# FPT UNIVERSITY- CAMPUS CAN THO





# **RESEARCH ON FACTORS AFFECTING FPT STUDENT'S INTENTION TO USE E-PAYMENT**

Supervisor Mr. Nguyen Thang Loi

**Major: International Business** 

# MEMBERS

**ROLLNUMBER** 

Trần Thành Đạt	CS150164
Nguyễn Thị Kim Ngân	CS150172
Thái Xuân Giang	CS150605
Nguyễn Nhựt Trường	CS150502
Lê Tố Nhi	CS150520

Can Tho, 08/2023

#### ACKNOWLEDGEMENT

In the process of researching the topic "Research on factors affecting the intention to use electronic payment of FPT students", our group has received a lot of help, guidance and sincere suggestions from friends and teachers. This is a remarkable to point the growth of our group during our years at FPT University.

Specifically, we want to convey our heartfelt thanks to Mr. Nguyen Thang Loi who wholeheartedly supported and guided us throughout the process of completing our graduation thesis. Thanks to your patience, professionalism, enthusiasm and extensive professional knowledge, we have completed our graduation thesis with unexpected richness.

Next, we appreciate everyone who took the time to participate in the survey in an unbiased manner. Your contributions have provided our team with an extremely useful resource for this research paper. Besides, the support from friends and family is also a huge source of motivation for us when doing research.

Due to our group's limited knowledge and lack of practical experience in the field of research. Therefore, in the process of doing research, it is inevitable that mistakes will be made. We look forward to receiving your comments and evaluations so that we can gain more experience and improve our thesis.

Our team would like to thank everyone.

Can Tho, August 5, 2023



#### **DECLARATION**

Our team hereby declares that the graduation thesis "Research on factors affecting the intention to use electronic payment of FPT students" is the group's own research work, the data stated in the thesis is truthful and real. The results of the thesis have never been published in any other works.

# **TABLE OF CONTENTS**

TABLE OF CONTENTSi
LIST OF TABLEiv
LIST OF FIGURES
LIST OF ABBREVATIONS AND ACRONYSM LIST vii
ABSTRACT viii
CHAPTER 1: INTRODUCTION1
1.1. Problem statement1
1.2. Overview of related studies1
1.3. Research objectives and research questions2
1.3.1.       Overall research objective
1.3.2. Specific research objectives2
1.3.3. Research questions3
1.4. Subjects and scope of research
1.4.1.   Research subjects
1.4.2.   Research scope
1.5. Methodology
1.5.1.   Qualitative research
1.5.2.   Quantitative Research
<b>1.6.</b> Theoretical and practical significance of the thesis topic4
1.7. Thesis structure4
CHAPTER 2: LITERATURE REVIEW
2.1. Related concepts5
2.1.1. Theory of Electronic Payment5
2.1.2. Unified Technology Use and Acceptance Model Theory (UTAUT)
7
2.1.3. Theory of Intention to Use9
2.1.4. Propose Factors11
2.2. Building A Research Model13



2.2.1.	Performance Expectancy13
2.2.2.	Effort Expectancy14
2.2.3.	Social Influence15
2.2.4.	Safety and Security15
2.2.5.	Facilitating Conditions16
2.2.6.	Support Policy16
Conclusi	on of Chapter 223
СНАРТЕ	CR 3: RESEARCH METHODOLOGY25
3.1 Re	esearch design25
3.1.1.	The research processes26
3.1.2.	Specific steps of the research process framework27
3.2 Da	ata collection method28
3.3 Da	ata analysis methods29
3.4 St	atistical results from qualitative analysis and survey
	on of chapter 3
	CR 4: ANALYSIS AND FINDINGS
4.1 Te	esting the reliability of the measurement scale using
	n's Alpha coefficient
	esults of Exploratory Factor Analysis (EFA)43
	earson Correlation Analysis
	ultiple Regression Analysis51
	dependent T-test
	ne-Way Anova61
	on of Chapter 462
	CR 5: CONCLUSIONS AND RECOMMENDATIONS64
5.1 Co	onclusion64
5.2 M	anagement implications64
5.2.1 Su	pport policies64
5.2.2 Pe	orformance Expectancy65
522 1	Facilitating Conditions



5.2.4	Safety and Security	66
5.2.5	Effort Expectancy	67
5.2.6	Social Influence	67
5.3	Recommendations	67
Concl	usion of Chapter 5	68
REFE	RENCES	70
APPE	NDICES	75



# LIST OF TABLE

Table 2.1 Author's description of Electronic Payment.	6
Table 2.2 Author's description of UTAUT	8
Table 2.3 Author's description of Intention to Use	10
Table 2.4 Propose Factors	12
Table 2.5 Formal Factors	13
Table 2.6 Scale of components	18
Table 4.1 Item-Total Statistics of Performance Expectancy (PE)	39
Table 4.2 Item-Total Statistics of Effort Expectancy (EE)	40
Table 4.3 Item-Total Statistics of Social Influence (SI)	40
Table 4.4 Item-Total Statistics of Facilitating Conditions (FC)	41
Table 4.5 Item-Total Statistics of Safety and Security (SS)	41
Table 4.6 Item-Total Statistics of Support Policy (SP)	42
Table 4.7 Item-Total Statistics of Intention To Use (ITU)	42
Table 4.8 Summary result of Cronbach's alpha	43
Table 4.9 KMO and Bartlett's Test	44
Table 4.10 Total Variance Explained	44
Table 4.11 Rotated Component Matrix <sup>a</sup>	45
Table 4.12 KMO and Bartlett's Test	46
Table 4.13 Total Variance Explained	47
Table 4.14 Rotated Component Matrix <sup>a</sup>	48
Table 4.15 KMO and Bartlett's Test	50
Table 4.16 Total Variance Explained	50
Table 4.17 Model Summary <sup>b</sup>	52
Table 4.18 Anova	52
Table 4.19 Coefficients	52
Table 4.20 Unstandardized Coefficients	53
Table 4.21 Standardized Coefficients	54



Table 4.22 Independent Samples Test	60
Table 4.23 Test of Homogeneity of Variances of year of birth	61
Table 4.24 Anova of year of birth	61
Table 4.25 Test of Homogeneity of Variances of courses	62
Table 4.26 Anova of courses	62

# LIST OF FIGURES

Figure 2.1 The proposed research model UTAUT	9
Figure 2.2 Research model of factors affecting the intention to use electronic	
payment of FPT university students1	7
Figure 3.1 The research process2	6
Figure 3.2 Survey data are statistically by sex	4
Figure 3.3 Survey data is statistical on year of birth	4
Figure 3.4 Survey data is statistical by courses	5
Figure 3.5 Survey data is statistical by average monthly spending	5
Figure 3.6 Survey data is statistical by frequency of using electronic payments3	6
Figure 3.7 Survey data is statistical by Frequency of Electronic Payment Usage Per	•
Month3	6
Figure 3.8 Survey data is statistical by the purposes use electronic payment	7
Figure 3.9 Survey data is statistical by the reasons for using electronic payment3	7
Figure 4.1 Histogram of Regression5	6
Figure 4.2 The Normal P-P Plot chart5	7
Figure 4.3 Regression Standardized Residual5	7



# LIST OF ABBREVATIONS AND ACRONYSM LIST

Notations	Descriptions
FU	FPT University
UTAUT	Unified Theory of Acceptance and Use of Technology
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behavior
PE	Performance Expectancy
EE	Effort Expectancy
SI	Social Influence
FC	Facilitating Conditions
SS	Safety and Security
SP	Support Policy
ITU	Intention To Use
EFA	Exploratory Factor Analysis
ANOVA	Analysis of Variance
КМО	Kaiser-Meyer-Olkin
SPSS	Statistical Package for the Social Sciences

# ABSTRACT

Electronic payment has been increasingly popular. This research attempts to determine the crucial elements affecting FPT students' intention to use electronic payments. The authors developed a model consisting of six factors for investigation. To analyze the data, the authors utilized approaches for both qualitative and quantitative analysis. After the analysis, the results revealed that all six factor groups were retained and showed varying degrees of impact on the intention to use electronic payments. The research findings revealed that Support Policies had the most significant impact on the intention to use electronic the least influence. Furthermore, the study proposed several suggestions for companies and service providers to enhance the safety, security, and convenience of electronic payments, thereby encouraging its adoption among different user groups.

#### **CHAPTER 1: INTRODUCTION**

#### 1.1. Problem statement

Vietnam's economy is transforming along with the rest of the world's as a result of the fourth industrial revolution. In this revolution, the strong explosion of technology has paved the way for many industries to develop, in which electronic payments is one of the industries with the strongest growth potential. Presently, we find ourselves in a society that has experienced significant and qualitative transformations. The strong explosion of information technology has created a premise for many industries to develop, in which e-commerce is one of the industries with outstanding development with many advances to make people's lives easier and should be more modern, followed by electronic payments activities. To date, electronic payments have remained the backbone of the digital economy. People rarely use cash for payments in a society with high Internet coverage and a developed digital economy. Instead, electronic payments are often the preferred option with the advantage of being faster and more convenient. Consumers are no longer restricted by time or location when it comes to purchasing products and services; they have the freedom to buy anytime and from anywhere. With a high number of Internet users, it can be seen that Vietnam and FU students have an advantage in accessing the electronic payments market. Electronic payments was born many years ago with the first model being an e-wallet. However, due to factors affecting students's intention to use electronic payments methods, online payment activities in Vietnam and FU continuously face significant challenges. Therefore, it is important to consider the factors that influence FU student decision to use an electronic payments method. To identify factors affecting electronic payments methods as well as service usage preferences, thereby providing appropriate orientations and solutions for consumers to increase the rate of service users and long-term use.

1.2. Overview of related studies



Shoppers can easily pay for their purchases by scanning a QR code, which transfers them to the merchant's online transaction for electronic payments for the purchased products (Kasirye & Marsum, 2021). With smartphones being an essential part of modern life, they have paved the way for the rise of digital payments, resulting in a substantial increase in the number of individuals utilizing electronic payments methods (Bantwa & Padiya, 2020). As consumers started touse debit and credit cards instead of paper money to protect payments made with smart cards previously, the concept of electronic payments was born (Alaeddin, 2018). Payment methods such as American Express, Discover, JCB, Mastercard, Union Pay, and Visa are six companies. Mobile-based digital payment systems have been rolled out in countries like the US, Japan, Sweden, and South Korea, allowing people to use their phones for a variety of transactions, including paying for groceries, buying drinks from vending machines, and booking airline tickets (Rathore, 2016). The most recent development in mobile commerce is electronic payments, which allows users to transact, shop online, place orders, and share a variety of services. Users can store and manage their online purchase information, including logins, passwords, shipping addresses, and credit card numbers, through this program or web service (Sharma, 2018). Perceiving the behavior of electronic payments, it was determined that three factors affecting consumer acceptance are the convenience of use, fast online transactions and usefulness of e-wallets (Pachpande & Kamble, 2018).

#### 1.3. Research objectives and research questions

#### 1.3.1. Overall research objective

Research on factors affecting FU student's intention to use e-payment

#### 1.3.2. Specific research objectives

- Acquire a theoretical basis for electronic payments and develop electronic payments; identify students' needs for using electronic payments and build a theoretical model for developing electronic payments for students of FU.
- There is a research model of the variables influencing FU students' intention to adopt electronic payments.
- Determine the extent to which each aspect has influenced the growth of electronic payments; give implications on the intention and policy of

developing electronic payments applications at FU.

#### 1.3.3. Research questions

- What are the factors affecting the use of electronic payments by FPT Can Tho students?
- 2) Which factor has the strongest impact, which factor has the least impact on the intention to use electronic payments of FPT students?
- 3) Does the research provide necessary policies for FPT students to maintain and continue to use electronic payments?

#### 1.4. Subjects and scope of research

#### 1.4.1. Research subjects

The goal of the study is to identify the variables that influence FU student's intentions to adopt electronic payments. Students from FU and a few other institutions are among the survey's participants.

# 1.4.2. Research scope

- Location: FPT University.
- Subjects of data collection: Students from year 1 to year 5 of FU.
- Time: Time to collect primary data from May 2023 to June 2023; Discussion with experts from July 2023.

#### 1.5. Methodology

This thesis combines qualitative and quantitative research.

#### 1.5.1. Qualitative research

Based on the research objectives in the thesis, as a scientific basis for setting up expert interview questions including expert lecturers in the economic sector and group discussion to complete the model for preliminary research, determine the scale and observed variables.

Qualitative research was conducted to evaluate the theoretical model's suitability and improve the observed variables that were utilized to gauge research concepts. This qualitative approach also facilitates the discovery, adjustment, and supplementation of the observed variables to ensure the coherence between the research theory and the constructed scale. The employed qualitative research techniques encompass dialectical materialism, information collection, analysis, synthesis and induction.

#### 1.5.2. Quantitative Research

This research was conducted to test the appropriateness of the scale, research model and research hypotheses.

To conduct the research, the thesis uses a direct interview technique with formal survey questionnaires obtained from preliminary quantitative research results. The sample size was selected according to the random sampling method and the subjects of the survey were students of FU. Collected data is entered and processed by specialized software. The formal quantitative research was conducted from May to July 2023.

#### **1.6.** Theoretical and practical significance of the thesis topic

This project is not only meaningful in surveying the intention to use payment of FU students generally but also has a favorable impact on the accessibility and development of electronic payments for FU students and students nationwide. The research results of the topic contribute to supplementing theoretical and practical knowledge about the development of electronic payments in today's era and that is the strong impact of technology, and at the same time, it is the basis to help developers apply electronic payments models and research and develop electronic payments models. At the same time, this is a completely fact-based essay and a useful reference for researchers, students majoring in economics in general, other related disciplines in particular and those interested.

#### 1.7. Thesis structure

The content of the thesis is divided into the following sections:

Chapter 1. INTRODUCTION

Chapter 2. LITERATURE REVIEW

Chapter 3. METHODOLOGY

Chapter 4. ANALYSIS AND FINDINGS

Chapter 5. CONCLUSION AND RECOMMENDATIONS

#### **CHAPTER 2: LITERATURE REVIEW**

In this chapter, we will proceed with reviewing and analyzing literature concerning theories related to electronic payments and unified theories on implementing new technology. The purpose is to investigate relevant factors and propose the group's model while clarifying theories on factors influencing use of electronic payments is intended among FPT university students. This will help identify which factors positively impact students' attitudes and which factors negatively affect them. Based on these findings, we will establish the formal model for this research topic.

#### 2.1. Related concepts.

#### 2.1.1. Theory of Electronic Payment.

Electronic payment systems have become increasingly popular in the era of digital technology. It is now common to encounter electronic payments as a necessary condition for users to facilitate their daily activities. Electronic payments represents a commitment between sellers and buyers and is used directly in electronic communication. Briggs & Brooks (2011) & Tan (2004) electronic payments enables the connection between individuals and organizations, encouraged by switching companies and banks to facilitate electronic financial exchanges. Adeoti & Osotimehin (2012) define electronic payments as a way to pay for the items or services you've purchased in physical stores or online shopping centers.

