentler, 1999). Before evaluating the internal structural model, the collinearity test is also used to check for the presence of highly connected components. There is no problem of multicollinearity because the variance inflation factor (VIF) values for all constructs are lower than the recommended value of 5.0 (Tan & Ooi, 2018).

Table 8. Outcome of the Structural Model Examination

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV)	P values	Remark
AT -> IU	0.703	0.704	0.039	17.942	0.000	Supported
PEU -> AT	0.377	0.378	0.051	7.462	0.000	Supported
PU -> AT	-0.058	-0.055	0.046	1.265	0.206	Unsupported
QS -> AT	0.258	0.258	0.056	4.595	0.000	Supported
SI -> AT	0.333	0.332	0.058	5.772	0.000	Supported

4.4 Discussion

The present study extends TAM to the field of mobile payment applications and examines the variables impacting client proposal of the application. The comes about appears that the deliberate to proceed to utilize the app, the customer's fulfilment with the app, and the hedonic benefits inferred from utilizing the app straightforwardly influence the user's purpose to suggest the app. This is often a solid indicator of their app recommender behaviour. Practical benefits have a positive impact on client fulfilment and deliberate to proceed to utilize the app: the more down-to-earth and epicurean benefits the client gets, the more fulfilled they are with the app and the more grounded their deliberate to proceed to utilize the app (Chenyang Xu, Daniel Peak, Victor Prybutok, 2015). In spite of the fact that not a direct determinant, utilitarian benefits were found to apply its impact on purposeful to suggest through fulfillment and app continuation deliberate. This result is in line with de Matos and Rossi's (Celso Augusto de Matos, Carlos Alberto Vargas Rossi, 2008) meta-analysis of earlier WOM writing which concluded that few considers found that item quality (a concept comparable to utilitarian benefits) may be a coordinate predecessor of WOM. The result here suggests that clients don't recommend their apps essentially since they are valuable and tall in quality; in reality, they suggest apps that provide such utilitarian benefits when they are fulfilled with the apps and are willing to proceed to utilize them within the future. This study supports the significant effects of satisfaction on intention to continue using and recommending a mobile payment application. Continued use intention and app recommendation are two dimensions of customer loyalty. Although satisfied customers are not necessarily loyal (which raises concerns that users may not intend to continue using mobile payment applications once satisfied). The conceptual model was at that point tried utilizing PLS-SEM. The result of this examination for the most part backed its proposed speculations, and a few discoveries can be drawn from these comes about (Mahmaod Alrawad, Abdalwali Lutfi, Mohammed Amin Almaiah, Ibrahim A. Elshaer, 2023).

5 Conclusion

In conclusion, mobile payment applications bring many benefits and convenience to users in making purchases of any kind. This research paper has important implications for the field of digitization of payment forms. However, this study still has some limitations. One of the limitations to consider is that the research area only revolves around users in the Ho Chi Minh City area. Therefore, the results of this study are not applicable to areas outside Ho Chi Minh City. To address this huge limitation, I hope that further studies can collect user data in other regions or study other aspects of mobile payment application usage to give a better overview and insight into this field.

References

- Argo, J. J., & Dahl, D. W. (2020). Social Influence in the Retail Context: A Contemporary Review of the Literature. *Journal of Retailing*, 96(1), 25–39. <https://doi.org/10.1016/J.JRETAI.2019.12.005>
- Chang, V., Doan, L. M. T., Di Stefano, A., Sun, Z., & Fortino, G. (2022). Digital payment fraud detection methods in digital ages and Industry 4.0. *Computers and Electrical Engineering*, 100, 107734. <https://doi.org/10.1016/j.compeleceng.2022.107734>
- Darko, A. P., Liang, D., Xu, Z., Agbodah, K., & Obiora, S. (2023). A novel multi-attribute decision-making for ranking mobile payment services using online consumer reviews. *Expert Systems with Applications*, 213, 119262. <https://doi.org/10.1016/J.ESWA.2022.119262>
- Dang, C. N. B., Nguyen, D. T., Le, T. T., Nguyen, V. H., & Nguyen, L. T. (2023). Factors influencing student citizenship behavior (SCB) and long-term student relationship orientation (LRO) in Vietnamese education sector. *The Second International Conference on Science, Economics and Society Studies–UEF 2023*, 67–81.
- Dang, D. T. V., Nguyen, L., & Nguyen, A. H. D. (2022). Extending UTAUT2 in Mobile money adoption and actual use behavior: An empirical research in Vietnam during the Covid-19. *Industrielle Beziehungen. Zeitschrift Für Arbeit, Organisation Und Management*, 10(4). <https://doi.org/10.53384/inbe.101390943.2779.1862003510>
- Dang, T. Q., Nguyen, L.-T., & Thuy, T. N. T. (2023). The capability of E-reviews in online shopping. Integration of the PLS-SEM and ANN method. *International Journal of Professional Business Review*, 8(7), 1–29.

