



Working Paper 2022.1.4.10
- Vol 1, No 4

NHỮNG NHÂN TỐ ẢNH HƯỞNG ĐẾN QUYẾT ĐỊNH TIẾP TỤC SỬ DỤNG DỊCH VỤ THANH TOÁN FINTECH CỦA GEN Z TRÊN ĐỊA BÀN THÀNH PHỐ HÀ NỘI

Đoàn Thị Thu Hà¹, Nguyễn Kim Ngân, Doãn Minh Huyền, Ngô Ngọc Yến Nhi

Sinh viên K58 CLC Kinh tế đối ngoại – Viện Kinh tế và Kinh doanh quốc tế

Trường Đại học Ngoại thương, Hà Nội, Việt Nam

Đoàn Phương Anh

Sinh viên K58 CLC Tài chính ngân hàng – Khoa Tài chính ngân hàng

Trường Đại học Ngoại thương, Hà Nội, Việt Nam

Nguyễn Đình Đạt

Giảng viên Khoa Khoa Tài chính ngân hàng

Trường Đại học Ngoại thương, Hà Nội, Việt Nam

Tóm tắt

Mục tiêu của nghiên cứu này là đề xuất một mô hình tích hợp để điều tra các yếu tố ảnh hưởng đến quyết định tiếp tục sử dụng dịch vụ thanh toán FinTech của Gen Z tại thành phố Hà Nội. Dữ liệu được thu thập từ 554 khách hàng thuộc Thế hệ Z tại Hà Nội, Việt Nam, những người đã sử dụng dịch vụ thanh toán FinTech. Các tác giả sử dụng phương pháp mô hình phương trình cấu trúc tuyến tính riêng phần (PLS -SEM) để phân tích dữ liệu. Nhóm tác giả cũng tiến hành kiểm tra độ tin cậy và phát triển Mô hình lý thuyết liên tục về công nghệ (TCT) dựa trên mô hình TAM, ECM và COGM. Kết quả nghiên cứu cho thấy (PR) không có tác động đến (ATT), điều này có nghĩa rằng (PR) không ảnh hưởng đến ý định tiếp tục sử dụng. Trong đó, (ATT) là yếu tố mạnh nhất ảnh hưởng trực tiếp đến ý định tiếp tục sử dụng, tương tự, (PEU) và (SES) cũng có tác động tích cực đến ý định tiếp tục. (CON) và (PU) có tác động tích cực đến (SES). Ngoài ra, (ATT) bị ảnh hưởng bởi (SES) nhưng không có mối quan hệ với các chuẩn mực chủ quan (SN).

Từ khóa: FinTech, dịch vụ thanh toán, TCT, Gen Z, ý định tiếp tục sử dụng.

FACTORS AFFECTING CONTINUANCE INTENTION OF FINTECH PAYMENT SERVICE AMONG GEN Z IN HA NOI

Abstract

The goal of this study is to propose an integrated model to investigate factors affecting Gen Z's decision to continue utilizing FinTech payment services in Hanoi. The data was acquired from 554 Gen Z customers in Hanoi, Vietnam, who use FinTech payment service. The authors use a partial

¹ Tác giả liên hệ, Email: thuhadoanthi2512@gmail.com

least squares structural equation modeling approach to analyze the data. The authors also conduct a reliability test and develop a Technology Continuance Theory Model (TCT) based on the TAM, ECM, and COGM models. The study's findings show that (PR) has no impact on (ATT), which indicates that it does not affect continuance intention to use. Meanwhile, (ATT) is the strongest factor directly affecting continuance intention. Similarly, perceived usefulness (PEU) and satisfaction (SES) also have a positive impact on the continuance intention. Confirmation (CON) and perceived usefulness (PU) has a positive impact on satisfaction (SES). In addition, attitude (ATT) is affected by satisfaction (SES) but in the meanwhile, it has no relationship with subjective norms (SN). From the research results, this study offers valuable insights that can help decision-makers formulate their strategy for retaining existing FinTech payment service consumers.

Keywords: FinTech, payment service, TCT, gen Z, continuance intention to use.

1. Introduction

The world is entering Industry 4.0 which has miraculous development bringing great opportunities in the Finance & Banking industry, manufacturing, and transportation recently. FinTech (Financial Technology) is a term used to characterize a growing trend in the financial industry, including banking and other sectors. In recent years, FinTech is showing great potential with a strong increase in investment in this field globally, which actually is demonstrated by that the total value of global FinTech investments increased from USD 60.2 billion in 2017 to USD 150.3 billion in 2019, corresponding to an increase of 250% after two years (Fiindexable, 2019).

As the country moves towards a cashless society, the Vietnamese government aims to reduce cash transactions by 10% and increase bank accounts among the population by 70% by 2020 (solidiance.com); these numbers also tend to increase. However, in addition to the prospects for FinTech growth in Vietnam, there are also some obstacles. The security problem for consumers is one of the most significant issues for FinTech growth in Vietnam and throughout the world. One explanation for this is a lack of understanding of this new sector of complicated technology, which might lead to fears about potential threats. Moreover, with the same great potential from this field, commercial banks also promote the development of Mobile Banking (payment by phone), creating a direct competitive edge with FinTech companies.