From another perspective, Ogedebe & Jacob (2012) consider electronic payments as a form of money transfer conducted over the Internet. Electronic payments are associated with e-commerce transactions, including electronic payments for buying and selling goods online. It involves direct electronic fund transfers, creditcard transactions, and other using just electronic methods instead of money or cheques.

In general, electronic payments in the current technology era is seen as a method of online transactions conducted directly through the Internet, with various

forms of payment. It can also be understood as a payment process conducted without using physical cash. Electronic payments encompasses several different transaction systems, such as credit cards, e-wallets, digital balance accumulation systems, wireless payment methods, and electronic check payment methods.

Rachna (2013) electronic payments is understood as a way to transfer funds from during a transaction, money is not exchanged directly from one party to another, such as from the buyer to the seller. Alternatively, electronic payments can be seen as a payment method that does not involve cash or checks, applicable for both in- person and online shopping at convenience stores, shopping centers, or online shopping websites. Electronic payments offer numerous benefits to users, enhancing convenience, saving time in payment processing, and providing flexibility in daily transactions. Additionally, electronic payments encourage faster digital transformation in the banking sector and the emergence of financial intermediaries.

	Author's description	Authors
1	Electronic payments provide connectivity between	Briggs &
	individuals and institutions, encouraged by switches and	Brooks (2011);
	banks that enable electronic financial exchange.	Tan (2004)
2	One way to pay for items is with an electronic payments	Osotimehin
	or a service purchased in shopping malls and	(2012)
	supermarkets and paying online.	
3	An electronic payments system is a form of money transfer	Ogedebe &
	done over the Internet. E-payments is considered a type of	Jacob (2012)
	transaction related to e-commerce, including making	
	electronic payments for buying and selling on an online	
	platform. Without the use of cash or lightning, electronic	
	payment is regarded as an electronic transfer	
	technique of direct credit cards and other electronic ways.	

#### **Table 2.1 Author's description of Electronic Payment**



4	When using an electronic payments method to transact	Rachna (2013)
	without the use of cash, it is considered a good way to	
	transfer cash flow from buyers to sellers or from one party	
	to another.	

(Sources of documents compiled by the thesis authors)

#### 2.1.2. Unified Technology Use and Acceptance Model Theory.

"The Unified Theory of Acceptance and Use of Technology" was defined and developed by Venkatesh et al. (2003) with the purpose of examining technology acceptance and usage in a more unified approach. The UTAUT model was constructed based on the belief that there are many overlapping ideas from various foundational theories, and it would be more reasonable to organize and synthesize them to create a unified theoretical foundation. The UTAUT model was developed with the hope that future research would no longer need to explore, gather, and synthesize ideas from multiple different models. Instead, researchers could simply apply the UTAUT model to address a wide range of technologyacceptance and adoption-related issues. The model was created and constructed to provide a unified theoretical foundation, facilitating research and acceptance of innovations in information systems and information technology. The theory proposes four key factors: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions.

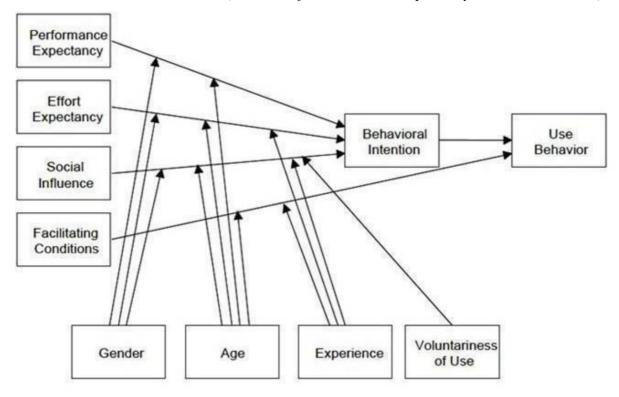
The UTAUT has been applied as a foundational theory in many studies, and there have been several extensions and integrations of the UTAUT model. Some studies have used the original UTAUT in new contexts, expanding it by adding new factors or integrating it with other models. Other research findings also indicate that, in addition to the factors studied by Venkatesh et al. (2003) there are other influential factors. Overall, studies have demonstrated that the four factors of UTAUT can predict intentions and usage behavior, but there have also been contrasting research results. Initially, the UTAUT model was designed to explain technology acceptance and usage primarily by employees, and therefore, it may not be entirely suitable for the general consumer population. Li & Kishore (2006) during their research of the use of online community weblog systems, found that the four main factors: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions did not have predictive significance across all research groups.

Venkatesh et al. (2003) the UTAUT proposes four factors: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. From a theoretical perspective, the UTAUT model provides insights into the factors influencing user intention over time. UTAUT has been empirically studied and shown to outperform other research models Venkatesh et al. (2003); Venkatesh & Zhang (2010). The UTAUT model is considered a combination of many models that investigate the acceptance and use of new information systems, including the Technology Acceptance Model (TAM). From the background theories that we have synthesized, in the following, we will summarize the authors' description through table 2.2 and list Venkatesh's Unified Theory of Acceptance and Use of Technology through figure 2.1.

	Author's description.	Authors
1	In order to test the acceptance of the technology and employ a more unified approach, Venkatesh et al. (2003) developed the Unified Technology Use and Acceptance Model. The UTAUT model is predicated on the idea that there are many underlying theories and several equivalent concepts; hence, it makes more sense to arrange and combine these concepts to create a single theoretical framework.	
2	In the process of researching the use of the online Weblog community system, it was found that the scale of 4 main factors is: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition. predictive significance across all research groups.	

Table 2.2 Author's description of UTAUT.





(Sources of documents compiled by the thesis authors)

Figure 2.1 The proposed research model UTAUT

(Source: Venkatesh et al., 2003)

#### 2.1.3. Theory of Intention to Use

Ajzen & Fishbein's defined Theory of Reasoned Action was created in the late 1960s and later developed in the 1970s, is considered one of the most significant

theories for research individual behavioral intentions. This theory suggests that behavioral intention is the most crucial factor in predicting an individual's usage behavior. Taylor & Todd (1995) noted that various empirical investigations have validated the TAM's capacity to forecast both the decision to adopt new technology and its actual use. The basic goal of Technology Acceptance Model TAM is to offer a theoretical framework for analyzing how external variables affect internal factors.

The Theory of Planned Behavior (TPB), which evolved from the Theory of Reasoned Action, asserts that behavioral tendencies to engage in an activity can be used to anticipate or explain an individual's conduct. These behavioral inclinations are thoughtto have underlying causes, such as the effort people put forth to carry out the conduct, that have an impact on the behavior. The three factors that make up TPB are functions of behavioral inclinations. First, There are two types of attitudes: favorable and unfavorable assessments of the activity in question. The third aspect is social influence, which refers to perceived societal pressure to engage in the behavior or refrain from doing so. Last but not least, Ajzen created the Theory of Planned Behavior by including a sense of behavioral control into the TRA model.

According to Ajzen (1988) behavioral intention is the intangible possibility that a person will carry out a particular behavior within a specific time frame. Usage intention was described by Zhao & Othman (2010) as a desired outcome of an action process. Usage intention was defined by Tirtiroglu & Elbeck (2008) as customers' willingness to use a specific product. Intention was defined by Ajzen et al. (1975) as a behavioral indicator of a person's preparedness to engage in a particular action or the intention to use a product either positively or negatively. Usage intention is an individual's expressed inclination and indicates whether they will adopt a new technology or not. An individual will perform that behavior if they have the intention to use it Latupeirissa et al., (2020).

Regarding the research findings of Peña-García et al. (2020), they confirmed that usage intention positively influences technology usage. This research also assumed that usage intention would positively influence future electronic payments adoption. Summary of the authors' views on behavioral theory is shown in Table 2.3.

	Author's description.	Authors
1	Built in the late 60s of the twentieth century and expanded in	Ajzen &Fishbein
	the 1970s, this is considered one of the most important	(1975)
	theories on the research of an individual's behavioral	
	intentions. This theory indicates that behavioral intentionis	
	the most important factor for predicting an individual's	
	usage behavior.	
2	The ability of TAMs (Technology Acceptance Models) to	Taylor &Todd
	predict behavioral decisions of new technology users and	(1995)

# Table 2.3 Author's description of Intention to Use



	their actual use has been supported by numerous empirical	
	studies. TAM's main objective is to provide foundational	
	knowledge for analyzing how external forces impactinternal	
	elements. A person's behavior may be predicted or explained	
	by behavioral propensities to engage in that behavior,	
	according to the Theory of Planned Behavior (TPB), which	
	developed from the concept of reasoned	
	action.	
3	Intention to use is a course of action that an individual	Zhao & Othman
	wants to achieve.	(2010)
4	Intent to use is considered the consumer's readiness to use	Tirtiroglu &
	a specific product.	Elbeck (2008)
5	Intention to use is an individual tendency to manifest andit	Latupeirissa et al.
	indicates whether the individual will use a new technology.	(2020)
	An individual will perform that behavior if they	
	intend to use it.	
6	Claims that the intention to use technology positively	Peña-García et al.
	affects usage.	(2020)
-		

(Sources of documents compiled by the thesis authors)

#### 2.1.4. Propose Factors

We believe that four elements have the most bearing on the intention to use electricity payment, based on the background theories we have examined and the notion of acceptability to use integrated technology: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions are the four fundamental components of the integrated technology adoption and usage paradigm. And after researching the theory of the aforementioned authors, we made the following 6 additions: Value Perceived, Utility Perceived, Attitude Toward Use, Safety and Security, Policy Support, and Risk Perceived.

We then carried out a poll to learn the thoughts of experts on the elements influencing the intention to use e-payment. Through the expert comments provided,

we have identified three additional factors: Perceived Knowledge, Perceived Financial, Supplier Reputation.

Through experience, we discover that it's simple to understand why electronic payments are so common in today's technologically advanced society. Kashima et al. (2013) theory on the use of electronic payments led us to choose to include another element, which is: Popularity

Finally, we have compiled 14 proposed characteristics that we believe have an impact on intention to use after learning about theory, gathering from practice, and consulting expert viewpoints. A test of the electricity bill. The formal variables for evaluation analysis will then be finalized through the use of an expert surveyas part of a formal model. Table 2.4 summarizes the proposed factors for the model.

	Factors	Authors
1	Performance Expectancy	Venkatesh (2003)
2	Effort Expectancy	Venkatesh (2003)
3	Social Influence	Venkatesh (2003)
4	Facilitating Conditions	Venkatesh (2003)
5	Perceived Value	Zeithaml (1988)
6	Perceived Knowledge	Research From The Expert (2023)
7	Perceived Financial	Research From The Expert (2023)
8	Perceived Usefulness	Davis (1989)
9	Supplier Reputation	Research From The Expert (2023)
10	Attitude Toward Use	Ajzen and Fishbein (1975)
11	Safety and Security	Bauer (1960)
12	Support Policy	Antinojia & Scherling (2019)
13	Perceived Risk	Bauer (1976)

**Table 2.4 Propose Factors** 



14	Popularity
----	------------

Kashima et al. (2013)

(Source from survey research team)

#### 2.2. Building A Research Model.

In order to determine the elements that should be incorporated into the official model, we will conduct expert interviews (Appendix 2) after collecting all of there commended factors.

Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Support Policy, and Safety and Security are the six components that have been formally included to the model as a result of the survey results. The formal model is given through table 2.5.

	Factors	Authors
1	Performance Expectancy	Venkatesh (2003)
2	Effort Expectancy	Venkatesh (2003)
3	Social Influence	Venkatesh (2003)
4	Safety and Security	Bauer (1960)
5	Facilitating Conditions	Venkatesh (2003)
6	Support Policy	Antinojia & Scherling (2019)

**Table 2.5 Formal Factors** 

(Source from survey research team)

#### 2.2.1. Performance Expectancy

Venkatesh et al. (2003) the performance expectancy is the assumption that employing electronic payment will increase one's level of productivity. When compared to conventional waiting and direct payment methods, electronic payment has a wider range of transaction alternatives, which customers view as making it more convenient and effective. Electronic payment also offers consumers a number ofadvantages, including cost-free money transfers, discounted cell top-ups, and discounts on purchases, all of which help users cut expenses. When it comes to use, electronic payment allows simple and convenient transactions that let consumers do jobs quickly and effectively with little effort.

Giao et al. (2020) & Widyanto et al. (2020) concluded that electronic payments make it simple to track and manage customer costs because the transactions are stored. According to research, people will react favorably and have a favorable attitude of using electronic payment if they are aware of the advantages it offers. Additionally, when the perceived usefulness of electronic payment is favorablyimpacted, people are more likely to utilize it in the future. As a result, Giao et al. (2020) & Widyanto et al. (2020) found that expectation effectiveness has a favorableimpact on consumers' desire to utilize electronic payment.

Performance expectancy in the context of electronic payment acknowledges, according to Venkatesh et al. (2003) that a technology instrument can increase the efficiency and effectiveness of task performance. According to Davis et al. (1992) perceived usefulness is associated with people's expectations that using technology will increase their task-related productivity. In orderto describe customers' expectations that adopting electronic payment will improve their performance and efficiency in accomplishing their goals, this study uses the efficacy of expectancy factor. Therefore, the authors Koenig-Lewis et al. (2015); Gupta et al. (2020); Ariffin & Lim, (2020) have investigated the effect of expectancy efficacy on consumers' intention to adopt electronic payment. The majority of studies' findings indicate that consumers' intentions to use electronic payments are greatly positively impacted by the effectiveness of expectation Ariffin&Lim (2020); Venkatesh et al. (2003); Sivathanu (2019); Schierz et al. (2010); Martins et al. (2014); Oliveira et al., (2014).

#### 2.2.2. Effort Expectancy

The effort expectancy is the degree to which someone can readily learn and memorize the procedure of using electronic payment when they first approach it and begin to learn how to utilize it Venkatesh et al, (2013). They are capable of using electronic payment effectively once they become accustomed to it. On the other side, consumers interact with electronic payment as they begin to become

comfortable with it and learn how to use it, eventually growing accustomed to it and using it more regularly throughout their everyday lives. According to research, when users find using electronic payment simple and uncomplicated, they are more likely to have a good attitude about using thes ystem, which enhances their intention to use electronic payment. It is define in accordance with Giao et al. (2020) that effort expectancy has a favorable impact on consumers' inclination to adopt electronic payment.

#### 2.2.3. Social Influence

Social influence, as concluded by Venkatesh et al. (2003) is the degree to which an individual believes that important others think he/she should use electronic payment. Nguyen Van Son et al. (2021) is determinate when people aren'thighly experienced with utilizing technology, they are more likely to be swayed by advice or criticism from those around them. People close to them or powerful figures may advise them to employ electronic payment during that period. One person's guiding and direction toward another is referred to as social influence. This component reflects the degree to which a person influences individuals in their immediate environment (family, friends, coworkers, etc.) to adopt electronic payment practices Chong & Chan, (2012). Depending on how customers or users assess the advantages or disadvantages of adopting electronic payment, social influence may have favorable or unfavorable effects Hidayanto et al. (2015). The word "social influence" refers to the notion that someone feels important because of other people. Kijsanayotin et al. (2009) it influences whether or not they willengage in that conduct. One facet of social influence is the perceived authority of influential others' views on adopting electronic payment Kaium et al., (2020).

