THE INTENTION OF YOUNG ADULT TO ADOPT E-WALLET DURING THE COVID-19 PANDEMIC IN MALAYSIA

CHAN YAO HUI CHIA CHUN HIANG LOH HUI LING TONG ESSY

BACHELOR OF BUSINESS ADMINISTRATION (HONS) BANKING AND FINANCE

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF BUSINESS AND FINANCE DEPARTMENT OF BANKING AND RISK MANAGEMENT

APRIL 2021

CHAN, CHIA, LOH, & TONG E-WALLET

BF (HONS) APRIL 2021

THE INTENTION OF YOUNG ADULT TO ADOPT E-WALLET DURING THE COVID-19 PANDEMIC IN MALAYSIA

BY

CHAN YAO HUI CHIA CHUN HIANG LOH HUI LING TONG ESSY

A final year project submitted in partial fulfillment of the requirement for the degree of

BACHELOR OF BUSINESS ADMINISTRATION (HONS) BANKING AND FINANCE

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF BUSINESS AND FINANCE DEPARTMENT OF BANKING AND RISK MANAGEMENT

APRIL 2021

Copyright @ 2021

ALL RIGHTS RESERVED. No part of this paper may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, graphic, electronic, mechanical, photocopying, recording, scanning, or otherwise, without the prior consent of the authors.

DECLARATION

We hereby declare that:

- (1) This undergraduate FYP is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this FYP has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) Equal contribution has been made by each group member in completing the FYP.

(4) The word count of this research report is <u>13,024 words</u>.

	Name of students:	Student ID:
1.	<u>Chan Yao Hui</u>	<u>17ABB01702</u>
2.	<u>Chia Chun Hiang</u>	<u>18ABB02216</u>
3.	Loh Hui Ling	<u>18ABB01454</u>
4.	Tong Essy	<u>18ABB01172</u>

Signature

Date: <u>2 April 2021</u>

ACKNOWLEDGEMENT

First, we would like to extend our most sincere thanks to our Final Year Project (FYP) supervisor, Mr. Thurai Murugan a/l Nathan. We feel from the bottom of our hearts that it is our honor to be supervised by Mr. Thurai. We are very grateful to Mr. Thurai for being able to come close to meeting with us almost every week, guiding us to do FYP, and provide us the best and sincere advice when we encounter difficulties. Mr. Thurai also always respect with our decision in doing FYP and we can have a harmony and effective communication with Mr. Thurai.

Besides, we would like to express appreciation to our examiner, Ms. Liew Feng Mei. During presentation, Ms. Liew had provided much advices for us on how to improve our FYP. In addition, she carefully explained to us the areas that need improvement in each part of FYP.

Furthermore, we would like to express our gratefulness to Universiti Tunku Abdul Rahman (UTAR). UTAR provides us with a good environment that enable us to pursue knowledge under good conditions, even though we are currently in a difficult situation during the Covid-19 pandemic. UTAR also provides us with comprehensive support in terms of facilities, Microsoft Team subscription and clear FYP procedure, which brings us convenience for FYP.

TABLE OF CONTENTS

Copyright Pageii
Declarationiii
Acknowledgement iv
Table of Contentsv
List of Tablesix
List of Figures x
List of Abbreviations
List of Appendices
Prefacexiv
Abstract xv
CHAPTER 1: RESEARCH OVERVIEW 1
1.0 Introduction
1.0.1 E-wallet and Covid-19 Pandemic1
1.0.2 Global Perspective of E-wallet
1.0.3 Malaysia perspective of E-wallet7
1.1 Problem Statement
1.2 Objectives
1.2.1 General Objective
1.2.2 Specific Objective
1.3 Research Questions