Many scientific articles and research work on this topic have been carried out. For example, the topic “The continuance usage intention of Alipay. Integrating context-awareness and technology continuance theory (TCT)” of Khayer and Bao (2019) stated that factor perceived usefulness, satisfaction, context and ubiquity have direct effect on Alipay's intention to continue through attitude. In addition, Nguyen et al. (2020) found out that perceived risk factor negatively affects customers' continual using intention. However, most of the reports focus on studying the factors affecting the use of FinTech services with all subjects of all ages and most of them are conducted in countries with favorable infrastructure conditions. Currently, there are no research articles that emphasize the criteria when reusing FinTech payment services in Vietnam with the target audience specifically Gen Z in Hanoi.

To bridge the mentioned gaps above, this research developed an extended TCT model to discover the relationship among 11 observed variables on the decision to continue using FinTech payment services of Gen Z in Hanoi. The result delivers a directly positive statement on the relation among 3 of 11 observations: Perceived Usefulness, Satisfaction, Attitudes to Gen Z's decision.

Additionally, contrary to popular belief, perceived risk has no impact on people's willingness to continue utilizing Fintech payment services. Therefore, FinTech companies can take into account the proposed impact when improving the quality of payment services and giving appropriate user access strategies.

2. Literature review

Continuity of Technology Theory (TCT) was first developed by (Liao et al., 2009) through the research paper "Information technology adoption behavior life cycle: Toward a Technology Continuance Theory (TCT)" aims to understand users' intent to continue using technology. This theory has been developed by integrating three popular information system models (Information System) such as the Technology Acceptance Model (TAM), the Expectation Confirmation Model (ECM) and the Cognitive Model (COGM) to represent and explain user behavior in continued use of the technology (Liao et al., 2009).

Investigation of users' continuance intention has been used as the subject of many scientific studies on social behavior. In the study "An investigation of users' continuance intention towards mobile banking in China" Yuan et al. (2014) has proposed a research model based on the combination of the technology acceptance model (TAM), technology-task fit model (TTF), and perceived risk in an expectation confirmation model (ECM) to explore intention to continue using e-banking in China.

In addition, the research "What Determines Generation Z Continuance Intention of Fintech? The Moderating Effect of Gender" conducted in Indonesia by surveying people of Gen Z suggests that usefulness significantly influences Gen Z's intention to continue using Fintech services in Indonesia. In contrast, perception of risk had no effect.

In Vietnam, some studies have been carried out. The research "Perceiving benefit-risk and Fintech users' continuance intention in Ho Chi Minh City" proved that the relationship between perceived benefits and perceived risks affects the intention to continue using FinTech services (Nguyen, 2020). Based on these previous studies, we hypothesis that:

Confirmation is defined as the cognitive conception denoting the level that the real use of technology-driven services reflects the anticipated use of that technology (Bao, 2019). It was found in a recent study by Khayer and Bao (2019) that the factor of confirmation and perceived usefulness, through satisfaction, significantly influenced the continuous intention to use Alipay of customers. This demonstrates the important role of confirmation for new technologies like FinTech. This conclusion is consistent with the perspectives that affirmation and perceived usefulness have an impact on satisfaction (Larasati and Salim, 2021).

H1: Confirmation is positively associated with Satisfaction

H2: Confirmation is positively associated with Perceived usefulness

Satisfaction is considered as one of the important predictors of customers' intention to continue using services. In previous scientific studies, customer satisfaction with the services they are using has been identified by Tse and Wilton (1988, p.204) as an "evaluation of the perceived discrepancy between prior expectations and the actual performance of the product". Devaraj et al. (2002) have shown that the satisfaction factor in the current e-commerce context is an important determinant of their preferred channels. It positively influences loyalty decisions with online

shopping or promotes the use of Internet portals, e-services as well as other online communities (Liu et al., 2010).

H5: Satisfaction is positively associated with Continuous intention to use Fintech

H6: Satisfaction is positively associated with Attitudes

Perceived usefulness is a key driver of consumer adoption of new technology, provided that performance is more efficient based on users' standards of consumers. Perceived usefulness also significantly influences the intention to use FinTech payment as customers will rate satisfaction with performing financial services through the technology platform. Therefore, based on previous analysis, perceived usefulness is considered as one of the most effective predictors of customer satisfaction because consumers often rate the customer satisfaction through the usefulness as well as the strength of the system or product in FinTech (Chen, Yeh & Tsaur, 2016).

H4: Perceived usefulness is positively associated with Customer satisfaction

H7: Perceived usefulness is positively associated with Continuous intention to use Fintech

H8: Perceived usefulness is positively associated with Attitudes

Perceived ease of use relates to how easily a technology system and its interface can be accessed. According to the Technology Acceptance Model (TAM) published by Davis in 1986, perceived ease of use is one of the important factors that determine customers' intention to continue to adopt the system. Perceived ease of use is important in explaining user intent and behavior towards the use of new technology. According to Alsamydai et al (2014), perceived ease of use plays an essential role in preventing several problems in the use of technology in financial transactions. Chen (2016) examined the case of FinTech development in China and further asserted that mobile technology is the service with the most user-friendly interface. In particular, perceived ease of use is a significant factor affecting consumer acceptance of information technology.