#### 2.2.4. Safety and Security

The level of consumers' perception of the safety and security of their personal information when utilizing electronic payment is represented by the words "safety" and "security." The degree to which users perceive safety and security when utilizing electronic payment positively increases their intention to utilize it Bauer's Protection Motivation Theory (1960). Previous studies have indicated that users' attitudes about electronic payment are positively correlated with how

secure they consider it to be, and that they are more likely to utilize it. In conclusion, consumers' perceptions of safety and security have a significant impact on whether they plan to use electronic payments. Users are more likely to embrace and use the electronic payment system for their transactions if they feel secure using it and are more confident in the security precautions.

#### 2.2.5. Facilitating Conditions

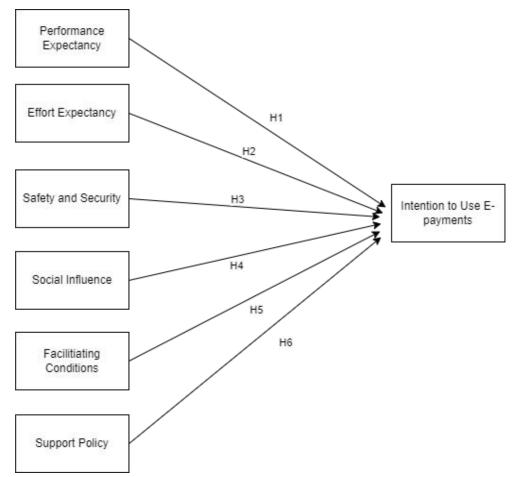
Venkatesh et al. (2003) determiinate the extent to which a person believes that the institutional setup and technological underpinnings permit them to use the technology is known as the enabling condition. Giao et al. (2020) defined perceived usability, on the other hand, as the availability of tools, such as infrastructure or reference materials, that can help and support people in implementing the new technology. Chawla & Joshi (2020) Perceived ease of use includes compatibility and knowledge of the technology, as well as instructions on how to use it. Mahran& Enaba (2013); Giao et al. (2020) the user's intention to use is greatly influenced by the perceived ease of use. Hossain et al. (2017) perceived ease of use positively correlates with a user's intention to utilize a product. Yang et al. (2021) Perceived ease of use has a beneficial influence on a user's propensity to adopt electronic payments, according to numerous studies.

#### 2.2.6. Support Policy

In order to commit and reassure users of their obligations and responsibilities towards those using electronic payment, vendors or service providers of electronic payment may implement rules and regulations. Customer assistance, prompt restitution, return and refund procedures, and support for user concerns are a few examples of these support policies. Support policies are influenced by both security and trust issues, claim Antinojia & Scherling (2019). These elements show how support policies affect users' intentions to utilize electronic payments favorably.

Users of electronic payments feel secure and have more faith that their interests will beproperly protected when there are clear refund and compensation mechanisms in place. Users are more likely to have negative opinions, develop skepticism, and refrain from using electronic payment for their transactions if a company or merchant fails to offer proper support policies or assurances of customer rights Antinojia & Scherling, (2019).

From the above 6 factors that have been given, our group comes up with a formal model in Figure 2.2.



# Figure 2.2 Research model of factors affecting the intention to use electronic payment of FPT university students.

According to Figure 2.2, Hypotheses are made through factors. We proved the following hypothesis in this context:

H1: Performance Expectancy has a positive effect on the intention to useelectronic payment.

H2: Effort Expectancy has a positive effect on the intention to use electronic payment.

H3: Safety and Security has a positive effect on the intention to use electronic payment.

H4: Social Influence has a positive effect on the intention to use electronic payment.

H5: Facilitating Conditions has a positive effect on the intention to use electronic payment.

H6: Support Policy has a positive effect on the intention to use electronic payment.

From the theoretical basis, we have the following scale of components through

Table 2.6.

	Factors	Notations	Authors
1	Performance Expectancy	PE	Venkatesh et al. (2003); Giao et al.
			(2020); Widyanto et al. (2020); Davis et
			al. (1992); Koenig-Lewis et al. (2015);
			Gupta et al. (2020); Ariffin & Lim,
			(2020); Venkatesh et al. (2003);
			Sivathanu (2019); Schierz et al. (2010);
			Martins et al. (2014); Oliveira et al.
			(2014).
1.1	Electronic payments expedite the	PE1	Venkatesh et al. (2003); Giao et al.
	transaction process.		(2020); Widyanto et al. (2020); Davis et
			al. (1992); Koenig-Lewis et al. (2015);
			Gupta et al. (2020); Ariffin & Lim,
			(2020); Venkatesh et al. (2003);
			Sivathanu (2019); Schierz et al. (2010);
			Martins et al. (2014); Oliveira et al.
			(2014).
1.2	Electronic payments makes it simpler	PE2	Venkatesh et al. (2003); Giao et al.
	tocomplete transactions.		(2020); Widyanto et al. (2020); Davis et
			al. (1992); Koenig-Lewis et al. (2015);
			Gupta et al. (2020); Ariffin & Lim,
			(2020); Venkatesh et al. (2003);
			Sivathanu (2019); Schierz et al. (2010);

#### Table 2.6 Scale of components



			Martins et al. (2014); Oliveira et al.
			(2014).
1.3	Do you think using electronicpayments is	PE3	Venkatesh et al. (2003); Giao et al.
	beneficial?		(2020); Widyanto et al. (2020); Davis et
			al. (1992); Koenig-Lewis et al. (2015);
			Gupta et al. (2020); Ariffin & Lim,
			(2020); Venkatesh et al. (2003);
			Sivathanu (2019); Schierz et al. (2010);
			Martins et al. (2014); Oliveira et al.
			(2014).
1.4	You can better manage your transactions by	PE4	Venkatesh et al. (2003); Giao et al.
	using electronicpayments.		(2020); Widyanto et al. (2020); Davis et
			al. (1992); Koenig-Lewis et al. (2015);
			Gupta et al. (2020); Ariffin & Lim,
			(2020); Venkatesh et al. (2003);
			Sivathanu (2019); Schierz et al. (2010);
			Martins et al. (2014); Oliveira et al.
			(2014).
1.5	Electronic payment transactions are more	PE5	Venkatesh et al. (2003); Giao et al.
	advantageous than traditional methods of		(2020); Widyanto et al. (2020); Davis et
	transaction.		al. (1992); Koenig-Lewis et al. (2015);
			Gupta et al. (2020); Ariffin & Lim,
			(2020); Venkatesh et al. (2003);
			Sivathanu (2019); Schierz et al. (2010);
			Martins et al. (2014); Oliveira et al.
			(2014).
1.6	You can reduce transaction expenses by	PE6	Venkatesh et al. (2003); Giao et al.
	accepting electronic payments.		(2020); Widyanto et al. (2020); Davis et
			al. (1992); Koenig-Lewis et al. (2015);
			Gupta et al. (2020); Ariffin & Lim,



			(2020); Venkatesh et al. (2003);
			Sivathanu (2019); Schierz et al. (2010);
			Martins et al. (2014); Oliveira et al.
			(2014).
2	Effort Expectancy	EE	Venkatesh et al. (2003); Giao et al.
			(2020); Widyanto et al. (2020).
2.1	Utilizing electronic payments is	EE1	Venkatesh et al. (2003); Giao et al.
	simple.		(2020); Widyanto et al. (2020).
2.2	Learning how to use electronic	EE2	Venkatesh et al. (2003); Giao et al.
	p a y m e n t s is simple.		(2020); Widyanto et al. (2020).
2.3	Understanding how to use electronic	EE3	Venkatesh et al. (2003); Giao et al.
	payments is simple.		(2020); Widyanto et al. (2020).
2.4	Your communications with the system are	EE4	Venkatesh et al. (2003); Giao et al.
	understandable and transparent.		(2020); Widyanto et al. (2020).
3	Safety & Security	SS	Bauer et al. (1960).
3.1	Account and personal information are	SS1	Bauer et al. (1960).
	treated under strictest confidence.		
3.2	Rarely encounter technical issues	SS2	Bauer et al. (1960).
	when processing payments		
3.3	If an incident does occur, it rarely results in	SS3	Bauer et al. (1960).
	financial loss and is dealt with right away.		
3.4	Ensured by law	SS4	Bauer et al. (1960).
4	Social Influence	SI	Venkatesh et al. (2003) ; Nguyen Van
			Son et al. (2021); Hidayanto et al. (2015);
			Kijsanayotin et al. (2009); Chong &
			Chan, (2012); Kaium et al., (2020).
4.1	People that have the power to affect your	SI1	Venkatesh et al. (2003) ; Nguyen Van



	helpowing advice you to use electronic		Son at al. (2021): Hidawanta at al. (2015).
	behavior advise you to use electronic		Son et al. (2021); Hidayanto et al. (2015);
	payments.		Kijsanayotin et al. (2009); Chong &
			Chan, (2012); Kaium et al., (2020).
4.2	People that matter to you believe that using	SI2	Venkatesh et al. (2003) ; Nguyen Van
	electronic payments is a good idea.		Son et al. (2021); Hidayanto et al. (2015);
			Kijsanayotin et al. (2009); Chong &
			Chan, (2012); Kaium et al., (2020).
4.3	Your friends use electronic payments.	SI3	Venkatesh et al. (2003) ; Nguyen Van
			Son et al. (2021); Hidayanto et al. (2015);
			Kijsanayotin et al. (2009); Chong &
			Chan, (2012); Kaium et al., (2020).
4.4	People in your household who use	SI4	Venkatesh et al. (2003) ; Nguyen Van
	electronic payments.		Son et al. (2021); Hidayanto et al. (2015);
			Kijsanayotin et al. (2009); Chong &
			Chan, (2012); Kaium et al., (2020).
4.5	Electronic payments are widely used in the	SI5	Venkatesh et al. (2003) ; Nguyen Van
	communities in which you participate.		Son et al. (2021); Hidayanto et al. (2015);
			Kijsanayotin et al. (2009); Chong &
			Chan, (2012); Kaium et al., (2020).
5	Facilitating Conditions	FC	Venkatesh et al. (2003);Giao et al.
			(2020) ; Chawla & Joshi (2020); Mahran
			& Enaba (2013); Hossain et al. (2017);
			Yang et al. (2021).
5.1	Do you own a smartphone that youcan use	FC1	Venkatesh et al. (2003);Giao et al.
	to make payments online?		(2020) ; Chawla & Joshi (2020); Mahran
			& Enaba (2013); Hossain et al. (2017);
			Yang et al. (2021).
5.2	Are you knowledgeable enough touse	FC2	Venkatesh et al. (2003);Giao et al.
	electronic payments?		(2020) ; Chawla & Joshi (2020); Mahran
L			



			& Enaba (2013); Hossain et al. (2017);
			Yang et al. (2021).
5.3	You receive assistance and support while using electronic payments.	FC3	Venkatesh et al. (2003);Giao et al. (2020) ; Chawla & Joshi (2020); Mahran & Enaba (2013); Hossain et al. (2017); Yang et al. (2021).
5.4	The checkout counter accepts your electronic payment method.	FC4	Venkatesh et al. (2003);Giao et al. (2020) ; Chawla & Joshi (2020); Mahran & Enaba (2013); Hossain et al. (2017); Yang et al. (2021).
5.5	Numerous other programs (Momo, Zalc pay,) have integrated electronic payment methods.	FC5	Venkatesh et al. (2003);Giao et al. (2020) ; Chawla & Joshi (2020); Mahran & Enaba (2013); Hossain et al. (2017); Yang et al. (2021).
6	Support Policy	SP	Antinojia & Scherling (2019)
6.1	Have a transparent, detailed returnpolicy.	SP1	Antinojia & Scherling (2019).
6.2	Get quick response when havingpayment problems.	SP2	Antinojia & Scherling (2019).
6.3	Get prompt assistance at theregister.	SP3	Antinojia & Scherling (2019).
6.4	When utilizing electronic payment, there are numerous promotions available (discounts, points accumulation, refunds, etc.).	SP4	Antinojia & Scherling (2019).
6.5	Support guidelines are outlined onthe website.	SP5	Antinojia & Scherling (2019).
7	Intention To Use	ITU	Ajzen et al. (1975); Taylor & Todd (1995); Ajzen (1988); Zhao & Othman (2010); Peña-García et al. (2020); Latupeirissa et al. (2020).



7.1	Will you continue to make payments online in the future?	ITU1	Ajzen et al. (1975); Taylor & Todd (1995); Ajzen (1988); Zhao & Othman (2010); Peña-García et al. (2020); Latupeirissa et al. (2020).
7.2	Will you use electronic payments in the future?	ITU2	Ajzen et al. (1975); Taylor & Todd (1995); Ajzen (1988); Zhao & Othman (2010); Peña-García et al. (2020); Latupeirissa et al. (2020).
7.3	Do you intend to use electronic payments going forward?	ITU3	Ajzen et al. (1975); Taylor & Todd (1995); Ajzen (1988); Zhao & Othman (2010); Peña-García et al. (2020); Latupeirissa et al. (2020).
7.4	Will you recommend your relatives to use electronic payment in the future?	ITU4	Ajzen et al, (1975); Taylor & Todd (1995); Ajzen (1988); Zhao & Othman (2010); Peña-García et al. (2020); Latupeirissa et al. (2020).
7.5	Do you think the use of electronic payments is necessary?	ITU5	Ajzen et al, (1975); Taylor & Todd (1995); Ajzen (1988); Zhao & Othman (2010); Peña-García et al. (2020); Latupeirissa et al. (2020).

# **Conclusion of Chapter 2**

The fundamental ideas relating to the payment system, the unified technology use and acceptance model, and the behavioral intention to use theory have all been compiled and organized in Chapter 2 from the viewpoint of the writers, who have confirmed anddeveloped them. Through Chapter 2, we have learned more about the variables influencing FU students' intentions to use electronic payment in addition to the pertinent concepts related to the topic that our team is researching by meansof six variables: anticipated effort, anticipated efficacy, safety and security, social impact, facilitation settings, and support policies. It can be seen that these 6



factors have a favorable effect on the intention of FPT University students to use electronic payment. These factors not only meet the user's needs but also leave a positive impression on the user by providing good policy and service when using electronic payment, and they quickly and conveniently resolve all issues relating to the user's payment provide users a solid first impression.

#### **CHAPTER 3: RESEARCH METHODOLOGY**

In Chapter 2, the authors have covered various theories related to the adoption of electronic payment, along with prior research, the research model, and the research hypotheses. Chapter 3 will focus on presenting the methodology, data analysis, samplesize, and the insights obtained from the research participants' responses.