1.4	Sig	nificance of Study	. 17
1.5	Coi	ncluding Remark	. 18
CHAP	ΓER 2	2: LITERATURE REVIEW	. 20
2.0	Intr	roduction	. 20
2.1	Un	derlying Theories	. 20
2.1	.1	Theory Acceptance Model (TAM)	. 20
2.1	.2	Unified Theory of Acceptance and Use of Technology (UTAUT)	. 22
2.2	Rev	view of Variables	. 23
2.2	2.1	Perceived Ease of Use (PEU)	. 23
2.2	2.2	Perceived Usefulness (PU)	. 24
2.2	2.3	Perceived Privacy and Security (PPS)	. 25
2.2	2.4	Government Roles (GR)	. 26
2.2	2.5	Health Awareness (HA)	. 27
2.3	Gaj	os of Literature Review	. 28
2.4	Co	nceptual Framework	. 30
2.5	Hy	pothesis Development	. 30
2.5	5.1	Perceived Ease of Use (PEU)	. 31
2.5	5.2	Perceived Usefulness (PU)	. 31
2.5	5.3	Perceived of Privacy & Security (PPS)	. 32
2.5	5.4	Government Roles (GR)	. 32
2.5	5.5	Health Awareness (HA)	. 33
CHAP	FER 3	3: METHODOLOGY	. 34
3.0	Intr	oduction	. 34
3.1	Res	search Design	. 34
3.2	Sar	npling Design	. 35

3.2.1	Target Population	. 35
3.2.2	Sampling Frame and Sampling Location	. 35
3.2.3	Sampling Technique	. 36
3.2.4	Sampling Size	. 36
3.3 Da	ta Collection Methods	. 37
3.4 Pro	posed Data Analysis Tool	. 37
3.4.1	Descriptive Analysis	. 38
3.4.2	Reliability Analysis	. 38
3.4.3	Pearson Correlation Analysis	. 39
3.4.4	Multiple Regression Analysis	. 41
3.5 Pile	ot Test	. 42
3.5.1	Reliability Analysis	. 42
3.5.2	Validity Analysis – Pearson Correlation	. 43
CHAPTER 4	4: DATA ANALYSIS	. 44
4.0 Introd	uction	. 44
4.1 De	scriptive Analysis	. 44
4.1.1	Gender	. 44
4.1.2	Education Level	. 45
4.1.3	Occupation Status	. 47
4.1.4	Current Income	. 48
4.1.5	Period of using E-wallet	. 49
4.1.6	Monthly Top-up of E-wallet	. 51
4.1.7	Types of E-wallet Used	. 52
4.2 Inf	erential Analysis	. 54
4.2.1	Reliability Analysis – Cronbach's Alpha	. 54

4.2.	.2	Pearson Correlation Analysis	. 55
4.2.	.3	Multiple Regression Analysis	. 56
4.3	Cor	ncluding Remark	. 59
CHAPT	ER 5	5: DISCUSSION, CONCLUSION AND IMPLICATIONS	. 60
5.0	Dis	cussion of Major Findings	. 60
5.0.	.1	Relationship between PEU and Y	61
5.0.	.2	Relationship between PU and Y	. 61
5.0.	.3	Relationship between PPS and Y	. 62
5.0.	.4	Relationship between GR and Y	. 63
5.0.	.5	Relationship between HA and Y	. 64
5.1	Imp	lications of the Study	. 65
5.2	Lin	nitations of the Study	. 67
5.3	Rec	commendation for Future Research	. 68
Reference	ces		. 70
Appendi	ices.		. 79

LIST OF TABLES

	Page
Table 3.1: Rule of Thumb for Cronbach's Alpha	38
Table 3.2: Rule of Thumb for Correlation Coefficient	40
Table 3.3: Cronbach's Alpha Result	42
Table 4.1: Gender	44
Table 4.2: Education Level	45
Table 4.3: Occupation Status	47
Table 4.4: Current Income	48
Table 4.5: Period of Using E-wallet	49
Table 4.6: Monthly Top-up	51
Table 4.7: Types of E-wallet Used	52
Table 4.8: Cronbach Alpha Result	54
Table 4.9: Pearson Correlation Result	55
Table 4.10: Model Summary	57
Table 4.11: ANOVA Model	57
Table 4.12: Coefficient	57
Table 5.1: Table of Hypothesis Statement Acceptance	60

LIST OF FIGURES

Page

Figure 1.1: Top 10 alternative payment platforms in year 2012	3
Figure 1.2: Number of users of the mobile payment platform (August 2017)	4
Figure 1.3: User penetration in the mobile point-of-sale segment in year 2019	5
Figure 1.4: Usage of mobile payment in India due to Covid-19 in April 2020	6
Figure 1.5: Usage of e-wallet used in Southeast Asia	7
Figure 1.6: Volume of e-wallet used in Malaysia	8
Figure 1.7: The entrance of e-wallet in Malaysia	9
Figure 1.8: Usage of e-wallet brands	10
Figure 1.9: Where is e-wallet used in Malaysia	11
Figure 1.10: Recent volume of e-wallet used in Malaysia	12
Figure 1.11: Number of e-wallet users in Malaysia in year 2020	13
Figure 2.1. Proposed model	30
Figure 4.1: Gender	45
Figure 4.2: Education level	46
Figure 4.3: Occupation status	47
Figure 4.4: Current income	49