H3: Perceived ease of use is positively associated with Perceived usefulness

H10: Perceived ease of use is positively associated with Attitudes

Attitude is thought to have a direct influence on behavioral intention and is linked with the subjective norm and behavioral control (Pham et al., 2020). For Fintech, the attitudes of Millennials and Gen Z play an important and positive role in their intention to use Fintech services. This relationship stems from their positive attitudes towards technology and their motivation in using new technologies (Shaikh & Karjaluoto, 2015). At the same time, feedback from users of Generation Y and Z are mainly using and having a positive attitude towards technology-based services while Baby Boomers and Generation X are trying to embrace FinTech services instead. dependent on traditional transaction methods but this rate is significantly lower than that of younger generations (Ankita and Das, 2020).

H9: Attitude is positively associated with Continuous intention to use Fintech

Perceived risks are the negative and uncertain outcomes that customers may perceive when making online transactions (Kim & Rao, 2008). Perceived risk is an important factor when consumers consider using FinTech (Keong et al., 2020). Similar to Internet banking, more perceived risk has the potential to negatively affect users' willingness to transact with Fintech and

at the same time Fintech is an emerging financial technology, so users Consumers will face many dangers, including the risk of being attacked by the technology itself, systemic risks or difficulties when using it (Featherman et al. 2010).

H11: Perceived risk is negatively associated with Continuous intention to use Fintech

Financial risk is defined as the risk of financial loss related to users' financial transactions when using technology (Ham., 1967) and financial risk has been identified as one of the variables that affect consumers' use of mobile technology. Financial risk refers to the potential financial loss in Fintech financial transactions (Forsythe et al., 2006). According to a study by the group of authors Zavolokina, Dolata and Schwabe (2016) mentioned that for the use of Fintech, financial risks can be caused when the transaction system has problems, such as financial fraud. Main risks, moral hazards, and transaction costs may increase compared to the original, thereby negatively impacting users' intention to continue using Fintech.

H12: Financial risk is positively associated with Perceived risk

Security risks are potential losses due to fraud resulting in an individual's privacy or important personal information being stolen or compromised. According to Das and Das (2020) in their study "Perception, Adoption, and Pattern of Usage of FinTech Services by Bank Customers: Evidence from Hojai District of Assam," the most significant challenge that FinTech users face is a lack of technical knowledge or a server error, which leads to serious security-related problems such as receiving fraudulent calls and messages. Schierz et al (2010) demonstrated in "Understanding consumer acceptance of mobile payment services: An empirical analysis" that the use of payment technology is associated with a very high probability of users being at risk about privacy, stealing personal data, thereby increasing the risk perception of users.

H8: Security risk factor is negatively associated with Continuous intention to use Fintech.

Subjective norm is defined as the extent to which individuals are influenced by their social environment (family, friends, professionals, celebrities) to consider desiring to use a Fintech payment application (Flavian, 2020). According to Momani and Jamous, "The importance of subjective norms in the field of technology acceptance is that the TRA model provides the main theoretical basis for the development of the TAM theory". In recent studies, Hsu and Lu (2004) argue that "subjective norms have a great influence on the intentions and attitudes of individuals related to certain attitudes and behaviors". This conclusion is consistent with the point of view of the direct impact of subjective norms on users' attitudes to using Fintech payments (Daragmeh, 2021; Wang, 2019). Looking deep into the study of the subjective norm factor, Daragmeh (2021) stated that "subjective norms have a positive impact on the attitude and intention to continue using Fintech payments of Generation X in Hungary."

H14: Subjective normative is positively associated with Continuous intention to use Fintech.

3. Research Methodology

3.1. Research Design

Based on the research on determining the factors affecting the continuance intention to use FinTech payment services of Gen Z, the authors have chosen a mixed research method. The

research methodology includes the use of both quantitative and qualitative methods, providing more evidence and more convincing arguments from different perspectives.

3.2. Data collection

The survey method was selected based on the advantages of sample size, question type, the topic of the question, time, cost, and response rate. For factors related to Gen Z's decision to continue using FinTech payment services in Hanoi, the authors used a 5-point Likert scale, whereas 1 is for “Strongly Disagree” and 5 is for “Strongly Agree”

The questionnaire was sent to 600 participants and after checking and selecting the results, 554 valid questionnaires were obtained for analysis. Then the data will be analyzed and synthesized by SPSS 22 and SmartPLS 3 software to give survey results for each question.

3.3. Model and Research Hypothesis

This research integrates the subjective norm, risk perception with Technology Continuance Theory (TCT) to investigate GenZ's continuance intention to use FinTech payments. Specifically, in previous research, the perceived risk factor was found to have an effect on the intention to continue using, for example, Yuan et al (2014), Ryu (2018), Diana & Leon (2020), Putritama (2019). Subjective norm factors also have been integrated with the research model of intention to continue using by Nugraheni, Hadisoewono, and Noranita (2020).

The research model investigates the relationship among confirmation, satisfaction, perceived usefulness, perceived ease of use, attitude, perceived risk including financial risk and security risks, the subjective norm, and continuance intention to use FinTech of GenZ in Ha Noi.