#### 3.1 Research design

The theoretical framework and research framework described in Chapter 2 serve as the foundation for the study. The primary focus of this research revolves around the intention to use (ITU) electronic payment, designated as the dependent variable. Several independent variables are taken into account, including Performance Expectancy (PE), Effort Expectancy (EE), Safety and Security (SS), Social Influence (SI), Facilitating Conditions (FC), and Support Policy (SP). The research uses both qualitative and quantitative research to thoroughly examine the factors impacting the intention to utilize electronic payment among FPT University students. These techniques were selected to learn more about the topic and find pertinent insights.

In this research, information and data were collected using a survey questionnaire with 44 items. The questionnaire was built using the study paradigm that was described in Chapter 2. To determine the effect of several factors on FPT University students' inclination to use electronic payment, a Likert scale with five levels was employed. The scale ranged from 1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree to 5: Strongly Agree. The Likert scale is a widely used measurement method in both social and scientific research (Joshi et al., 2015).

For the purpose of gathering data for this study, a Google Forms-created online survey questionnaire was used. A common way for gathering data in social science research is the use of questionnaires, and they can be used in a legitimate and reliable manner. When using questionnaires as data for analysis, the consistency and accuracy of the survey questionnaire provide certain values and reliability (Philip Cleave, 2023).

# 3.1.1. The research processes

The completed research process framework is illustrated in Figure 3.1.

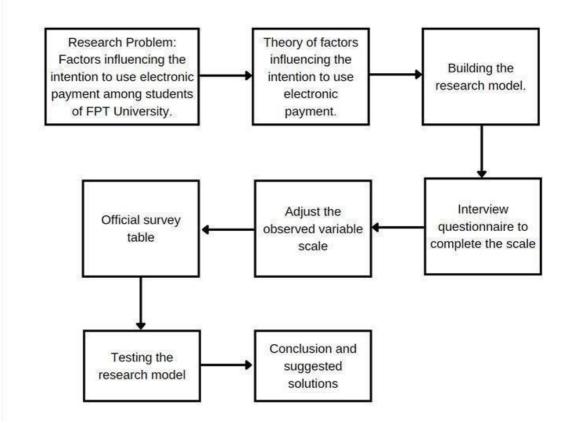


Figure 3.1 The research process

To achieve the objectives set out, this research process was designed to include two part as follows: The first Qualitative research: Research relevant literature to provide a scientific basis for proposing the theoretical research model and refining the preliminary scale; The second In the quantitative research phase, a formal analysis of the subjects was conducted using the following statistical methods: Descriptive statistics, Cronbach's Alpha test, Exploratory Factor Analysis (EFA), Pearson correlation analysis, T-test, ANOVA, Regression analysis. The research process framework should include the following contents: Research problem: The research problem in this research is the factors influencing the intention to use electronic payments among students at FPT University. Theoretical background: After identifying the research problem, we will discuss the theory of the factors influencing the intention to use electronic payments. Research model



development: Once the research model is established, we need to create a questionnaire and refine the preliminary measurement scale. To make it complete, we will adjust the measurement scale and observed variables, and then we will havean official survey questionnaire. Data collection and analysis: With the surveyresults, we will perform the verification of the research model. Conclusion and proposed solutions: Finally, we will draw conclusions and propose solutions based on the research findings.

#### 3.1.2. Specific steps of the research process framework.

In the research process framework, there will be 2 specific steps: Step 1 is qualitativeresearch, step 2 is quantitative research.

#### 3.1.2.1. Qualitative Research

The main objective of qualitative research is to explore, complement, and refine evaluation criteria, adjust measurement scales, and develop a questionnaire. According to Cyriacoa et al. (2017), the research method focuses on describing and explaining phenomena through interviews and observations. The research adopts a descriptive approach, which allows for the generation of observed and common themes without being restricted to specific variables. The analytical method used in this research is deductive or inferential, meaning that conclusions are drawn from the interpretation and in-depth analysis of interviews and observations. This approachadds value by providing descriptive and explanatory insights into the phenomena being investigated. Qualitative research shares similarities with quantitative research, but it employs a flexible approach to gather feedback related to the research topic and offers rational explanations for the collected data tosupport the presented conclusions.

The performance of qualitative research by studying relevant documents aims to establish a scientific basis for building and establishing a theoretical research model on the factors affecting the intention to use electricity payment death. Literature review aims to understand previous studies by authors both domestically and internationally associated with the topic of the research. Through this review and research of literature, scientific bases will be obtained to identify factors and attributes relevant to the research topic, followed by expert interviews and group discussions.

Next will be the exchange and interview with experts and this part has been done in chapter 2. This is a crucial step in the process of building and designing the questionnaire before proceeding with the formal research. The purpose of surveying experts is to gather their opinions on the factors influencing the intention to use electronic payment. Simultaneously, expert interviews aim to explore and adjust the content of the factors and attributes of the research topic. After interviewing the experts, the questionnaire will be set up, and the research subjects will be surveyed to verify the factors influencing the intention to use electronic payment.

## 3.1.2.2. Quantitative Research

The quantitative research was conducted in two phases: preliminary quantitative research and formal quantitative research, by collecting information from a survey sample of FPT University students. During this formal research phase, several key components were carried out, including:

-Descriptive statistics: Presenting an overview of the data collected from the survey.

-Cronbach's Alpha test: Validating the reliability of the scale utilized in the formal research.

-Exploratory Factor Analysis (EFA): Employed to assess the scale's validity and ensure convergent and discriminant values.

-Pearson correlation analysis: Conducted to examine the linear relationship betweenobserved variables.

-T-test: Performed to determine if there are significant differences in the mean value of a single variable compared to a specific value.

-ANOVA: Applied to analyze differences in the mean values of dependent variables.

-Multivariate linear regression analysis: Used to test regression assumptions regarding normal distribution, linear relationships, and homoscedasticity to confirm research results.

#### 3.2 Data collection method

This questionnaire's main goal is to collect information on the variables that



affect students at FPT University's intention to use electronic payment. The questionnaire's questions were all carefully considered and chosen based on pertinent prior research. The survey is divided into two portions. The primary goalof the first section is to learn more about the respondents in general. The questions in the second section were designed to gauge the degree to which various circumstances affect students at FPT University's intention to adopt electronic payment. For the first part, nominal and ordinal scales are applied. The nominal scale utilizes numbers solely for the purpose of categorizing objects without implying any specific meaning (Nha-Ha, 2020).

The primary objective of the second part is to assess the degree of impact that the identified factors have on the intention to use electronic payment among FPT University students. We utilized the Likert scale, developed by the company Resin Likert, which is considered an interval scale. This type of scale typically consists of a continuous and evenly spaced range of numbers, such as from 1 to 5, 1 to 7, or 1 to 9. This range of numbers has two extremes at both ends, representing two opposite states (Thu-Ha, 2020).

Moreover, this scale provides us with quantitative data, also known as a quantitative scale. The survey can be conducted in two forms: online and offline. Conducting the survey online yields more reliable input data; however, it can be time-consuming and require significant financial and effort investments. On the other hand, an offline survey can save time and money but may result in decreased data input quality. We used a survey template from an internet application called Google Formto create a survey form with the questionnaire and proceeded with the survey. The survey was shared through social media channels, and we also visited classrooms tocollect data. The survey was conducted over one month, from May 1st to June 1st, with a total of 359 respondents.

#### 3.3 Data analysis methods

Upon data acquisition, we will proceed to analyze it using the SPSS software. Thanks to the enhanced capabilities and accessibility of SPSS technology, analytical tasks have become more straight forward, allowing multiple users to utilize qualitative techniques for decision-making (SPSS Inc., 2009). The author



employed SPSS to assess the reliability of the proposed hypotheses. Initially, a reliability analysis was conducted to evaluate the consistency of the determining factors, identifying which factors could be further analyzed. The subsequent analyses encompassed Exploratory Factor Analysis (EFA), T-test, One-way ANOVA, Pearson correlation, and ultimately, linear regression. Following the data collection from the questionnaire survey, it was processed and analyzed using the statistical package SPSS. The data were processed before analysis, which involved screening, editing, data entry, categorization, encoding, and the removal of questions without value and reliability for the research. SPSS is a comprehensive and user-friendly system that allows data processing from various file types to generate reports, tables, charts, distribution maps, trends, as well as descriptive statistics and complex statistical analyses. Before conducting statistical analysis using SPSS, the following procedures were performed three steps as follows:

- Step 1: Identifying Variables using Data Editor. The software's Data Editor is used to identify the variables, with the name, type, width, label, and value of each variable displayed in variable view mode.
- Step 2: Using Data Editor to Input Data. Data can be entered into the software application through the Data Editor, displayed in data view mode. Each survey respondent is represented by a row in a specific section of the questionnaire, and each answer to a question in the survey is represented by acolumn.
- Step 3: Checking Received Results. The data is processed and analyzedusing SPSS statistical software to calculate the mean and standard deviation for each component based on the responses gathered from the questionnaire survey. One of the techniques used is descriptive statistics, where information is collected, summarized, presented, calculated, and various characteristics are determined to generalize the research objectives. Key values considered include the maximum, minimum, and mean values of the factors in the research.

Cronbach's Alpha reliability is a widely utilized method in social science research to assess the reliability of measurements. It is employed to evaluate how



well observed variables align with a specific factor. This approach provides insights into how each variable affects the measurement, enabling a deeper comprehension of the idea and characteristics of that factor and its linked variables. A higher value of Cronbach's Alpha indicates greater scale reliability, implying that it more accurately and consistently measures the intended property or attribute. However, variables should have Cronbach's Alpha coefficients of greater than 0.6 and total correlation coefficients of greater than 0.3 for a scale to be deemed appropriate. Some authors even suggest higher values, ranging from 0.9 to 0.95.

We used the Pearson correlation analysis approach during the research and quantitative analysis utilizing SPSS software. The primary objective of this study was to investigate the linear relationship between the dependent variable and the independent variables. If the independent variables are tightly related to one another, it also helps to spot problems with multi-collinearity. The "sig" (probability) value obtained is used to evaluate the Pearson correlation study' findings. There is a substantial connection between when the "sig" value is less than 0.05, the variables. When the value of "r" is closer to 1 than when it is closer to 0, a correlation is stronger than when it is closer to 0. When "sig" > 0.05, we get to the conclusion that there is no discernible relationship between the variables. Regression analysis is utilized when we want to predict the value of a variable based on the values of two or more other variables. The dependent variable is the one we attempt to forecast, and the independent variables are the ones we use to predict the value of the dependent variable. The R Square and modified R Square values demonstrate the impact of independent variables on the dependent variable. These numbers vary from 0 to 1, with higher numbers signifying a stronger model and lower numbers a weaker one. First-order autocorrelation is tested using the Durbin-Watson (DW) value, which ranges from 0 to 4. A score closed to 2 suggests that there is no correlation between adjacent errors, a value close to 4 implies that there is, and a value that is close to 0 means there is. The overall fit of the regression model is examined using the Sig value of the F-test. The dataset and multiple linear regression model are adequate if Sig. 0.05; otherwise, if Sig. > 0.05, the regression model is not suitable. The Sig value of the t-test is used to determine

whether the regression coefficients are significant. If Sig. 0.05, the independent variable's impact on the dependent variable is significant.

The Independent Samples t-test is used to determine the mean difference of a quantitative variable between several categories of a categorical variable when the sig value is less than 0.05. If the sig value of Levene's Test is likewise less than 0.05, indicating heterogeneity in variances among the groups, we use the sig value of the T-Test under the assumption of unequal variances. However, if the sig value of Levene's Test is greater than or equal to 0.05, which indicates that the variances between groups are not statistically different, then we use the sig value of the T-Test under the assumption of equal variances.

When examining the overall variation of the dependent variable, the ANOVA analysis approach divides it into various components that correspond to the variability of a factor or set of elements that explain something. The total variance is calculated as the sum of the squared departures of values from the mean of the dependent variable. We conclude that there is a substantial variance difference between the two groups if the sig value for the homogeneity of variance test is less than 0.1, We conclude that the variances between the two groups differ significantly. In these situations, we use Tamhane's test in Post Hoc to pinpoint particular group differences. In contrast, if the sig value is more than 0.1, we infer that the variances in the two groups are equal and utilize the Post Hoc LSD test to identify group differences. If any pair's Sig. value in the Post Hoc analysis is less than 0.1, we conclude that those pairs exhibit substantial differences. We use the "Mean Difference (I-J)" number to determine which group is smaller and which group is larger when there are differences. We carefully screened, picked, and created an adequate sample structure from the 359 survey respondents in order to guarantee the efficacy and validity of the study.

A multivariate statistical method known as exploratory factor analysis (EFA) is used to identify correlations between observed independent variables and latent variables, which are variables that are not directly visible to the eye (Norris & Lecavalier, 2009). This method involves several key steps, including Bartlett's Test of Sphericity, Bartlett's Test of Approximation, Total Variance Explained, and



Factor Loadings. The initial step in EFA involves using the Kaiser-Meyer-Olkin Test for Sampling Adequacy (KMO) coefficient to evaluate the suitability of the factors for analysis. In order to verify that the elements are suitable for the research goal, the KMO coefficient should be greater than 0.6. In this research, the factors meet this requirement, as the KMO coefficient is 0.6, surpassing the acceptable threshold. Next, to determine the degree of correlation between independent and dependent variables (Carroll & Green, 1997), we use Bartlett's Test. There is a substantial association between the variables if Bartlett's Test's Sig value is less than 0.05. we conclude that the factors are correlated with each other, and in this research, the factors will be analyzed through EFA under the condition of Sig < 0.05. Finally, we examine the Total Variance Explained and Factor Loadings. The total variance explained must be at least 50% to be considered reliable. Independent variables with factor loadings >= 0.3 are deemed suitable for further analysis.However, subsequent research has shown that factor loadings >= 0.5 and >= 0.7 are statistically significant for independent variables (Maskey et al., 2018).

## 3.4 Statistical results from qualitative analysis and survey samples

Based on previous research, demographic questions were added to the survey. Survey participants indicated a significant difference between males and females, with males comprising 36.8% and females 63.2% of the total respondents. This indicates a higher participation rate of females in the survey compared to males in descriptive statistics Figure 3.2.



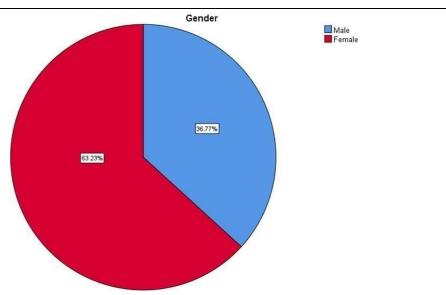


Figure 3.2 Survey data are statistically by sex

In terms of birth year, 39% of respondents were born in 2001, 28.1% in 1999, 17.8% in 2000, and the remaining years (2002, 2004, and 2003) had lower percentages, specifically 6.4%, 6.1%, and 2.5%, respectively in descriptive statistics Figure 3.3.