- <https://doi.org/https://doi.org/10.26668/businessreview/2023.v8i7.2638>
- Nguyen, B.-T. H., Le, T. H., Dang, T. Q., & Nguyen, L.-T. (2023). What Role Does AI Chatbot Perform in the F&B Industry? Perspective from Loyalty and Value Co-Creation: Integrated PLS-SEM and ANN Techniques. *Journal of Law and Sustainable Development*, 44(4), 1–39.
- Nguyen, B. H. T., Le, T. H., Dang, T. Q., & Nguyen, L. T. (2023). What Role Does AI Chatbot Perform in the F&B Industry? Perspective from Loyalty and Value Co-Creation: Integrated PLS-SEM and ANN Techniques. *Journal of Law and Sustainable Development*, 11(4), e794–e794. <https://doi.org/https://doi.org/10.55908/sdgs.v11i4.794>
- Nguyen, H.-B., & Nguyen, L.-T. (2021). Factors Influence Blockchain Adoption in Supply Chain Management Among Companies Based in Ho Chi Minh City. *Conference Towards ASEAN Chairmanship 2023 (TAC 23 2021)*, 1–13. <https://www.atlantis-press.com/proceedings/t-a-c-23-21/125965535>
- Nguyen, L.-T. (2023). Financial Inclusion through Mobile Money in developing countries : the case of Vietnam. *Digital Transformation, Cooperation and Global Integration in the New Normal*, 121–141.
- Nguyen, L.-T., Duc, D. T. V., Dang, T.-Q., & Nguyen, D. P. (2023). Metaverse Banking Service: Are We Ready to Adopt? A Deep Learning-Based Dual-Stage SEM-ANN Analysis. *Human Behavior and Emerging Technologies*, 2023, 6617371. <https://doi.org/10.1155/2023/6617371>
- Nguyen, L.-T., Dwivedi, Y. K., Tan, G. W. H., Aw, E. C. X., Lo, P. S., & Ooi, K. B. (2022). Unlocking Pathways to Mobile Payment Satisfaction and Commitment. *Journal of Computer Information Systems*, 00(00), 1–18. <https://doi.org/10.1080/08874417.2022.2119444>
- Nguyen, L.-T., Nguyen, D., Ngoc, K. N.-N., & Duc, D. T. V. (2023). Blockchain adoption in logistics companies in Ho Chi Minh City. *Cogent Business & Management*, 10(2), 1–24. <https://doi.org/10.1080/23311975.2023.2216436>
- Nguyen, L.-T., Nguyen, V. P., & Dang, D. T. V. (2022). Critical Factors Affecting the Adoption of Artificial Intelligence: An Empirical Study in Vietnam. *The Journal of Asian Finance, Economics and Business(JAFEB)*, 9(5), 225–237. <https://doi.org/10.13106/jafeb.2022.vol9.no5.225>
- Phan, T.-T. C., Dang, T.-Q., & Nguyen, L.-T. (2023). Consumer trust in social network sites in Vietnam: PLS-SEM-ANN analysis. *The Second International Conference on Science, Economics and Society Studies–UEF 2023*.
- Tien, P. C. T., Luan, N. T., & Tri, D. Q. (2023). Exploring the brand experience of Korean brands on customer interactions in Ho Chi Minh City, Vietnam: non-linear structural equation modelling approach. In *Kỷ yếu hội thảo khoa học quốc tế Việt-Hàn 2023* (pp. 276–289). Ho Chi Minh City, Vietnam: Information and Communications Publishing House.
- Tien, P. C. T., Tri, D. Q., & Luan, N. T. (2023). Belief of Customers in Social Commerce Performed via Social Networking Sites : An Empirical Study from Hồ Chí Minh City. *Vietnam Social Sciences*, 2(214), 61–80. [https://doi.org/10.56794/VSSR.2\(214\).61-80](https://doi.org/10.56794/VSSR.2(214).61-80)
- Dash, G., Sharma, K., & Yadav, N. (2023). The diffusion of mobile payments: Profiling the adopters and non-adopters, Roger’s way. *Journal of Retailing and Consumer Services*, 71, 103219. <https://doi.org/10.1016/J.JRETCONSER.2022.103219>
- Dzandu, M. D., Hanu, C., & Amegbe, H. (2022). Gamification of mobile money payment for generating customer value in emerging economies: The social impact theory perspective. *Technological Forecasting and Social Change*, 185, 122049. <https://doi.org/10.1016/J.TECHFORE.2022.122049>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. In *Source: Journal of Marketing Research* (Vol. 18, Issue 1).
- Fu, H. P., Chang, T. S., Wang, C. N., Hsu, H. P., Liu, C. H., & Yeh, C. Y. (2022). Critical factors affecting the introduction of mobile payment tools by microretailers. *Technological Forecasting and Social Change*, 175, 121319. <https://doi.org/10.1016/J.TECHFORE.2021.121319>
- Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management and Data Systems*, 116(1), 2–20. <https://doi.org/10.1108/IMDS-09-2015-0382>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>