Figure 4.5: Period of using e-wallet	50
Figure 4.6: Monthly top-up of e-wallet	52
Figure 4.7: Types of e-wallet used	53

LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
DV	Dependent Variable
GR	Government Roles
НА	Health Awareness
IV	Independent Variable
МСО	Movement Control Order
PEU	Perceived Ease of Use
PPS	Perceived Privacy and Security
PU	Perceived Usefulness
SPSS	Statistical Package for Social Science
ТАМ	Technology Acceptance Model
UTAR	Universiti Tunku Abdul Rahman
UTAUT	Unified Theory of Acceptance and Use of Technology
WHO	World Health Organization
Y	Intention to Adopt E-wallet

LIST OF APPENDICES

	Page
Appendix 3.1: Krejcie and Morgan Table	79
Appendix 3.2: Partial Result of Pearson Correlation (PEU, PU, PPS, GR, HA, Y)	81
Appendix 3.3: Pearson Correlation Critical Value Table	87
Appendix 3.4: Survey Questionnaire	89
Appendix 3.5: Sources of Questionnaire	95

PREFACE

Before the Covid-19 pandemic, most Malaysians preferred to use tangible cash instead of e-wallet. However, we found that Malaysia's e-wallet utilization rate has risen to 40% during the Covid-19 pandemic. Besides, Malaysia is leading the e-wallet utilization rate among Southeast Asia in 2020, which is during Covid-19 pandemic. Therefore, we are curious about the factors that caused Malaysians to prefer to use e-wallet during Covid-19 pandemic happens. We use five factors (perceived ease of use, perceived usefulness, perceived privacy and security, government roles, health awareness) to examine the intention of Malaysian to adopt e-wallet. Among these factors, government roles and health awareness are fairly new factors that examine the intention to adopt e-wallet as our research takes into account the Covid-19 pandemic. Our research more focuses on examine the intention of Malaysian young adult to adopt ewallet.

We hope that our research can provide knowledge of e-wallet usage to the readers. Moreover, we also hope that our research can provide some insights to government, ewallet companies, academia, and future researchers.

ABSTRACT

This research is aimed to find out the factors that affect the intention to adopt e-wallet among young adult during the Covid-19 pandemic in Malaysia. This research is using five factors (perceived ease of use, perceived usefulness, perceived privacy and security, government roles, health awareness) to examine their significancy to the intention of Malaysian young adult to adopt e-wallet by referring TAM and UTAUT theory. We selected young adult (18-35 years old) as our research target because they are more familiar with e-wallet. Our research collected 425 responses from Malaysian young adult through Google Forms. SPSS software is applied to examine the reliability and validity of data and find out the relationship between IVs and DV. Pilot test, Cronbach's Alpha, Pearson Correlation Analysis, and Multiple Regression Analysis are conducted for this purpose. Our result shows that perceived ease of use, perceived usefulness, government roles, and health awareness have a positive relationship with intention of Malaysian young adult to adopt e-wallet. However, we found that perceived privacy and security is insignificant toward the intention of Malaysian young adult to adopt e-wallet. Our research provides several implications to government, ewallet companies, and academia to help them sorting out the current situation of ewallet in Malaysia and how to enhance and promote e-wallets. Lastly, our research provides some limitations and recommendations for future researchers so that they can overcome the limitations and provide more accurate and realistic research.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

1.0.1 E-wallet and Covid-19 Pandemic

E-wallet is a kind of electronic card that used by a PC or smartphone for making online transaction is known as e-wallet. The function of e-wallet is parallel as a credit or debit card. Besides, a password needs to be set up in order to protect e-wallet account. E-wallet is a prepaid account form in which the user can store their money for any online exchange in the future. There are many kinds of things that can be purchased through e-wallet, such as food and beverage, online purchases, flight ticket and so on. Personal information is stored in the part of software and data protection and encryption are provided. The username, shipping address, payment method, credit or debit card detail and so on is an information provided by e-wallet user while registering an account which stored in a database ("Definition of 'E-wallets'," 2020). E-wallet can be easily downloaded from online or app store to own device. In order to use e-wallet for payment, a password or 6 digital pin numbers are required to activate the e-wallet.