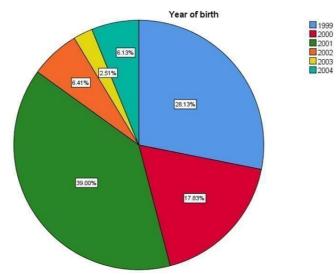
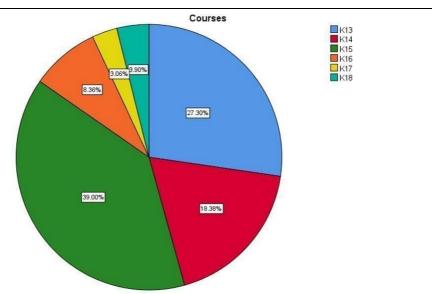


Figure 3.3 Survey data is statistical on year of birth

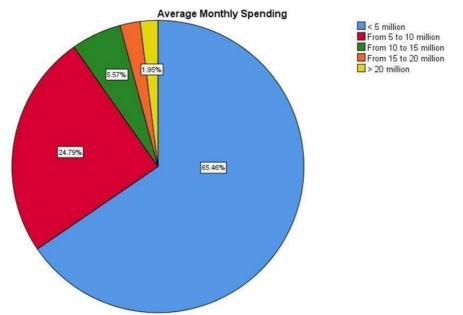
Fourth-year students accounted for the highest proportion with 39%, followed by 1year Bachelor's graduates with 27.3%, while freshmen, sophomores and third-years had a lower proportion, namely 8.4%, 3.1% and 3.9%. This shows that fourth-year and bachelor's graduates are more interested in answering questions than secondandthird-year freshmen in descriptive statistics Figure 3.4.





## Figure 3.4 Survey data is statistical by courses

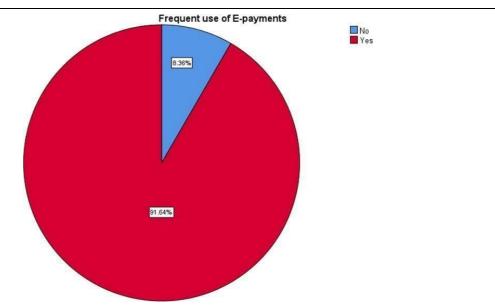
The average monthly expenditure below 5 million accounts for the highest proportion, at 65.5%. The second-highest proportion is in the range of 5-10 million, at 24.8%. The third-highest proportion is in the range of 10-15 million, at 5.6%. The proportions for the ranges of 15-20 million and above 20 million are 2% each in descriptive statistics Figure 3.5.



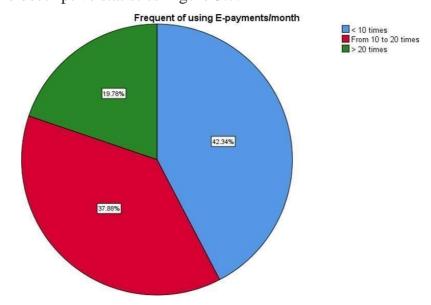
# Figure 3.5 Survey data is statistical by average monthly spending

The proportion of students who frequently use electronic payment is 91.6%, with 8.4% responding that they do not use it. From this, we can observe that a significant majority of students are interested in and actively use electronic payment, while only a small minority do not use it in descriptive statistics Figure 3.6.





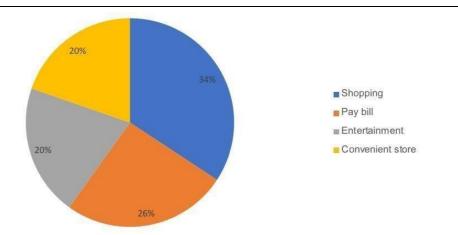
# **Figure 3.6 Survey data is statistical by frequency of using electronic payments** In terms of the frequency of electronic payment usage per month, 42.3% use it less than 10 times, 37.9% use it between 10-20 times, and 19.8% use it more than 20 times. In the descriptive statistics Figure 3.7.



# Figure 3.7 Survey data is statistical by Frequency of Electronic Payment Usage Per Month

Next are the results of descriptive statistics on the purpose use electronic payment. As for the purposes of using electronic payment, 334 respondents (34.3%) use it for shopping, 250 (25.6%) for bill payment, 199 (20.4%) for entertainment, and 192 (19.7%) for convenience stores, out of a total of 100%.





#### Figure 3.8 Survey data is statistical by the purposes use electronic payment

Finally, descriptive statistics on the reasons for using electronic payments. The reasonsfor using electronic payment include speed and convenience with 330 responses (30.7%), cost and time savings with 237 responses (22.1%), flexible payment with 261 responses (24.3%), and not needing to carry cash with 246 responses (22.9%), out of a total of 100%.

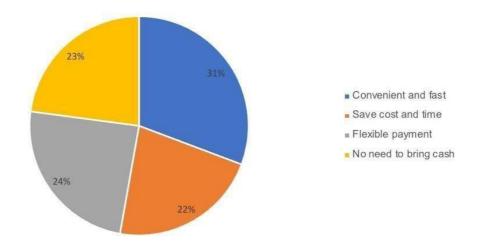


Figure 3.9 Survey data is statistical by the reasons for using electronic payment

#### **Conclusion chapter 3**

Chapter 3 outlined the research procedure and the chosen research approach for analyzing the research outcomes. The research methodology adopted in this study encompasses a blend of qualitative and quantitative techniques. A total of 359valid responses were gathered, excluding incomplete or dishonest answers. Furthermore, this study has produced fresh insights that can enrich previous



investigations by utilizing analysis and testing methodologies including quantitative methods, descriptive statistics, Cronbach's Alpha, Exploratory Factor Analysis (EFA), T-Test, linear regression, Pearson correlation, and ANOVA. These methods have guaranteed the accuracy of the data and research findings by pinpointing connections between variables.

## **CHAPTER 4: ANALYSIS AND FINDINGS**

In this chapter, the authors will conduct data analysis through various methods, including Cronbach's Alpha, exploratory factor analysis (EFA) to determine factors, Pearson correlation, and finally, multiple linear regression analysis. By doing so, we can evaluate the dataset and derive observations and recommendations from the analysis.

# 4.1 Testing the reliability of the measurement scale using Cronbach's Alpha coefficient

Cronbach's Alpha coefficient for the Performance Expectancy (PE) scale is 0.844 (Table 4.8), which exceeds the required value of 0.6. The Corrected Item- Total Correlation coefficients for each variable, ranging from 0.583 to 0.657 (Table 4.1), all meet the requirement of >0.3. Therefore, all six observed measurement variables of the PE scaleare suitable for exploratory factor analysis (EFA).

	Scale Mean if Item Deleted		ale Variance if Corrected Item- Item Deleted Total Correlation	
				Deleted
PE1	17.91	12.386	0.583	0.826
PE2	17.96	11.982	0.655	0.812
PE3	17.86	11.899	0.657	0.812
PE4	17.94	12.139	0.637	0.816
PE5	18.07	12.011	0.622	0.819
PE6	18.09	12.052	0.587	0.826

Table 4.1 Item-Total Statistics of Performance Expectancy (PE)

Cronbach's Alpha coefficient for the Effort Expectancy (EE) scale is 0.786 (Table 4.8), which exceeds the required value of 0.6. The Corrected Item-Total

Correlation coefficients for each variable, ranging from 0.582 to 0.602 (Table 4.2), all meet the requirement of >0.3. Therefore, all four observed measurement variables of the EE scale are suitable for exploratory factor analysis (EFA).

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item	
				Deleted	
EE1	10.85	4.935	0.582	0.738	
EE2	10.91	4.856	0.591	0.734	
EE3	11.05	4.780	0.602	0.728	
EE4	10.88	4.773	0.594	0.732	

Table 4.2 Item-Total Statistics of Effort Expectancy (EE)

Cronbach's Alpha coefficient for the Social Influence (SI) scale is 0.838 (Table 4.8), which exceeds the required value of 0.6. The Corrected Item-Total Correlation coefficients for each variable, ranging from 0.588 to 0.705 (Table 4.3), all meet the requirement of >0.3. Therefore, all five observed measurement variables of the SI scale are suitable for exploratory factor analysis (EFA).

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
SI1	14.32	8.027	0.630	0.809
SI2	14.28	8.291	0.588	0.820
SI3	14.03	8.013	0.614	0.813
SI4	14.25	7.982	0.668	0.798
SI5	14.05	7.609	0.705	0.787

Table 4.3 Item-Total Statistics of Social Influence (SI)

Cronbach's Alpha coefficient for the Facilitating Conditions (FC) scale is 0.834 (Table 4.8), which exceeds the required value of 0.6. The Corrected Item-

Total Correlation coefficients for each variable, ranging from 0.574 to 0.767 (Table 4.4), all meet the requirement of >0.3. Therefore, all five observed measurement variables of the FC scale are suitable for exploratory factor analysis (EFA).

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
FC1	14.44	9.157	0.646	0.797
FC2	14.60	9.553	0.574	0.817
FC3	14.75	8.465	0.767	0.761
FC4	14.64	9.343	0.598	0.810
FC5	14.51	9.463	0.586	0.813

Table 4.4 Item-Total Statistics of Facilitating Conditions (FC)

Cronbach's Alpha coefficient for the Safety and Security (SS) scale is 0.790 (Table 4.8), which exceeds the required value of 0.6. The Corrected Item-Total Correlation coefficients for each variable, ranging from 0.577 to 0.620 (Table 4.5), all meet the requirement of >0.3. Therefore, all four observed measurement variables of the SS scale are suitable for exploratory factor analysis (EFA).

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total	Cronbach's Alpha if Item	
			Correlation	Deleted	
SS1	10.93	4.819	0.610	0.733	
SS2	10.88	4.840	0.588	0.744	
SS3	11.03	4.893	0.577	0.749	
SS4	10.91	4.755	0.620	0.728	

Table 4.5 Item-Total Statistics of Safety and Security (SS)

Cronbach's Alpha coefficient for the Support Policy (SP) scale is 0.833(Table 4.8), which exceeds the required value of 0.6. The Corrected Item-Total

Correlation coefficients for each variable, ranging from 0.576 to 0.716 (Table 4.6), all meet the requirement of >0.3. Therefore, all five observed measurement variables of the SP scale are suitable for exploratory factor analysis (EFA).

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
SP1	14.20	7.964	0.632	0.800
SP2	14.23	7.664	0.716	0.776
SP3	14.16	7.959	0.665	0.791
SP4	14.29	8.325	0.578	0.815
SP5	14.07	8.286	0.576	0.816

Table 4.6 Item-Total Statistics of Support Policy (SP)

Cronbach's Alpha coefficient for the Intention To Use scale is 0.804 (Table 4.8), which exceeds the required value of 0.6. The Corrected Item-Total Correlation coefficients for each variable, ranging from 0.573 to 0.610 (Table 4.7), all meet the requirement of >0.3. Therefore, all five observed measurement variables of the SP scale are suitable for exploratory factor analysis (EFA).

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
ITU1	15.22	8.090	0.610	0.760
ITU2	15.26	8.194	0.576	0.770
ITU3	15.28	8.062	0.577	0.770
ITU4	15.31	8.377	0.573	0.771
ITU5	15.25	8.126	0.605	0.761

Table 4.7 Item-Total Statistics of Intention To Use (ITU)

After testing the reliability of the measurement scales, the results show that



there are seven sets of measurement scales that meet the requirements in the initial research model. These include one dependent factor - the intention to use electronic payment with five observed measurement variables, and six independent factors: Performance Expectancy (six observed variables), Effort Expectancy (four observed variables), Social Influence (five observed variables), Facilitating Conditions (five observed variables), Safety and Security (four observed variables), and Support Policy (fiveobserved variables).

	Code	Cronbach's Alpha
1	Performance Expectancy (PE)	0.844
2	Effort Expectancy (EE)	0.786
3	Social Influence (SI)	0.838
4	Facilitating Conditions (FC)	0.834
5	Safety and Security (SS)	0.790
6	Support Policy (SP)	0.833
7	Intention To Use (ITU)	0.804

#### Table 4.8 Summary result of Cronbach's Alpha

From Table 4.8, it is evident that all Cronbach's Alpha values are greater than 0.6. These data will serve as a foundation for further analysis, as the authors will proceed with the EFA (Exploratory Factor Analysis).

# 4.2 Results of Exploratory Factor Analysis (EFA)

# \*EFAexamination of independent factors:

The research utilized SPSS software to conduct an examination of the scale value through EFA's exploratory factors. All observed variables of the 06 factors withsufficient scale conditions were used for the examination.

Through the results of Table 4.9, The result of the EFA examination showed a Kaiser-Meyer-Olkin (KMO) coefficient of 0.802 > 0.5, indicating that the dataset met the necessary conditions for conducting the EFA factor analysis.

Bartlett's test of sphericity was statistically significant with a sig value of

Bartlett's Test < 0.05 (Table 4.9), proving that the observed variables were correlated with one another within the factor and that they represent various elements of the same component.

Kaiser-Meyer-Olkin Measure	0.802	
Bartlett's Test of Sphericity	Approx. Chi-Square	5747.790
	df	406
	Sig.	0

Table 4.9 KMO and Bartlett's Test

The Eigenvalue is used to calculate the EFA's (Exploratory Factor Analysis) factor count. The factor analysis model only keeps factors with Eigenvalues > 1. The findings reveal that there are 6 extracted components with a 1,624 Eigenvalue. The Eigenvalue would be 0.791 < 1 if we were to extract one additional factor. So, we stop atfactor number six.

The Total Variance Explained, which is 63.135% indicates that the number of factors extracted from EFA explains 63.135% > 50% of the data variability and represents a good representation of the data this result is clearly shown in Table 4.10.

	Total	% of	Cumulative	Total	% of	Cumulative	Total	% of	Cumulative
		Variance	%		Variance	%		Variance	%
1	8.685	29.949	29.949	8.685	29.949	29.949	3.534	12.185	12.185
2	2.46	8.482	38.431	2.46	8.482	38.431	3.164	10.909	23.094
3	1.974	6.809	45.239	1.974	6.809	45.239	2.94	10.137	33.23
4	1.798	6.201	51.44	1.798	6.201	51.44	2.923	10.078	43.309
5	1.767	6.095	57.534	1.767	6.095	57.534	2.879	9.929	53.237
6	1.624	5.6	63.135	1.624	5.6	63.135	2.87	9.897	63.135

 Table 4.10 Total Variance Explained



7	0.791	2.728	65.863						
Ent	Extraction Mathed, Dringing Component Analysis								

Extraction Method: Principal Component Analysis.

According to Table 4.11 the correlation between the factors and the observed variables is shown by the Factor Loading Coefficient. With a sample size of 359, a standard value of 0.3 is chosen. In the rotation matrix results, there are 04 observed variables that violate discriminant validity when loaded on 02 factors. These variables are Support Policy (SP2), Social Influence (SI5), Performance Expectancy(PE2), and Facilitating Conditions (FC3).