- Karim, W., Haque, A., Ulfy, M. A., Hossain, A., & Anis, Z. (n.d.-a). Factors Influencing the Use of E-wallet as a Payment Method among Malaysian Young Adults. *JIBM) Journal of International Business and Management*. <https://doi.org/10.37227/jibm-2020-2-21>
- Karim, W., Haque, A., Ulfy, M. A., Hossain, A., & Anis, Z. (n.d.-b). Factors Influencing the Use of E-wallet as a Payment Method among Malaysian Young Adults. *JIBM) Journal of International Business and Management*. <https://doi.org/10.37227/jibm-2020-2-21>
- Kaur, P., Dhir, A., Singh, N., Sahu, G., & Almotairi, M. (2020). An innovation resistance theory perspective on mobile payment solutions. *Journal of Retailing and Consumer Services*, 55, 102059. <https://doi.org/10.1016/J.JRETCONSER.2020.102059>
- Quan, W., Moon, H., Kim, S. (Sam), & Han, H. (2023). Mobile, traditional, and cryptocurrency payments influence consumer trust, attitude, and destination choice: Chinese versus Koreans. *International Journal of Hospitality Management*, 108, 103363. <https://doi.org/10.1016/J.IJHM.2022.103363>
- Singh, N., Sinha, N., & Liébana-Cabanillas, F. J. (2020). Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. *International Journal of Information Management*, 50, 191–205. <https://doi.org/10.1016/J.IJINFOMGT.2019.05.022>
- Tan, G. W. H., & Ooi, K. B. (2018). Gender and age: Do they really moderate mobile tourism shopping behavior? *Telematics and Informatics*, 35(6), 1617–1642. <https://doi.org/10.1016/j.tele.2018.04.009>
- Verkijika, S. F., & Neneh, B. N. (2021a). Standing up for or against: A text-mining study on the recommendation of mobile payment apps. *Journal of Retailing and Consumer Services*, 63, 102743. <https://doi.org/10.1016/J.JRETCONSER.2021.102743>
- Xu, C., Peak, D., & Prybutok, V. (2015). A customer value, satisfaction, and loyalty perspective of mobile application recommendations. *Decision Support Systems*, 79, 171–183. <https://doi.org/10.1016/j.dss.2015.08.008>
- Yan, L. Y., Tan, G. W. H., Loh, X. M., Hew, J. J., & Ooi, K. B. (2021a). QR code and mobile payment: The disruptive forces in retail. *Journal of Retailing and Consumer Services*, 58, 102300. <https://doi.org/10.1016/J.JRETCONSER.2020.102300>
- Yan, L. Y., Tan, G. W. H., Loh, X. M., Hew, J. J., & Ooi, K. B. (2021b). QR code and mobile payment: The disruptive forces in retail. *Journal of Retailing and Consumer Services*, 58, 102300. <https://doi.org/10.1016/J.JRETCONSER.2020.102300>
- Yuan, S., Liu, L., Su, B., & Zhang, H. (2020). Determining the antecedents of mobile payment loyalty: Cognitive and affective perspectives. *Electronic Commerce Research and Applications*, 41, 100971. <https://doi.org/10.1016/J.ELERAP.2020.100971>
- Zhong, J., & Chen, T. (2023). Antecedents of mobile payment loyalty: An extended perspective of perceived value and information system success model. *Journal of Retailing and Consumer Services*, 72, 103267. <https://doi.org/10.1016/J.JRETCONSER.2023.103267>