In reality, digital wallets have been around since the late 1990s, but their standards were not met by the digital wallet revolution. Throughout the years, payment methods have become even more standardized. Society has undergone significant shifts in both how we use our money and how we view our currency,

from paper currency, debit and credit card, online banking and E-commerce methods such as PayPal (Chain, 2019).

Covid-19 is a recently located coronavirus-caused infectious disease. If an infected person coughs or sneezes, the Covid-19 virus mainly spread through droplets of saliva or discharge from the nose. For example, it is a responsibility to cover your mouth when you sneeze. However, there is no 100 percent effective and reliable Covid-19 vaccines or therapies accessible until now. Currently, there are few clinical trials testing new therapies. After clinical result is obtainable, WHO will responsible to reveal the latest information (World Health Organization, 2020).

Due to Covid-19, society is promoted to be more cashless. Most of the people are not willing to take risk by using cash as a payment method. During the Covid-19 pandemic period, consumers are becoming more likely to accept digital wallets and contactless payments such as e-wallet ("Covid-19 (coronavirus) impact on payment and Fintech," 2020). So, e-wallet may become a more preferred payment method during this period as it is contactless and require less physical interaction between purchaser and seller.

1.0.2 Global Perspective of E-wallet

First of all, the origin of digital wallet payment came from the concept of purchases via message. In 1997, Coca-Cola Company introduced a vending machine in Helsinki which allowed customer to purchase their product through text massage. During that time, the user of mobile device was rapidly growth whereby people used mobile devices to purchase goods. In the year 2003, there was up to 95 million of people were using mobile device to make purchase (Sachdev, 2019).

In the year 2011, Google Company introduced the first ever mobile wallet (Google wallet) with the NFC (near field communication) technology which allowed consumer to make payment, receive loyalty point as reward and redeem gift. According to the WorldPay, it mentioned that there are more than 1.4 billion people are using smartphone all around the world and the annual growth rate of smartphone ownership increases to 44 percent. Besides, as the consumer experience improved, consumers feel more pleasant when they purchase items through mobile payment ("On the Evolution of E-commerce and the Rise of E-Wallets," 2020).



Figure 1.1. Top 10 alternative payment platforms in year 2012. Adopted from

On the Evolution of E-commerce and the Rise of E-Wallets. (2020).

Besides, in the year 2012, the users of mobile payment increased rapidly due to the growth of smartphone. According to the World Pay's comparative chat, it found out that there are ten different leading payment platform all around the world and Paypal is the biggest platform while AliPay and TenPay are the second and third biggest platform. ("On the Evolution of E-commerce and the Rise of E-Wallets," 2020).



Figure 1.2. Number of users of the mobile payment platform (August 2017). Adopted from Best, R. d. (2021). *Number of users of selected global mobile payment platforms 2017.*

As the saying goes, during 2017 to 2018, "WeChatPay" and "Alipay" received a big growth whereby the Chinese consumers could use their mobile device to make payment instead of cash or physical wallet. According to People's Bank of China (PBOC), mobile payment became popular in countryside during 2018. Moreover, Alipay has moved future in 2018 by making partnership with foreign company which include Openpay, FreedomPay, MotionPay and even in Japan. For WeChatPay, their market was expanded in global market for instance, France, Italy, Russia, The UAE and Sri Lanka (Best, 2021).



Figure 1.3. User penetration in the mobile point-of-sale segment in year 2019. Adopted from Buchholz, K. (2020). *China's Mobile Payment Adoption Beats All Others*.

In 2019, there was nearly 2.07 billion people selected mobile wallets to make purchase. By comparing to 2017, the amount of user of mobile wallets had increased up to 30 percent in 2019. The result mentioned that the world largest adopter of mobile payment is China in term of "Alipay" and "WeChat Pay". According to Buchholz (2020), the adoption of mobile payment in China is the highest around 35.2% penetration rate followed by India (29.5% penetration rate) and Indonesia (15.9% penetration rate).