	Component							
	1	2	3	4	5	6		
PE4	0.742							
PE5	0.738							
PE3	0.733							
PE6	0.698							
PE1	0.676							
SP1		0.775						
SP3		0.745						
SP4		0.702						
SP5		0.680						
SP2		0.652			0.600			
SI4			0.760					
SI1			0.719					
SI3			0.710					
SI2			0.704					

 Table 4.11 Rotated Component Matrix<sup>a</sup>



SI5	0.557		0.656			
EE3				0.790		
EE2				0.763		
EE4				0.717		
EE1				0.690		
PE2	0.582			0.656		
SS4					0.770	
SS1					0.758	
SS2					0.712	
SS3					0.707	
FC5						0.756
FC1						0.752
FC4						0.713
FC3		0.573				0.697
FC2						0.647

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 6 iterations.

The observed variables that violated discriminant validity were removed, and the EFA was reanalyzed with the remaining observed variables. The results showed a KMO value of 0.883, which is greater than 0.5, indicating that the conditions for conducting exploratory factor analysis (EFA) were met.

The measured variables show many facets of the same component, as shown by the statistically significant Bartlett's test of sphericity with a significance level (sig.) of Bartlett's Test 0.05 (See Table 4.12).

# Table 4.12 KMO and Bartlett's Test



Kaiser-Meyer-Olkin Measure	of Sampling Adequacy.	0.883
Bartlett's Test of Sphericity	Approx. Chi-Square	2925.653
	df	300
	Sig.	0

According to Table 4.13 the Eigenvalue is used to calculate the EFA's (Exploratory Factor Analysis) factor count. The factor analysis model only keeps factors with Eigenvalues > 1. According to the findings, there are six retrieved components having an Eigenvalue of 1,500. If we were to extract one more factor, the Eigenvalue would be 0.714, which is less than 1. Therefore, we stop at the 6th factor. The Total Variance Explained, which is 60.480%, indicates that the number of factors extracted from EFA explains 60.480% > 50% of the data variability and represents a good representation of the data.

	Total	% of	Cumulative	Total	% of	Cumulative	Total	% of	Cumulative
		Variance	%		Variance	%		Variance	%
1	6.668	26.671	26.671	6.668	26.671	26.671	2.916	11.665	11.665
2	1.949	7.795	34.466	1.949	7.795	34.466	2.505	10.019	21.685
3	1.794	7.177	41.643	1.794	7.177	41.643	2.472	9.889	31.574
4	1.693	6.770	48.414	1.693	6.770	48.414	2.460	9.839	41.412
5	1.517	6.067	54.481	1.517	6.067	54.481	2.422	9.689	51.101
6	1.500	5.999	60.480	1.500	5.999	60.480	2.345	9.379	60.480
7	0.714	2.856	63.336						
Ext	traction	Method: F	Principal Con	nnonen	t Analysis				

Extraction Method: Principal Component Analysis.

According to the result of Table 4.14 The Factor Loading coefficients ranges from 0.682 to 0.783 are greater than 0.3, indicating that the observed variables have

significant and strong relationships with the factors. The values suggest that the observed variables are meaningful and highly associated with the factors in the factor analysis model.

	Component						
	1	2	3	4	5	6	
PE5	0.744						
PE4	0.741						
PE6	0.734						
PE1	0.701						
PE3	0.697						
SS4		0.754					
SS1		0.745					
SS2		0.740					
SS3		0.730					
EE3			0.783				
EE4			0.749				
EE2			0.732				
EE1			0.726				
SI1				0.753			
SI2				0.751			
SI4				0.739			
SI3				0.682			
SP1					0.750		
SP4					0.731		

Table 4.14 Rotated Component Matrix<sup>a</sup>



SP5		0.728
SP3	(	0.723
FC5		0.756
FC1		0.731
FC4		0.710
FC2		0.686

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 6 iterations.

From the results in Table 4.14, we can observe that four observed variables, namely Support Policy (SP2), Social Influence (SI5), Performance Expectancy (PE2), and Facilitating Conditions (FC3), were excluded from the analysis. The specific Rotated Component Matrix consists of 6 factor groups as follows:

- Factor 1: Performance Expectancy (PE) includes the observed variables PE1, PE3, PE4, PE5, and PE6.
- Factor 2: Safe and Security (SS) includes the observed variables SS1, SS2, SS3, and SS4.
- Factor 3: Effort Expectancy (EE) includes the observed variables EE1, EE2, EE3, and EE4.
- Factor 4: Social Influence (SI) includes the observed variables SI1, SI2, SI3, and SI4.
- Factor 5: Support Policy (SP) includes the observed variables SP1, SP3, SP4, and SP5.
- Factor 6: Facilitating Conditions (FC) includes the observed variables FC1, FC2, FC4, and FC5.

Based on these results, the authors proceeded with regression analysis. The observed variables that were excluded from the rotated component matrix will not be included in the regression analysis.

**\*EFA examination of dependent factors:** the Kaiser-Meyer-Olkin (KMO) measure was 0.842 (Table 4.15), which is greater than 0.5, indicating that the dataset is suitable for conducting EFA.

The analysis resulted in one factor extracted with an eigenvalue of 2.806, which is greater than 1. This factor explains 56.125% of the data variation of the 5 observed variables included in the EFA. (See Table 4.16)

KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.0.842					
Bartlett's Test of Sphericity	Approx. Chi-Square	491.942			
	df	10			
	Sig.	0			

# Table 4.15 KMO and Bartlett's Test

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	2.806	56.125	56.125	2.806	56.125	56.125	
2	0.619	12.390	68.514				
3	0.552	11.050	79.564				
4	0.519	10.388	89.952				
5	0.502	10.048	100.000				
Extraction M	ethod · P	rincinal Comr	onent Analysi	c	1	1	

Extraction Method: Principal Component Analysis.

# 4.3 Pearson Correlation Analysis

According to Appendix 1 the results of the linear correlation test between the

variables show that the intention to embrace electronic payments and all six independent factors are correlated. have positive linear correlations (Performance Expectancy, Effort Expectancy, Safety and Security, Social Influence, Facilitating Conditions, and E-payment Support Policy). This is consistent with the initial research model, which hypothesized that these variables would positively impact the intention to use electronic payments. The correlation coefficients (Pearson's "r") for all these relationships are significant (Sig < 0.05), indicating a statistically meaningful association.

The strongest linear correlation is observed between the variable "E-payment Support Policy" and the desire to utilize electronic payments have a 0.566 connection coefficient, while the variable "Effort Expectancy" has a 0.503 correlation coefficient.

# 4.4 Multiple Regression Analysis

According to the findings from the preceding analysis, all six independent variables exhibit a positive linear association with the dependent variable, "Intention To Use" electronic payments, confirming the initial hypotheses. The software program SPSS was used to do a multiple regression analysis to ascertain how the independent variables impacted the dependent variable.

The adjusted R-squared value from the multiple regression analysis is 66.4%, indicating that the independent variables in the regression model explain 66.4% of the variance in the dependent variable, "Intention To Use" electronic payments. The Durbin-Watson value is 1.932, which falls within the range of 1.5 to 2.5, indicating no violation of the assumption of first-order autocorrelation (See Table 4.17).

The results of Table 4.18 show us the results of the F test to evaluate the hypothesis of fit of the regression model. The F-test sig value is 0.000 < 0.05, so the regression model is suitable

All six independent variables have a significance level (Sig t < 0.05), the findings demonstrate that these variables hold statistical significance and possess a notable influence on the dependent variable. Furthermore, the positive regression coefficients for all independent variables indicate a favorable effect on the dependent variable. To check for multicollinearity, the variance inflation factor

(VIF) was examined, and the VIF values ranged from 1.252 to 1.390, all below 2, indicating no multicollinearity among the independent variables (See Table 4.19).

Model	R	R-Square	Adjusted R- Square	Std. Error of the Estimate	Durbin- Watson				
1	0.818 <sup>a</sup> 0.670 0.664 0.404		0.40445	1.932					
a. Predictors: (Constant), SP, PE, EE, FC, SS, SI									
b. Depe	b. Dependent Variable: ITU								

# $Table \, 4.17 \, Model \, Summary^b$

# Table 4.18 Anova

Model		Sum of Squares	df	Mean Square	F	Sig.				
1	Regression	116.685	6	19.448	118.886	.000 <sup>b</sup>				
	Residual	57.581	352	0.164						
	Total	174.266	358							
a. Dependent Variable: ITU										
b. I	b. Predictors: (Constant), SP, PE, EE, FC, SS, SI									

# **Table 4.19 Coefficients**

Model		Unstand Coef	ardized ficients	Standardized Coefficients	t	Sig.	Collinear Statist	v
		В	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.572	0.166		- 3.444	0.001		
	PE	0.235	0.035	0.233	6.667	.000	0.770	1.299



	EE	0.181	0.034	0.184	5.361	.000	0.799	1.252	
	SI	0.153	0.037	0.151	4.189	.000	0.719	1.390	
	FC	0.212	0.034	0.221	6.241	.000	0.749	1.335	
	SS	0.192	0.035	0.194	5.497	.000	0.751	1.332	
	SP	0.244	0.035	0.242	6.885	.000	0.759	1.318	
a.	a. Dependent Variable: ITU								

# **\*Unstandardized Regression Coefficients:**

The unstandardized regression coefficients (B) for the multiple regression analysis are shown in the following Table 4.20.

Model		Unstandardized Coefficients			
		В	Std. Error		
1	(Constant)	-0.572	0.166		
	PE	0.235	0.035		
	EE	0.181	0.034		
	SI	0.153	0.037		
	FC	0.212	0.034		
	SS	0.192	0.035		
	SP	0.244	0.035		

**Table 4.20 Unstandardized Coefficients** 

a. Dependent Variable: ITU

\*Unstandardized Regression Equation: The unstandardized regression equation is represented as follows:

Y = 0.244X1 + 0.235X2 + 0.212X3 + 0.192X4 + 0.181X5 + 0.153X6 + e

With Y: Intention To Use

X1: Support Policy

X2: Performance Expectancy



X3: Facilitating Conditions

X4: Safe and Security

X5: Effort Expectancy

X6: Social Influence

In the unstandardized regression equation, the factors reflect the effects on the dependent variable (Y) when the independent variables (X) remain unchanged.

# \*Standardized Regression Coefficients (Beta):

Standardized regression coefficients (Beta) are commonly used to determine the relative impact of each independent variable (X) on the dependent variable (Y) by standardizing the units and standard deviations of the variables involved in the regression model. The results of the multiple regression analysis with standardized coefficients (Beta) are as follows Table 4.21:

Model		Standardized Coefficients		
		Beta		
1	(Constant)			
	PE	0.233		
	EE	0.184		
	SI	0.151		
	FC	0.221		
	SS	0.194		
	SP	0.242		

**Table 4.21 Standardized Coefficients** 

All standardized regression coefficients (Beta) are > 0, indicating that all independent variables in the multiple regression analysis have an impact on the dependent variable in a positive way, "Intention To Use" electronic payments. The standardized regression equation is represented as follows:

Y = 0.242X1 + 0.233X2 + 0.221X4 + 0.194X3 + 0.184X5 + 0.151X6 + e With Y: Intention To Use



X1: Support Policy

X2: Performance Expectancy

X3: Facilitating Conditions

X4: Safe and Security

X5: Effort Expectancy

X6: Social Influence

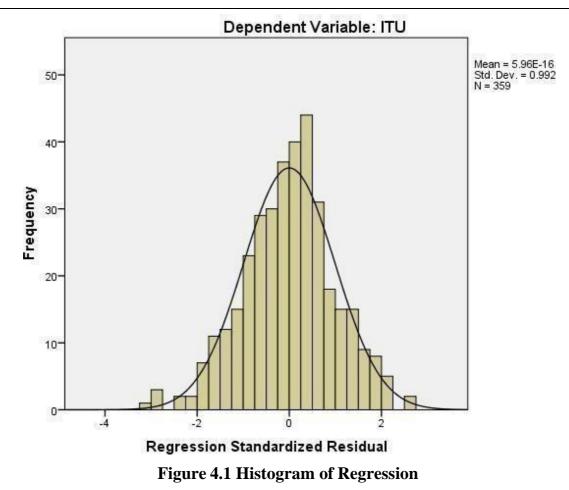
Based on the order of the standardized regression coefficients (Beta) in the multiple regression model for each independent variable, "E-payment Support Policy" has the strongest impact, while "Social Influence" has the weakest impact on the "Intention To Use" electronic payments.

## \*Checking Regression Assumptions

To ensure the reliability of multivariate regression analyses, the thesis author conducted tests on the regression assumptions concerning the residuals' normal distribution, ensuring a linear relationship between the dependent and independent variables, and ensuring homoscedasticity.

Normal Distribution: Checking the residuals in regression must approximate a normal distribution through Histogram and Normal P-P Plot of the residuals. The Histogram chart has a mean value of Mean = 5.96E-16, which is close to 0, and a standard deviation of Std. Dev. = 0.992, which is close to 1. Therefore, the distribution curve of the residuals takes the form of a bell-shaped curve, suggesting that the distribution is approximately normal. The author cannot reject the hypothesis that the residuals are normally distributed.





The Normal P-P Plot chart indicates that the quantile points in the distribution of the residuals align along a straight line, as shown in the figure below. This implies that the residuals follow a normal distribution. Therefore, the assumption of normal distribution for the residuals is not violated.



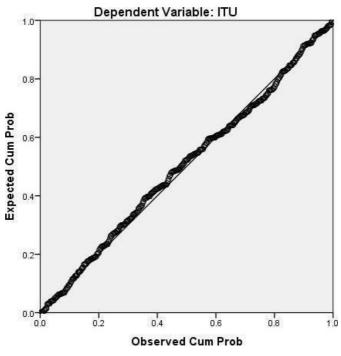


Figure 4.2 The Normal P-P Plot chart

Comparing a scatter plot of standardized residuals to standardized projected values to test the linearity of the connection between the dependent and independent variables. The scatter plot shows a random distribution around the horizontal line at 0, and the shape forms a straight line, indicating that the linear relationship presumption is confirmed.

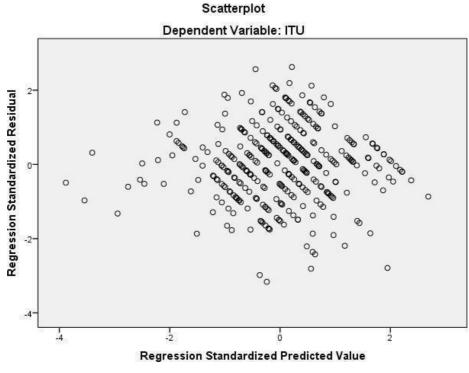


Figure 4.3 Regression Standardized Residual

# \*Hypothesis Testing

**Hypothesis testing H1:** Performance Expectancy has a positive (+) effect on intention to use, according to hypothesis H1. The results of Pearson correlation analysis show that the Pearson correlation value "r" is non-zero (#0), and has a positive sign (+),demonstrating the strong correlation between Intention to Use Electronic Payment and Performance Expectancy. With a Sig significance level of 0.000 < 0.05, Indicates that the experimental data support hypothesis H1. It can be commented that, Performance Expectancy has a positive (+) effect on the intention to use e-payment. In the research of multivariable regression model, the results show that the effect of Performance Expectancy on Intent to use e-payment is the 2nd most influential factor in the survey factors with a standardized regression coefficient of 0.233 (Table 4.19) which is significant (Sig t < 0.05).