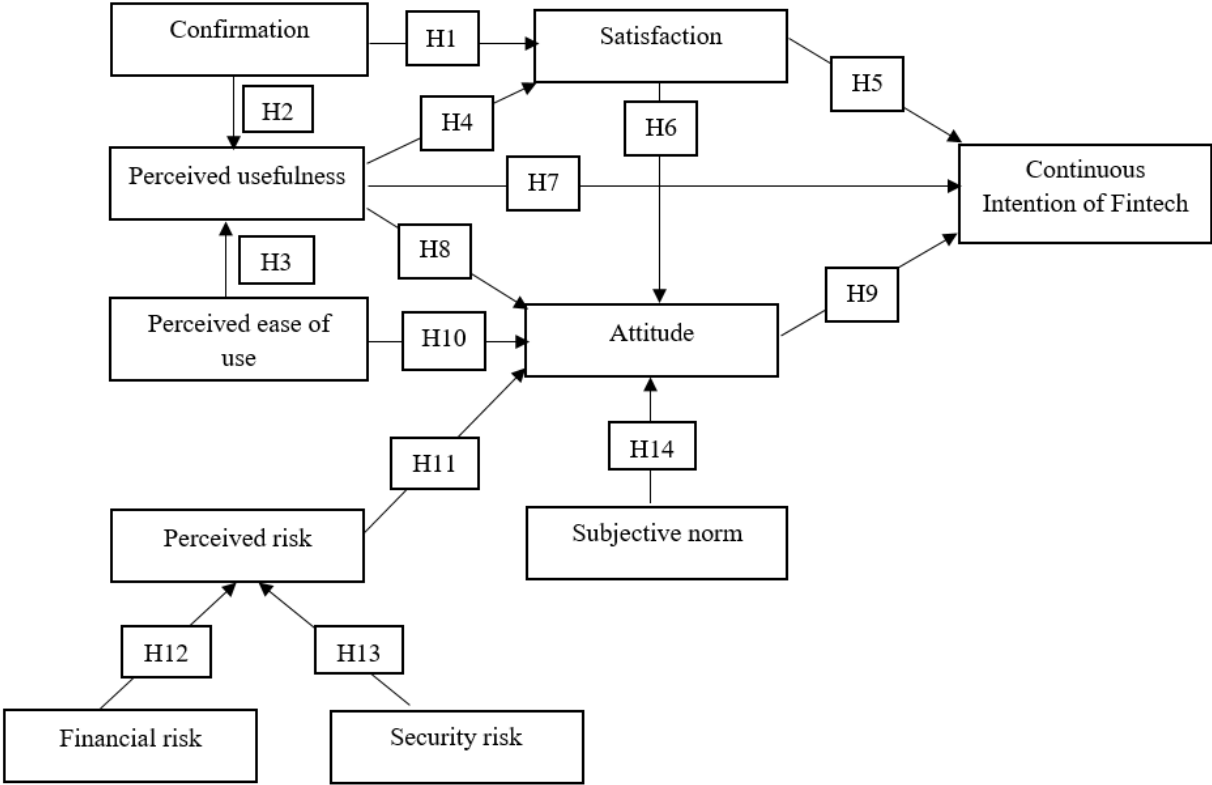


Figure 1. Research model

(Source: Compiled by the author)

4. Results

4.1. Descriptive Statistics

Table 1. Descriptive Statistics

	n	%
<i>Gender</i>		
Male	214	38.6
Female	340	61.4
<i>Age</i>		
18	142	25.6
19	110	19.9
20	170	30.7
21	57	10.3
22	30	5.4
23	15	2.7
24	12	2.2
25	3	0.5
26	15	2.7
<i>Education</i>		
High school	60	10.8
College	16	2.9
University	458	82.7
Post Graduated	20	3.6
<i>Income</i>		
Under 5 million VND	448	80.9
5-10 million VND	74	13.4
10-20 million VND	22	4.0
Over 20 million VND	10	1.8
<i>Time of use</i>		
Under 1 year	201	36.3
1-3 years	298	53.8
3-5 years	49	8.8
Over 5 years	6	1.1

	n	%
<i>Frequency of use</i>		
Under 2 times/week	376	67.9
2-5 times/week	144	26.0
Over 5 times/week	34	6.1

Source: Compiled by the author

From Table 1, we see that those who took part in the survey have a higher number of women than men, mostly young people (≤ 20 years old) with high school and university education, and have had from 1-3 years of using FinTech services (accounting for over a half) or even under one year with 200 people.

Regarding income, most of the participants have an income of VND 5 million or less with the percentage of 80.9%. While about the frequency of FinTech service usage, 376 people mainly use these services less than 2 times per week, accounting for 67.9%, followed by those who use from 2-5 times per week.

4.2. Evaluating the Scale Reliability and Validity

Table 2. The Reliability Test

Constructs	Items	Outer Loadings (≥ 0.5)	Cronbach's Alpha (>0.7)	Rho_A	CR	AVE (≥ 0.5)
SN	SN1	0.857	0.87	0.879	0.92	0.794
	SN2	0.903				
	SN3	0.911				
PR	PR1	0.857	0.851	0.863	0.909	0.77
	PR2	0.901				
	PR3	0.874				
PEU	PEU1	0.849	0.856	0.859	0.902	0.698
	PEU2	0.868				
	PEU3	0.787				
	PEU4	0.837				
PSR	PSR2	0.907	0.886	0.921	0.929	0.814
	PSR3	0.936				
	PSR4	0.862				
PFR	PFR1	0.839	0.862	1.003	0.911	0.774
	PFR2	0.869				