However, China faced few big rivals during year 2019, whereby their competitors (such as Google Pay, Amazon Pay, WhatsApp Pay) set to enter the Indian Payment market. Besides, the company of Amazon introduced the P2P payment for the user of Android in the country via Amazon Pay. According to Constantinescu (2019), it mentioned that there are more than 300 million of

people in India using WhatsApp whereby the result exceeds the user of "Paytm" which only 230 million of users.



Figure 1.4. Usage of mobile payment in India due to Covid-19 in April 2020. Adopted from Statista Research Department. (2021). *COVID-19 impact on digital payment app usage in India 2020*.

As the pandemic of Covid-19 happened in the end of 2019, it has affected the economics of every country. In India, the first case of Covid-19 was found on 30 January 2020. To prevent the pandemic of Covid-19 get worsen, the government of India declared to have a lockdown on March 25, 2020. A survey has done among the people in India to analyze the effect of the coronavirus (Covid-19) and its ensuing lockdown. Based on the survey, there was more than 30 percent of respondent reported that they had increased the usage of online payment during the lockdown period. According to Statista Research Department (2021), the common mobile payment in India are Paytm, Google Pay, Amazon Pay, and the others.



1.0.3 Malaysia perspective of E-wallet

Figure 1.5. Usage of e-wallet used in Southeast Asia. Adopted from Tan, J. (2020). *Mastercard: Malaysia Has Highest Mobile Wallet Usage in Southeast Asia.*

In 2020, Malaysia was leading the usage of e-wallet among Southeast Asia (include Philippines, Thailand, and Singapore) which was 40%, as restriction was imposed due to the Covid-19 pandemic. These restrictions forced Malaysian to adapt e-commerce including e-wallet and online activities. Besides, Malaysian government started to promote the use of e-wallet by offering RM30 e-Tunai to the Malaysian adult. There were three selected e-wallet providers participated in this program, namely TouchnGo, Boost, and Grab Pay (Tan, 2020).



Figure 1.6. Volume of e-wallet used in Malaysia. Adopted from Bank Negara Malaysia. (2020b). *Electronic Payments: Volume and Value of Transactions*.

According to Bank Negara Malaysia (2020b), the volume used of e-wallet from 2005 to 2012 was below RM1, 000 billion. After 2013, there was a gradual increase in the volume of e-wallet used. Until last year 2019, the volume increased to RM2,000 billion. In overall, the usage of e-wallet in Malaysia showed a significant increase from 2005-2019, which increased from below RM500 billion to above RM2,000 billion.



Figure 1.7. The entrance of e-wallet in Malaysia. Adopted from *Malaysians on Malaysia Q1 2020: Malaysian Consumer Confidence Dampened by COVID-19 Pandemic.* (2020).

The booming of e-wallet applications started about 2017. In 2017, there were nine e-wallets entering the Malaysia market which included Samsung Pay, XOX mobile, FavePay, KiplePay, MCash, Presto, AliPay, Boost, and VCash. In the following year, BigPay, TouchnGo e-wallet, GrabPay, RazerPay, WeChat Pay, AEON Wallet, and Setel entered the Malaysia e-wallet market. In 2019, MAE, GoPayzm, and 1Pay entered the e-wallet while the VCash exited the market ("Malaysians on Malaysia Q1 2020: Malaysian Consumer Confidence Dampened by COVID-19 Pandemic," 2020).

As mention by Bank Negara Malaysia (2020a), currently there are six banks and 47 non-banks gain the license from Bank Negara Malaysia to legally issue e-wallet applications in Malaysia. Besides, some of these companies collaborate with each other to gain larger market share. For example, AmBank partners with WeChat Pay to provide cross-border merchant acquiring service (AmBank Group, 2020), TNG digital company collaborates with Lazada to make the TouchnGo available in Lazada platform (TouchnGo eWallet, 2019), RHB Islamic Bank ties with Boost to provide cashless payment in government clinics (Tan, 2019).



Figure 1.8. Usage of e-wallet brands. Adopted from *Navigating the E-Wallet Landscape of Malaysia.* (2019).

Among the 53 e-wallet applications, the top-3 favourite e-wallet of Malaysian is Boost, TouchnGo, and Big Pay. AS stated by Navigating the E-Wallet Landscape of Malaysia (2019), Boost was the top provider of Malaysia's e-wallet usage which took over half market share of e-wallet usage. Besides, "TouchnGo" was the second largest e-wallet brand in Malaysia during 2019, followed by "BigPay".