**Hypothesis testing H2:** Effort Expectancy has a positive (+) effect on intention to use, according to hypothesis H2. The results of Pearson correlation analysis show that the Pearson correlation value "r" is non-zero (#0), and has a positive sign (+),demonstrating the strong correlation between Intention to Use Electronic Payment and Effort Expectancy. With a Sig significance level of 0.000 < 0.05, It indicates that the experimental data support hypothesis H2. It can be commented that, Effort Expectancy has a positive (+) effect on the intention to use e-payment. In theresearch of multivariable regression model, the results show that the effect of Effort Expectancy on Intent to use e-payment is the 5th influencing factor in the survey factors with a standardized regression coefficient of 0.184 (Table 4.19) which is significant (Sig t < 0.05).

**Hypothesis testing H3:** Safety and Security has a positive (+) effect on intention to use, according to hypothesis H3. The results of Pearson correlation analysis show that the Pearson correlation value "r" is non-zero (#0), and has a positive sign (+), demonstrating the strong correlation between Intention to Use Electronic Payment and Safety and Security. With a Sig significance level of 0.000 < 0.05, It indicates that the experimental data support hypothesis H3. It can be commented that, Safety and Security has a positive (+) effect on the intention to use e-payment. In the research of multivariable regression model, the results show that the effect of Safety

and Security on Intent to use e-payment is the 4th influencing factor in the survey factors with a standardized regression coefficient of 0.194 (Table 4.19) which is significant (Sig t < 0.05).

**Hypothesis testing H4:** Social Influence has a positive (+) effect on intention to use, according to hypothesis H4. The results of Pearson correlation analysis show that the Pearson correlation value "r" is non-zero (#0), and has a positive sign (+), demonstrating the strong correlation between Intention to Use Electronic Payment and Social Influence. With a Sig significance level of 0.000 < 0.05, It indicates that the experimental data support hypothesis H4. It can be commented that, Social Influence has a positive (+) effect on the intention to use e-payment. In the research of multivariable regression model, the results show that the effect of Social Influence on Intent to use e-payment is the 6th influencing factor in the survey factors with a standardized regression coefficient of 0.151 (Table 4.19) which is significant (Sig t < 0.05).

**Hypothesis testing H5:** Facilitating Conditions has a positive (+) effect on intention to use, according to hypothesis H5. The results of Pearson correlation analysis show that the Pearson correlation value "r" is non-zero (#0), and has a positive sign (+), demonstrating the strong correlation between Intention to Use Electronic Payment and Facilitating Conditions. With a Sig significance level of

0.000 < 0.05, It indicates that the experimental data support hypothesis H5. It can be commented that, Facilitating Conditions has a positive (+) effect on the intention to use e-payment. In the research of multivariable regression model, the results show that the effect of FacilitatingConditions on Intent to use e-payment is the 3th influencing factor in the survey factors with a standardized regression coefficient of 0.221 (Table 4.19) which is significant (Sig t < 0.05).

**Hypothesis testing H6:** Support Policy has a positive (+) effect on intention to use, according to hypothesis H6. The results of Pearson correlation analysis show that the Pearson correlation value "r" is non-zero (#0), and has a positive sign (+), demonstrating the strong correlation between Intention to Use Electronic Payment and Support Policy. With a Sig significance level of 0.000 < 0.05, It indicates that the experimental data support hypothesis H6. It can be commented that, Support

Policy has a positive (+) effect on the intention to use e-payment. In the research of multi variable regression model, the results show that the effect of Support Policy on Intent to use e-payment is the most important influencing factor in the survey factors with a standardized regression coefficient of 0.242 (Table 4.19) which is significant (Sig t < 0.05).

# Hypothetical conclusion:

- H1: Performance Expectancy has a positive effect on the intention to use electronic payment. (accept)
- H2: Effort Expectancy has a positive effect on the intention to use electronic payment. (accept)
- H3: Safety and Security has a positive effect on the intention to use electronicpayment. (accept)
- H4: Social Influence has a positive effect on the intention to use electronic payment.(accept)
- H5: Facilitating Conditions have a positive effect on the intention to use electronic payment. (accept)
- H6: Support Policy has a positive effect on the intention to use electronic payment.(accept)

# 4.5 Independent T-test

Levene's Test for Homogeneity of Variances is employed to assess whether the variances between two groups of values are equal or not.

According to the results of Table 4.22, we see that the Sig. of the F-test is 0.294, which is > 0.05. This indicates that the variance between the two groups is not significantly different of males and females. Therefore, we will use the result of the t-test under the assumption of equal variances. The significance (Sig.) of the t-test is 0.892, which is > 0.05. The null hypothesis (H0) is supported, suggesting that there is no statistically significant difference in job satisfaction between male and female respondents.

# Table 4.22 Independent Samples Test

Levene's Test for t-test for Equality of Means
--



		Equality of Variances				
		F	Sig.	t	df	Sig. (2- tailed)
ITU	Equal variances assumed	1.104	0.294	0.136	357	0.892
	Equal variances not assumed			0.134	262.276	0.894

# 4.6 One-Way Anova

# \*One-Way Anova Test with the variable "year of birth"

The Sig of the Levene's test is 0.152 (Table 4.23), which is > 0.05. This indicates that there is no statistically significant distinction in variance between different age groups. Therefore, we will use the result of the F-test in the ANOVA table. The significance (Sig.) of the F-test is 0.175 (Table 4.24), which is greater than 0.05. Which states that there is no discernible difference in the participants' usage intentions based on their birth years. Therefore, there is no difference in usage intention among participants with different birth years.

 Table 4.23 Test of Homogeneity of Variances of year of birth

Levene Statistic	df1	df2	Sig.
1.626	5	353	0.152

#### Table 4.24 Anova of year of birth

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.734	5	0.747	1.546	0.175
Within Groups	170.533	252	0.483		
Total	174.266	358			

# \*One-Way Anova Test with the variable "course"

The Sig of the Levene's test is 0.279 (Table 4.25), which is > 0.05. Accordingly, there is no statistically discernible difference in variance across the various course



groups. Therefore, we will use the result of the F-test in the ANOVA table. The significance (Sig.) of the F-test is 0.101 (Table 4.26), which is greater than 0.05. Which states that there are no appreciable differences in the participants' intentions to use between different courses. Therefore, there is no difference in usage intention among participants with different courses.

Levene Statistic	df1	df2	Sig.
1.264	5	353	0.279

Table 4.25 Test of Homogeneity of Variances of courses

### Table 4.26 Anova of courses

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.465	5	0.893	1.856	0.101
Within Groups	169.802	353	0.481		
Total	174.266	358			

## \*Management Recommendations

Improve the legal framework for electronic payment methods to be more robust, preventing technological crimes, and regulating payment service providers more strictly.

Companies should invest more in management systems and software to enhance electronic payment security, such as implementing multi-layer security measures like Face ID instead of simple OTP when conducting transactions or transfers.

For the target audience of students, companies should enhance the design interface of their apps and ATM cards and increase advertising efforts to attract more users.

For complex transactions, having a 24/7 online support hotline would be beneficial in providing maximum assistance.

# **Conclusion of Chapter 4**

Quantitative research is combined with an analysis of the effects of each element on the intention to utilize electronic payments, we establish a foundation for offering management recommendations to businesses and companies in the



electronic payment service sector. The outcomes of the exploratory factor analysis (EFA), Cronbach's Alpha reliability test, and multiple regression analysis all indicate that the variables are suitable for the data and hold statistical significance, ensuring their reliability.

## **CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS**

#### 5.1 Conclusion

Electronic payments have captured the attention of people all around the world as an alternative financial transaction system. There is currently no research examining FPT University students' intentions to use electronic payment. A study model was built and developed to investigate the elements influencing the intention to employ electronic bars in order to fill this research gap. A research study using the theory and model of unified acceptance and use of technology (UTAUT) is being undertaken to find out what factors affect FPT University students' desire to utilize electronic payment.

Another important factor in service providers' success is their intent to employ FPT University students. The following six primary factors are considered in the research's framework when determining whether or not to employ electronic payments: Performance Expectancy, Effort Expectancy, Safety and Security, Social Influence, Facilitating Conditions, Support Policy. The research's conclusions help epayments service providers understand their customers' needs, expectations, and level of interest in using e-payments in the present.

#### 5.2 Management implications

#### 5.2.1 Support policy

According to the research results of FPT students, the Support Policy is the factor that has the most of an impact on the intention to use electronic payments. Service providers must collaborate with related parties like the delivery department, the department in charge of handling E-Payments issues, the customer care department, and the customer service department in order to effectively implement the Support Policy in e-payments and be able to offer timely and appropriatesupport, compensation, and support for service use. Specifically, how the service provider's policies will be applied in the event of a problem with events related to E-Payments for customers. Perform properly, sufficiently and promptly as possible

in all situations so as not to lose credibility and brand image with service users.

### 5.2.2 Performance Expectancy

The researches findings indicate that the projected efficiency is the second most important factor influencing whether or not people intend to use electronic payments for FPT students. Service providers should design and innovate the application interface layout so that it is really attractive and friendly to manydifferent customers. It is necessary to focus on developing the platform and electronic payments service systems, ensuring modern, fast, highly stable and convenient operation of the system. In addition, regularly upgrade, maintain and fix errors for the website's electronic payments systems with the aim of helping customers always feel the professionalism and dedication of the service provider. Electronic payments is currently the payment trend of the future, so more and more customers will approach to use the service. Receiving customer feedback on a regular basis for continuous improvement according to customer requirements is very important in assessing their ease of use. Improve the process, increase the features to help users reduce time and effort in performing transactions by electronic payments (automatically display and fill in the necessary information that he user has provided at the time of registration to use the service when conducting electronic payments transactions...) for easier operation.

Investigate and comprehend the escalating variety of payments requirements of various consumers, integrating payment utilities in many domains such as public services including water bills, electricity bills, internet bills..., or monthly/yearly paid programs like Netflix and Amazon... Especially, the trend of cross-border ecommerce will become popular in the future, so e-payments needs to be well, especially wallets. The majority of people today always consider pricing and quality while making purchases online. Online sales platforms, e-commerce platforms, and electronic payments service providers must therefore collaborate closely. E-wallet service providers must concentrate on activities to boost the attractiveness of many consumers through incentives and accompanying utilities, attractive e-gifts, etc., in addition to the discounts and promotions supplied by e-commerce exchanges or online sales websites. Additionally, it is crucial to coordinate, discuss, and sell products on online trading platforms as well as to work closely with retailers on business matters. is essential for encouraging people to adopt electronic payment services. The inclusion of a feature that helps users filter "bargain" prices is one way to help customers grasp the utility of the product better. Therefore, announcements of fresh promotions and discounts should be made through the application on a regular basis in order to persuade users to use power payment.

### 5.2.3 Facilitating Conditions

According to the study's conclusions, facilitation ranks third among the factors impacting FPT students' propensity to use electronic payments. Providers of services should offer user support if customers have inquiries about activation, e- wallet payment services, etc. in order to assist users in overcoming challenges when using e-wallets. Besides, vendors can also consider providing free tutorials forpeople at schools, or shopping malls... Finally, vendors must create e-wallet software that can run on various phone lines so that users may easily install it when there is a need to use electronic payments. Building an easy-to-understand and simple electronic payments instruction system for users to easily manipulate. Increase the friendliness of the website's electronic payments tool's interface and content for consumers of all ages and levels. The design of the instruction system is both concise but still ensures all the necessary content to be communicated to the user, which can be supplemented with instructions on graphic images, videos, and voice instructions.

## 5.2.4 Safety and Security

The study's conclusions show that the fourth most significant factor influencing FPT students' inclinations to adopt electronic payments is safety. The major issues with e-commerce and e-payment in Vietnam right now are information theft, fraud, financial fraud, and user-harassing advertising. Users of services frequently place more value on the security of electronic payments than they do on the security of traditional payment services. As a result, it's essential to develop industry-leading security standards and mandate that all domestic service providers adhere to them. The inclusion of a feature that helps users filter "bargain" prices is one way to help customers grasp the utility of the product better. Information authentication and information encryption processes are implemented and maintained by network security services with the additional purpose of safeguarding user data.

Service providers need to closely associate with intermediaries providing epayments services (such as banks, financial technology companies) that are really reputable and recognized in the market. For the purpose, stakeholders will support to provide payments software with high safety and security, minimizing risks for service users. In addition, it is necessary to train a team of professional cyber security personnel, to quickly grasp the situation of network security in the country and the world, promptly handle incidents that occur, the effective use of professional tools should be encouraged, the infrastructure for information technology should be upgraded, and intrusion signals should be checked and disabled frequently. This will help the supplier not to fall into a passive state in the face of problems arising in the operation of the E-Payments system.

## 5.2.5 Effort Expectancy

The findings of the research indicate that the fifth factor influencing FPT students' propensity to use electronic payments is the estimated effort. The survey's findings indicate that this factor is highly interesting to service users as well. Therefore, in order for customers to utilize the service quickly and simply, service providers must constantly improve the service's usability.

## 5.2.6 Social Influence

Social influence, which has the least impact, has the greatest influence on FPT students' intentions to utilize e-payments. As a result, e-payments serviceproviders must further develop their multimedia operations. As part of multi- channel communication on social networks like Facebook, Youtube, Zalo, Tiktok, and Instagram, the marketing department must create "video stories" in the form of straightforward narrative messages like "use a savings wallet" "spend cheaply with an e-wallet" and "use a wallet to relax." Additionally, respectable celebrities can be used by electronic payments service providers to market their goods and spread the word about the usefulness of cashless payments to potential customers.

#### 5.3 Recommendations

Even though the research team has made an effort to use the important theories discussed, there are still certain restrictions. Future research can, however, address these limits.

First of all, the study's reach is constrained. As a result, the research team exclusively focuses on determining and quantifying the impact on FPT students' tendency to use electronic payments. However, the fourth industrial revolution, also known as Industry 4.0, is currently underway in Vietnam and throughout the world. The goal of this revolution is to completely alter how people live, work, and communicate. It is evident that the tremendous growth of the online payment business also serves as a major driving force behind the trend toward embracing electronic payments. The research team hopes to increase the research limit in the future. It would be interesting to be able to open up the survey to everyone who is familiar with or has utilized electronic payments. The analysis will be more effective as a result. Additionally, a larger study with more diverse consumer types would offer a broader perspective. This aids in giving the research a more comprehensive and colorful appearance.

Second, the research team summarizes and describes the collected data set using descriptive statistics. The group intends to employ more alternative approaches in the future to examine the results more accurately and save time and money, but this method also has the drawbacks of being more time-consuming, expensive, and more sophisticated than other methods.