Constructs	Items	Outer Loadings (≥ 0.5)	Cronbach's Alpha (>0.7)	Rho_A	CR	AVE (≥ 0.5)
	PFR3	0.929				
PU	PU1	0.847	0.856	0.858	0.902	0.698
	PU2	0.83				
	PU3	0.85				
	PU4	0.814				
SES	SES1	0.851	0.881	0.881	0.918	0.737
	SES2	0.853				
	SES3	0.854				
	SES4	0.874				
CON	CON1	0.864	0.871	0.872	0.912	0.721
	CON2	0.84				
	CON3	0.837				
	CON4	0.855				
ATT	ATT1	0.879	0.853	0.862	0.902	0.698
	ATT2	0.887				
	ATT3	0.833				
	ATT4	0.734				
CUI	CUI1	0.851	0.833	0.834	0.9	0.75
	CUI2	0.868				
	CUI3	0.878				

Source: Compiled by the author

Hair et al. (2016) suggest that the outer loading factor should be greater than or equal to 0.708. In the model, no variable has a load factor less than 0.7, which indicates that this model is reliable.

Cronbach's alpha coefficient is a coefficient that allows us to evaluate how appropriate certain observed variables belong to a research variable (latent variable, factor). The results of the Cronbach's Alpha reliability test for the research components show that the Cronbach's Alpha coefficient of all the research concepts is greater than 0.7, all the observed variables have the total variable correlation coefficient greater than 0.3.

Hock & Ringle (2010) suggest that a scale achieves convergence value if the AVE (Average Variance Extracted) is 0.5 or higher. Through these above calculating results, it can be concluded that the scale used in the study is appropriate and reliable, ensuring in the subsequent testing and analysis.

Table 3. Discriminant Validity

	SN	PR	PEU	PSR	PFR	PU	SES	CON	ATT	CUI
SN	0.891									
PR	0.512	0.877								
PEU	0.377	0.581	0.836							
PSR	0.54	0.166	0.248	0.902						
PFR	0.535	0.247	0.23	0.766	0.88					
PU	0.406	0.478	0.752	0.351	0.34	0.835				
SES	0.413	0.5	0.708	0.385	0.332	0.794	0.858			
CON	0.446	0.53	0.686	0.41	0.378	0.783	0.838	0.849		
ATT	0.426	0.531	0.754	0.368	0.355	0.818	0.826	0.76	0.835	
CUI	0.436	0.492	0.602	0.449	0.432	0.692	0.727	0.727	0.731	0.866

Source: Compiled by the author

Discriminant validity is defined as the square root of the variance greater than the correlation between research topics. As shown in Table 3, the square root index of AVE compared to the correlation coefficients is larger than the absolute value of the correlation coefficient with the variables, so the Fornell-Larcker criterion is satisfied. The variables are all discriminants.

4.3. PLS-SEM Analysis

The measurement model was calculated using the study instrument's reliability, convergent validity, and discriminant validity (Hair et al., 2016). The internal reliability of constructs was assessed using Cronbach's alpha and composite reliability. The loadings of indicators were used to assess their reliability. Similarly, the average variance extracted (AVE) values were used to determine convergent validity. The reliability coefficients in this study were greater than 0.70, and the AVE values for all variables were greater than 0.50 (Hair et al., 2016). (Table 2).

As a result, internal reliability and convergent validity were found to be adequate in this research. In addition, the square roots of all AVE values were larger than the equivalent cross-correlation, and each item was most heavily loaded on its related construct (Table 3).

Table 3. R squared

	R Square	R Square Adjusted
PR	0.062	0.059
PU	0.700	0.699
SES	0.752	0.751
ATT	0.776	0.774
CUI	0.590	0.588

Source: Compiled by the author

The structural model was examined after the psychometric features of the measuring model were confirmed. R^2 and the level of significance of the path coefficients were used to evaluate the

structural model's quality (Hair et al., 2016). The model explained 58.8% of the variance in continuation intention, 77.4% of the variance in attitude, 75.1% of the variance in satisfaction, and 69.9% percent of the variance in perceived usefulness, according to R^2 values. The bootstrapping approach was used to determine the path significance levels (5000 resamples). Table 5 shows the findings of the hypothesis.

Table 5. PLS-SEM Analysis Results

Hypotheses	Path	Original Sample (O)	Standard Deviation (SATTEV)	T-Statistics	P-Values (0.05)
H1	CON → SES	0.560	0.041	13.753	0.000
H2	CON → PU	0.506	0.040	12.753	0.000
H3	PEU → PU	0.405	0.039	10.304	0.000
H4	PU → SES	0.356	0.045	7.955	0.000
H5	SES → CUI	0.324	0.065	5.006	0.000
H6	SES → ATT	0.396	0.037	10.604	0.000
H7	PU → CUI	0.169	0.060	2.802	0.005
H8	PU → ATT	0.325	0.036	8.944	0.000
H9	ATT → CUI	0.325	0.061	5.330	0.000
H10	PEU → ATT	0.186	0.040	4.711	0.000
H11	PR → ATT	0.053	0.029	1.841	0.066
H12	PFR → PR	0.289	0.064	4.524	0.000
H13	PSR → PR	-0.055	0.065	0.847	0.397
H14	SN → ATT	0.033	0.029	1.146	0.252

Source: Compiled by the author

Hypotheses H1 ($p < 0.05$), H2 ($p < 0.05$), H3 ($p < 0.05$), H4 ($p < 0.05$), H5 ($p < 0.05$), H6 ($p < 0.05$), H7 ($p < 0.05$), H8 ($p < 0.05$), H9 ($p < 0.05$), H10 ($p < 0.05$), and H12 ($p < 0.05$), are all accepted, but hypothesis H11, H13, H14 ($p > 0.05$) did not. However, as H11 is not supported, we can conclude that perceived financial risk does not affect continuance intention. There are 3 variables directly

affecting continuation intention: perceived usefulness, satisfaction, and attitude. The standardized impact coefficients of these three variables are 0.169, 0.324, and 0.325, respectively. Thus, the level of impact of these 3 variables on continuation intention in order from strong to weak is the attitude, satisfaction, and perceived usefulness.

Factor attitudes were found to be positively influenced by the ease of use, perceived usefulness, and satisfaction. This study suggested, in line with previous research of Khayer and Bao (2019), that the perceived usefulness of a FinTech payment system will positively impact users' attitudes toward continually using the system. As a result, the findings suggest FinTech payment apps give users customized information and services (such as recommended movie tickets, style of clothes, and courses) based on their environment. Also, appropriate financial solutions based on the balance of a user's account should be offered. The capacity to provide such information has a significant impact on customers' continuance intention.

In line with some studies such as Khayer and Bao (2019), Ryu (2018), factor confirmation and perceived ease of use positively affect factor perceived usefulness. This suggests that users' confirmation of their initial expectations from utilizing FinTech payment service and the level of ease of use led to increased perceived usefulness, which indirectly reinforces continuation intention.

However, contrary to our assumptions, perceived risk has no effect on the attitude toward the continual using FinTech payment services, indicating that hypothesis H11 is unsupported. As H11 is not supported, we can conclude that perceived financial risk does not affect continuance intention. This finding is contradicted to previous studies of Ryu (2018), Dao et al. (2018), and Nguyen et al. (2020)

In summary, this part presented the research design and methods used to achieve the research objectives. This study is a combination of both qualitative and quantitative methods to determine the factors affecting the intention to continue using FinTech payment services of Generation Z in Hanoi, Vietnam. In the end, 14 hypotheses were tested and 11 were accepted.

5. Conclusion

The research shows that the factors affecting the decision to continue using FinTech payment services of Gen Z in Hanoi are in descending order as follows: Factor of Perceived Usefulness, Satisfaction, and Attitudes influence Generation Z's decision to continue using FinTech payment services in Hanoi. In which, the factor Perceived ease of use has an indirect impact on the continuance intention to use through Attitude, and Confirmation has an indirect impact on intention to continue using through Usefulness, and Satisfaction.

The original scale had 14 observed variables, after checking the reliability and factor analysis, 4 variables were eliminated, respectively: perceived risk, security risk, risk financial, and subjective norm, so the scale has 10 observed variables, the remaining variables of the scale have high reliability. The analysis results show that the research model is suitable for the survey data set and all the assumptions of the linear regression model are satisfied. Therefore, this scientific research project has built a model and given the factors affecting the decision to continue using FinTech services of Gen Z in Hanoi city. Hence, it creates favorable conditions for businesses and companies related to FinTech payment services in Hanoi to adjust and develop appropriate policies to increase the number of customers using Fintech payment services in the future.

For researchers, managers, and decision-makers, this study has numerous important values. Nonetheless, it contains some limitations that can pave the way for further research. To begin with, while this study considers the essential structures to continued FinTech payment services usage, it overlooks several key constructions such as ubiquity, social context, habit, and others that could potentially affect continued usage behavior. Next, this study uses one-time cross-sectional data collected from a single city which is Hanoi, Vietnam, indicating that the findings are limited to that country's scenario. In addition, this research employs the PLS-SEM technique. To develop new insights regarding FinTech payment services, we suggest more study should be undertaken utilizing others analytical strategies and cross-country data.

REFERENCES

- Abramova, S. and Böhme, R. (2016), "Perceived benefit and risk as multidimensional determinants of bitcoin use: A quantitative exploratory study".
- Ajzen, I. and Fishbein, M. (1975), "A Bayesian analysis of attribution processes", *Psychological Bulletin*, Vol. 82 No. 2, p. 261.
- Al Nawayseh, M.K. (2020), "FinTech in COVID-19 and beyond: what factors are affecting customers' choice of FinTech applications?", *Journal of Open Innovation: Technology, Market, and Complexity*, Vol. 6 No. 4, p. 153.
- Alsamydai, M.J. (2014), "Adaptation of the technology acceptance model (TAM) to the use of mobile banking services", *International Review of Management and Business Research*, Vol. 3 No. 4, p. 2039.
- Benlian, A. and Hess, T. (2011), "Opportunities and risks of software-as-a-service: Findings from a survey of IT executives", *Decision support systems*, Vol. 52 No. 1, pp. 232-246.
- Bhattacharjee, A. (2001), "Understanding information systems continuance: An expectation-confirmation model", *MIS quarterly*, pp. 351-370.
- Carrion-i-Silvestre, J.L., Kim, D. and Perron, P. (2009), "GLS-based unit root tests with multiple structural breaks under both the null and the alternative hypotheses", *Econometric Theory*, Vol. 25 No. 6, pp. 1754 - 1792.
- Cudjoe, A.G., Anim, P.A. and Nyanyofio, J.G.N.T. (2015), "Determinants of mobile banking adoption in the Ghanaian banking industry: a case of access bank Ghana limited", *Journal of Computer and Communications*, Vol. 3 No. 02, p.1.
- Cunningham, L.F., Gerlach, J. and Harper, M.D. (2004), "Assessing perceived risk of consumers in Internet airline reservations services", *Journal of Air Transportation*, Vol. 9 No. 1.
- Chen, M.C., Chen, S.S., Yeh, H.M. and Tsaur, W.G. (2016), "The key factors influencing internet finances services satisfaction: An empirical study in Taiwan", *American journal of industrial and business management*, Vol. 6 No. 6, pp. 748 - 762.
- Daragmeh, A., Lentner, C. and Sági, J. (2021), "FinTech payments in the era of COVID-19: Factors influencing behavioral intentions of "Generation X" in Hungary to use mobile payment", *Journal of Behavioral and Experimental Finance*, Vol. 32, p. 100574.