## **Conclusion of Chapter 5**

The study used both quantitative and qualitative methods and collected 359 people's personal data. The goal of this study is to identify the variables that influence FPT students' intention to use electronic payment. To that end, it employs test techniques such as Cronbach's Alpha, EFA, T-Test, One Way Anova, Lesson Correlation, and Regression. This highlights the significance of the study's analysis of the aforementioned links. The findings indicate that the following factors, which influence FPT students' intentions to utilize electronic payment, are similar:



expected efficiency, expected effort, social influence, favorable conditions, safety and security, and support policies.

#### REFERENCES

- 1. De Oliveira, B. (2023, January 30). Participatory action research as a researchapproach: advantages, limitations and criticisms. Qualitative Research Journal, 23(3),287–297.
- Alaeddin, O., Rana, A. K., Zainudin, Z., & Kamarudin, F. (2018). FROM PHYSIICAL TO DIGITAL: INVESTIGATING CONSUMER BEHAVIROUR of SWITCHING TO MOBILE WALLET. Polish Journal of Management Studies, 17(2), 18–30.
- Alduais, F., & Al-Smadi, M. O. (2022). Intention to Use E-Payments from the Perspective of the Unified Theory of Acceptance and Use of Technology (UTAUT): Evidence from Yemen. Economies, 10(10), 259.
- Padiya, J., & Bantwa, A. (2020). Contribution of Carpool towards Sustainable Urban Transportation – A Study of Ahmedabad City. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3735390
- 5. Barkhordari, M., Nourollah, Z., Mashayekhi, H., Mashayekhi, Y., & Ahangar,
- 6. M. S. (2016). Factors influencing adoption of e-payment systems: an empirical studyon Iranian customers. Information Systems and E-business Management,15(1), 89–116.
- 7. lkhadim, G. S. (2022, February 10). Cronbach's Alpha and Semantic Overlap Between Items: A Proposed Correction and Tests of Significance. Frontiers inPsychology, 13.
- Ahmad, H., Rami, H., Akhuirshaideh, D. A. A., Ghaith, M. M., Ghaith, Y. M., &Mustafa, H. (2022, October 30). IMPACT OF AGILE LEADERSHIP, INFORMATION SYSTEM, AND EMPOWERMENT ON THE ORGANIZATIONAL ENTREPRENEURSHIP IN THE ZAIN TELECOMMUNICATION COMPANY. Journal of Southwest Jiaotong University, 57(5), 740–749.
- 9. Hedlund, T. (2008). Business school researchers' attitudes towards open access and institutional repositories: a study on user acceptance and user behavior.

10. International Conference on Electronic Publishing, 15–22.

- 11. Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015a). Likert scale: explored and explained. British Journal of Applied Science and Technology, 7(4), 396–403.
- Junadi, & Sfenrianto, S. (2015). A Model of Factors Influencing Consumer's Intention To Use E-payment System in Indonesia. Procedia Computer Science, 59, 214–220.
- Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. Computers in HumanBehavior, 26(3), 310–322.
- 14. Gia-Shie Liu, & Pham Tan Tai. (2016, June 28). A Study of Factors Affecting the Intention to Use Mobile Payment Services in Vietnam. Economics World, 4(6).
- 15. Mashatan, A., Sangari, M. S., & Dehghani, M. (2022). How Perceptions of information privacy and security impact consumer trust in Crypto-Payment: an Empirical study. IEEE Access, 10, 69441–69454.
- 16. Mueller, R. O., & Hancock, G. R. (2001a). Factor analysis and latent structure, confirmatory. In Elsevier eBooks (pp. 5239–5244).
- Norris, M., & Lecavalier, L. (2009a). Evaluating the use of exploratory factor analysis in developmental disability psychological research. Journal of Autism and Developmental Disorders, 40(1), 8–20.
- 18. Phương, N. N. D., & Truong, H. V. (2021). Application of the Unified Technology Acceptance and Usage Model (UTAUT): The case of using document management software by officials of the International University. Ho Chi Minh City Open University Journal of Science - Economics and Business Administration, 17(2), 19–37. (Vietnamese)
- 19. Indar Rachmawati, W., Rustandi Kartawinata, B., Wijayangka, C., & Hasbi, I. (2020, March 23). Factors Analysis that Affecting the Intention to Use Digital Payment (Case Study on OVO Users in Jakarta, Bogor, Depok, Tangerang, Bekasi). KnE Social Sciences. https://doi.org/10.18502/kss.v4i6.6605
- 20. Rouibah, K., Lowry, P. B., & Hwang, Y. (2016). The Effects of Perceived Enjoyment and Perceived Risks on Trust Formation and Intentions to Use Online Payment Systems: New Perspectives from an Arab Country. SSRN Electronic

21. Journal. https://doi.org/10.2139/ssrn.2810637

- 22. Saha, S. K., Duarte, P., Silva, S. C. E., & Zhuang, G. (2022). The role of online experience in the relationship between service convenience and future purchase intentions. Journal of Internet Commerce, 22(2), 244–271.
- 23. Taufan, A., & Trisno, R. (2019). Analysis of Factors That Affect Intention to Usee- Wallet through the Technology Acceptance Model Approach.
- 24. Salah Uddin, M., & Yesmin Akhi, A. (2014, June). E-Wallet System for Bangladesh an Electronic Payment System. International Journal of Modeling and Optimization, 4(3), 216–219.
- 25. Van Breukelen, G. (2010). Encyclopedia of Research Design. In SAGE Publications, Inc.eBooks.
- 26. LIU William, WANG Chi, SHEN Xuhui, WU Jian, BLANC Michel, YAN Yihua, FU Suiyan, YUE Xinan, LEI Jiuhou, GONG Wei, ZHANG Shaodong, ZHANG Qinghe, WANG Xin, YANG Jing, ZHANG Xiaoxin, GAO Jing, XU Jiyao, YANG Guotao, LI Hui, . . . YANG Fang. (2020). International Meridian Circle Program. Chinese Journal of Space Science, 40(5), 723.
- 27. Venkatesh, V. et al. (2003), User acceptance of information technology: Toward a unified view, *MIS Quarterly*, 27(3), 425–478.
- 28. Ajzen, I., & Fishbein, M. (1975), *Belief, attitude, intention and behavior: An introduction to theory and research*, Reading, MA: Addison-Wesley.
- 29. Taylor, S. and Todd, P. A. (1995), Understanding Information Technology Usage: A Test of Competing Models, *Information Systems Research*, 6(4), 144–176.
- 30. Ajzen, I. (1991), *The Theory of Planned Behavior, Organizational Behavior and Human* Decision Processes 50(2), 179–211.
- 31. Fishbein, M., and Ajzen, I. (1975), *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*, Addison-Wesley, Reading, MA.
- 32. Junadi và Sfenrianto (2015), *A model of factors influencing consumer's intention to use E-payment system in Indonesia*, Published by Elsevier.
- 33. J. Theor. Appl. Electron. Commer. Res. (2021), Young Generation's Mobile Payment Adoption Behavior: Analysis Based on an Extended UTAUT Model, *Journal of Theoretical andApplied Electronic Commerce Research*, 16(1), 1–20.

- 34. Gia-Shie Liu, Pham Tan Tai (2016), A Study of Factors Affecting the Intention to Use MobilePayment Services in Vietnam, *Economics World*, 4(6), 249–273.
- 35. Davis, F. D., et al. (1989), User acceptance of computer technology: A comparison of two theoretical models, 35(8), 982–1003.
- 36. Bauer, R. A. (1960), Consumer behavior as risk taking, Chicago, IL, 384–398.
- 37. Tabachnick, Barbara G., Linda S. Fidell, and Jodie B. Ullman (2007), *Using multivariate statistics*. Vol. 5. Boston, MA: Pearson.
- 38. Nunnally, J. (1978), Psycometric Theory, McGraw-Hill. New York, 701 pages.
- 39. Peterson, R. (1994), A Meta-Analysis of Cronbach's Coefficient Alpha, *Journal of ConsumerResearch*, 21(2), 381–391.
- 40. Slater, S. (1995), Issues in Conducting Marketing Strategy Research, *Journal of Strategic*, 3(4),257–270.
- 41. Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010), *Multivariate Data Analysis*, SeventhEdition, Prentice Hall, Upper Saddle River, New Jersey.
- 42. Anderson, J. C., & Gerbing, D. W. (1988), *Structural equation modeling in practice: A review and recommended two-step approach*, Psychological Bulletin, 103(3), 411–423.
- 43. Alawan A.A (2020). Mobile food ordering apps: An empirical study of the factors affecting customer e-satisfaction and continued intention to reuse. International Journal of Information Management, 50, 28-44. DOI: 1016/j.ijinfomgt.2019.04.008.
- 44. Allicia D.S., Nuryanti T., Faizal H.E.P. et al (2021). Continuance intention of baby boomer and X generation as new users of digital payment during COVID-19 pandemic using UTAUT2. Nature Public Health Emergency Collection, 26(4), 259–273. DOI: 10.1057/s41264-021-00104-1.
- 45. Bejtkovsky J. (2016). The employees of baby boomers generation, generation X, generation Y and generation Z in selected Czech corporations as conceivers of development and competitiveness in their corporation. Journal of Competitiveness, 8(4), 105-123. DOI: 10.7441/joc.2016.04.07.
- 46. De' R., Pandey N., Pal A. (2020). Impact of digital surge during Covid-19 pandemic: A viewpoint on research and practice. International Journal of Information Management, 55. DOI: 10.1016/j.ijinfomgt.2020.102171.
- 47. Kaur K., Pathak A. (2015). E-Payment System on E-Commerce in India. Karamjeet Kaur International Journal of Engineering Research and Applications, 5(2), 79-87.

- 48. Lim Y., Yap C., Lee T. (2011). Intention to shop online: A study of Malaysian baby boomers. African Journal of Business Management, 5(5), 1711-1717. DOI: 10.5897/AJBM10.640.
- Limayem M., Cheung C. (2008). Understanding information systems continuance: The case of Internet-based learning technologies. Information and Management, 45(4), 227-232.
- 50. Lissitsa S., Kol O. (2016). Generation X vs. Generation Y A decade of online shopping Journal of Retailing and Consumer Services, 31, 304-312. DOI: 10.1016/j.jretconser.2016.04.015.
- 51. Magsamen-Conrad K., Upadhyaya S., Joa C.L. et al. (2015). Bridging the divide: Using UTAUT to predict multigenerational tablet adoption practices. Computer in Human Behavior, 50, 186-196.
- 52. Mathieson K., Peacock E., Chin W. (2001). Extending the Technology Acceptance Model: The Influence of Perceived User Resources. DATA BASE for Advances in Information Systems, 32(3), 86-112.
- 53. Oliver R.L. (2010). Satisfaction: A Behavioral Perspective on the Consumer, 2nd ed. NewYork, USA: Routledge. DOI: 4324/9781315700892.
- 54. Peter M.O., Babatunde P. (2012). E-Payment: Prospects and Challenges in Nigerian Public Sector. International Journal of Modern Engineering Research, 2(5), 3104-3106.
- 55. Roberts J., Manolis C. (2000). Baby boomers and busters: An exploratory investigation of attitudes toward marketing, advertising, and consumerism. Journal of Consumer Marketing, 17(6), 481-497. DOI: 1108/07363760010349911.
- 56. Venkatesh V., Morris M., Davis G. et al (2003). User acceptance of information technology: Toward a unified view. Management Information Systems Research Center, 27(3), 425-478. DOI: 10.2307/30036540.
- 57. Yang, A. (2009). Exploring adoption difficulties in mobile banking services. Canadian Journal of Administrative Sciences, 26(2), 136-149. DOI: 10.1002/cjas.102

# APPENDICES

# Appendix 1: Pearson Correlations

# Correlations

		HO	QNL	AH	DK	AB	CS	YD
HQ	Pearson Correlation	1	.293**	.367**	.342**	.329**	.302**	.555**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	359	359	359	359	359	359	359
NL	Pearson Correlation	.293**	1	.345**	.299**	.302**	.304**	.503**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	359	359	359	359	359	359	359
AH	Pearson Correlation	.367**	.345**	1	.351**	.341**	.380**	.536**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	359	359	359	359	359	359	359
DK	Pearson Correlation	.342**	.299**	.351**	1	.374**	.331**	.561**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	359	359	359	359	359	359	359
AB	Pearson Correlation	.329**	.302**	.341**	.374**	1	.346**	.544**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	359	359	359	359	359	359	359
CS	Pearson Correlation	.302**	.304**	.380**	.331**	.346**	1	.566**



	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	359	359	359	359	359	359	359
YD	Pearson Correlation	.555**	.503**	.536**	.561**	.544**	.566**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	359	359	359	359	359	359	359

\*\*. Correlation is significant at the 0.01 level (2-tailed).

# Appendix 2

# PHIÉU KHẢO SÁT CHUYÊN GIA (EXPERT SURVEY QUESTIONNAIRE)

# Nghiên cứu các yếu tố tác động đến ý định sử dụng thanh toán điện tử

(Research on factors affecting the intention to use electronic payment)

(Mọi ý kiến của các chuyên gia đều hữu ích và không có quan điểm đúng, sai ở mỗicâu hỏi)

(All opinions from experts are valuable, and there is no right or wrong viewpoint foreach question.)

Thông tin chung:

# (General information:)

Tên:

(Name:) Giới tính:

(Gender:)

Theo ý kiến của Quý chuyên gia, các yếu tố sau đây tác động thế nào đến ý định sử dụng thanh toán điện tử?

(According to the opinions of esteemed experts, how do the following factors impact the intention to use electronic payments?)

STT	Các yếu tố(Factors)	Có (Yes)	Không (No)
1	Hiệu Quả Kì Vọng		
	(Performance Expectancy)		
2	Ảnh Hưởng Xã Hội(Social		
	Influence)		
3	An Toàn Và Bảo Mật(Safe and		
	Security)		
4	Chi Phí Cảm Nhận(Perceived		
	Cost)		
5	Danh Tiếng Nhà Cung Cấp		



	(Supplier Reputation)	
6	Nỗ Lực Kỳ Vọng (Effort	
	Expectancy)	
7	Điều Kiện Thuận Lợi	
	(Facilitating Conditions)	
8	Nhận Thức Rủi Ro(Perceived	
	Risk)	
9	Nhận Thức Kiến Thức	
	(Perceived Knowledge)	
10	Nhận Thức Tài Chính	
	(Perceived Financial)	
11		
	Nhận Thức Tiện Lợi	
	(Perceived Convenience)	
12	Chính Sách Hỗ Trợ (Support	
	Policy)	
13	Tính Phổ Biến(Popularity)	
14	Thái Độ Hướng Đến Sử Dụng	
	(Intetion to Use Attitude)	

Ngoài những yếu tố trên Quý Chuyên gia có đề xuất thêm các yếu tố nào khác không ?

(Apart from the aforementioned factors, have the esteemed experts proposed any additional factors?)