- Das, A. and Das, D. (2020), "Perception, adoption, and pattern of usage of FinTech services by bank customers: Evidences from Hojai District of Assam", *Emerging Economy Studies*, Vol. 6 No. 1, pp. 7-22.
- Devaraj, S., Fan, M. and Kohli, R. (2002), "Antecedents of B2C channel satisfaction and preference: validating e-commerce metrics", *Information systems research*, Vol. 13 No. 3, pp. 316- 333.
- Diana, N. and Leon, F.M. (2020), "Factors affecting continuance intention of FinTech payment among Millennials in Jakarta", *European Journal of Business and Management Research*, Vol. 5 No. 4.
- Findexable.com. (2022), "The Global Fintech Index 2020", Available at: https://findexable.com/wp-content/uploads/2019/12/Findexable_Global-Fintech-Rankings-2020exSFA.pdf (Accessed 11 Jan, 2022).
- Forsythe, S., Liu, C., Shannon, D. and Gardner, L.C. (2006), "Development of a scale to measure the perceived benefits and risks of online shopping", *Journal of interactive marketing*, Vol. 20 No. 2, pp. 55 - 75.
- Hair JR, J.F & Ringle, G.T.M. (2016), "A Primer on partial least squares structural equation modelling (PLS – SEM)", *Thousand Oaks, CA: Sage Publications, Inc*
- Hock, M. and Ringle, C. (2010), "Local strategic networks in the software industry: an empirical analysis of the value continuum", *International Journal of Knowledge Management Studies*, Vol. 4 No. 2, p. 132.
- Hua, W., Li, Y. and Yuan, S. (2014), "A quantitative analysis of Antarctic related articles in humanities and social sciences appearing in the world core journals", *Scientometrics*, Vol. 100 No. 1, pp. 273 - 286.
- Hsu and Lu (2004), "Why do people play on-line games? An extended TAM with social influences and flow experience", *Science Direct*.
- Kim, D.J., Ferrin, D.L. and Rao, H.R. (2008), "A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents", *Decision support systems*, Vol. 44 No. 2, pp. 544 - 564.
- Kos, A., Tomažič, S. and Umek, A. (2016), "Evaluation of smartphone inertial sensor performance for cross-platform mobile applications", *Sensors*, Vol. 16 No. 4, p. 477.
- Khayer, A. and Bao, Y. (2019), "The continuance usage intention of Alipay: Integrating context-awareness and technology continuance theory (TCT)", *The Bottom Line*.
- Larasati, C.A.K., and Salim, R.A. (n.d), "Analysis of Factors Influencing Continuance Intention of E-wallet Use: A Case Study of LinkAja".
- Liao, C., Palvia, P. and Chen, J.L. (2009), "Information technology adoption behavior life cycle: Toward a Technology Continuance Theory (TCT)", *International Journal of Information Management*, Vol. 29, pp. 309 - 320.
- Liu, B. (2010), "Uncertain risk analysis and uncertain reliability analysis" *Journal of Uncertain Systems*, Vol. 4 No. 3, pp. 163 - 170.

- Momani, A.M. and Jamous, M. (2017), "The evolution of technology acceptance theories", *International Journal of Contemporary Computer Research (IJCCR)*, Vol. 1 No. 1, pp. 51 - 58.
- Nugraheni, D.M., Hadisoewono, A. and Noranita, B. (2020), "November. Continuance Intention to Use (CIU) on Technology Acceptance Model (TAM) for m-payment (Case Study: TIX ID)", In *2020 4th International Conference on Informatics and Computational Sciences (ICICoS)* (pp. 1-5). IEEE.
- Praveena, K. and Thomas, S. (2014), "Continuance intention to use Facebook: A study of perceived enjoyment and TAM", *Bonfring International Journal of Industrial Engineering and Management Science*, Vol. 4 No. 1, pp. 24 - 29.
- Putritama, A. (2019), "The mobile payment FinTech continuance usage intention in Indonesia", *Jurnal Economia*, Vol. 15 No. 2, pp. 243 - 258.
- Rama Murthy, S. and Mani, M. (2013), "Discerning rejection of technology", *Sage Open*, Vol. 3 No. 2, p. 2158244013485248.
- Ryu, H.S. (2018), "What makes users willing or hesitant to use FinTech?: the moderating effect of user type", *Industrial Management & Data Systems*.
- Schierz, P.G., Schilke, O. and Wirtz, B.W. (2010), "Understanding consumer acceptance of mobile payment services: An empirical analysis", *Electronic commerce research and applications*, Vol. 9 No. 3, pp. 209 - 216.
- Shaikh, A.A. and Karjaluoto, H. (2015), "Mobile banking adoption: A literature review", *Telematics and informatics*, Vol. 32 No. 1, pp. 129 - 142.
- Tang, K.L., Ooi, C.K. and Chong, J.B. (2020), "Perceived risk factors affect intention to use FinTech", *Journal of Accounting and Finance in Emerging Economies*, Vol. 6 No. 2, pp. 453 - 463.
- Tse, D.K. and Wilton, P.C. (1988), "Models of consumer satisfaction formation: An extension", *Journal of marketing research*, Vol. 25 No. 2, pp. 204 - 212.
- Venkatesh, V. (2000), "Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model", *Information systems research*, Vol. 11 No. 4, pp. 342 - 365.
- Wang, Z., Zhengzhi Gordon, G.U.A.N., Hou, F., Li, B. and Zhou, W. (2019), "What determines customers' continuance intention of FinTech? Evidence from YuEbao", *Industrial Management & Data Systems*.
- Wells, J.D., Campbell, D.E., Valacich, J.S. and Featherman, M. (2010), "The effect of perceived novelty on the adoption of information technology innovations: a risk/reward perspective", *Decision Sciences*, Vol. 41 No. 4, pp. 813 - 843.
- Zavolokina, L., Dolata, M. and Schwabe, G. (2016), "The FinTech phenomenon: antecedents of financial innovation perceived by the popular press", *Financial Innovation*, Vol. 2 No. 1, pp. 1 - 16.

Appendix A: Questionnaire table

Code	Items	Score				
		1	2	3	4	5
I	Confirmation					
CON1	My experience with using FinTech payment services is better than I expected	1	2	3	4	5
CON2	The service provided by FinTech payment applications is better than I expected	1	2	3	4	5
CON3	FinTech payment service can meet my requirements	1	2	3	4	5
CON4	Overall, most of my expectations about the FinTech application were met	1	2	3	4	5
II	Satisfaction					
SES1	I am satisfied with the performance of the FinTech payment service	1	2	3	4	5
SES2	Using FinTech payment application brings convenience when making financial transactions	1	2	3	4	5
SES3	Using FinTech payment service gives me satisfaction when making financial transactions	1	2	3	4	5
SES4	Overall, I am satisfied with FinTech payment services	1	2	3	4	5
III	Perceived usefulness					
PU1	FinTech services can meet my needs	1	2	3	4	5
PU2	FinTech services increase my productivity	1	2	3	4	5
PU3	I can save time and cost when using FinTech payment service	1	2	3	4	5
PU4	I can do many, many different payment services	1	2	3	4	5

Code	Items	Score				
		1	2	3	4	5
IV	Perceived Ease of Use					
PEU1	The interface of the FinTech payment application is simple for me	1	2	3	4	5
PEU2	User manual on FinTech payment service system is clear and easy to understand	1	2	3	4	5
PEU3	I can use the FinTech payment service anytime, anywhere	1	2	3	4	5
PEU4	I can easily use the FinTech payment service through other electronic devices (mobile phone, app, wifi,...)	1	2	3	4	5
V	Attitude					
ATT1	The decision to use FinTech payment service is right	1	2	3	4	5
ATT2	I like using the FinTech payment service	1	2	3	4	5
ATT3	Using FinTech payment services in line with today's technology era	1	2	3	4	5
ATT4	I trust FinTech payment services	1	2	3	4	5
VI	Perceived risk					
PR1	The use of FinTech financial services is not associated with a high degree of risk.	1	2	3	4	5
PR2	There is a high degree of certainty when using FinTech financial services.	1	2	3	4	5
PR3	I think there is very little risk in using FinTech financial services compared to traditional financial services.	1	2	3	4	5
VII	Perceived security risk					
PSR1	Personal information and account information are kept the	1	2	3	4	5

Code	Items	Score				
		1	2	3	4	5
	highest security					
PSR2	I am afraid that my personal data and privacy will be abused when using FinTech payments	1	2	3	4	5
PSR3	I am afraid my financial information is not safe when using FinTech payments	1	2	3	4	5
PSR4	I am worried someone has unauthorized access to my information when I use FinTech payments	1	2	3	4	5
VIII	Perceived financial risk					
PFR1	Possible financial damage when I use FinTech payments	1	2	3	4	5
PFR2	I am afraid of financial fraud occurring during the payment process	1	2	3	4	5
PFR3	Possible financial damage due to lack of ability to link with other services (e.g. utility payment service) when I use FinTech payment service	1	2	3	4	5
IX	Subjective Norms					
SN1	Advice from my family influenced my attitude that I should continue using FinTech payments	1	2	3	4	5
SN2	Advice from friends influenced my attitude that I should continue using FinTech payments	1	2	3	4	5
SN3	Advice from people around me influenced my attitude that I should continue using FinTech payments	1	2	3	4	5
X	Continuance Intention					
CUI1	I will continue to the use FinTech payment app	1	2	3	4	5
CUI2	I intend to continue using FinTech payment applications rather than looking for other traditional methods	1	2	3	4	5

Code	Items	Score				
		1	2	3	4	5
CUI3	I will use FinTech payments as much as possible	1	2	3	4	5