Figure 1.9. Where is e-wallet used in Malaysia. Adopted from *Navigating the E-Wallet Landscape of Malaysia.* (2019).

According to Navigating the E-Wallet Landscape of Malaysia (2019), food and beverage was the most frequently used e-wallets in the business sector in Malaysia during 2019 which reflected 51% of the all usage of e-wallet. Next, 48% Malaysian preferred to pay their bills through e-wallet. Moreover, 44% of Malaysian used e-wallet to purchase groceries. Other than that, the e-wallets were also commonly used by the transaction of convenience stores, mobile reloads, tickets, petrol and transportation which represented 38%, 34%, 29%, 23% and 14%.



Figure 1.10. Recent volume of e-wallet used in Malaysia. Adopted from Malaysians on Malaysia Q1 2020: Malaysian Consumer Confidence Dampened by COVID-19 Pandemic. (2020).

According to Malaysians on Malaysia Q1 2020: Malaysian Consumer Confidence Dampened by COVID-19 Pandemic (2020), the first case of coronavirus was reported in Malaysia in December 2019. The appearance of Covid-19 pandemic boosts the usage of e-wallet. In recent data, we can see that the e-wallet usage in period before Covid-19 pandemic was only 12%-27%. However, we can clearly see a sudden increase from the fourth quarter of 2019 to the first quarter of 2020. The usage increased from 38% to 63%. There is 65% growth after the appearance of Covid-19 pandemic.



Figure 1.11. Number of e-wallet users in Malaysia in year 2020. Source: Bank Negara Malaysia. (2020c). *Number of Cards and Users of Payment Instruments*.

According to Bank Negara Malaysia (2020c), the users of e-wallet gradually increased RM11.06 million from January (RM88.12 million) to June (RM99.18 million) in 2020. This shows that usage of e-wallet in Malaysia still increasing in 2020 despite the Covid-19 pandemic cause economic downturn. However, the number of users of other payment methods including credit cards (decreased RM0.21 million), debit cards (increased RM0.4 million) and charge cards (decreased RM5,500) was stable without any big fluctuations during the same period. In other words, only the use rate of e-wallets is on the rise, while the use rates of other media tend to stabilize. This shows something special with the rise in e-wallet users with comparison.

As Covid-19 can be spread easily, people start to aware of physical contact among others and their healthy awareness has arisen. As a result, there are many news reports reporting the increase of e-wallet adoption. There are also some facts which claim the truth. For example, the CEO of TouchnGo Digital claimed that the number of TouchnGo users increases during the MCO period (Birruntha & Nharul, 2020). According to Malaysians on Malaysia Q1 2020: Malaysian Consumer Confidence Dampened by COVID-19 Pandemic (2020), the impact of Covid-19 on personal health awareness which represented there are 64% of Malaysian more frequently use hand sanitizer to sanitize their hand. It can be known as a rise of personal health awareness.

In addition, the government was also raised the use of e-wallet during 2020. In January 2020, the government introduced the incentive of free RM30 of e-Tunai to the Malaysian who are over 18 years old and yearly earning less than RM100,000 via "Boost", "Grab Pay" and "TouchnGo e-wallet" (Gazi, 2020). Government also published "MYSejahtera" app for the location check in purpose. Furthermore, the government introduced the incentives of e-Penjana which allows MYSejahtera user to receive RM50 e-wallet credit via Boost, Grab Pay and TouchnGo (Yeoh, 2020).

1.1 Problem Statement

Before Covid-19 pandemic, most of the e-wallet service in Malaysia was mainly set up for foreigners, especially China. Malaysian were still preferring to use cash at that time. However, the Covid-19 pandemic has changed this situation as there are news warning that using cash is not secure and may cause coronavirus spread. Data shows that Malaysian increase the usage of e-wallet during this pandemic and this situation happens may due to government support and citizen health awareness.

The Malaysia Government implements MCO to defend the pandemic of Covid-19 to prevent the pandemic getting serious. Government of Malaysia encourages Malaysian to use e-wallet by offering RM30 award payment to every adult who income lower than RM100,000. Government encouragement is vital as every action imposes by government will affect the intention of e-wallet adoption around Malaysia. As a result, intention of e-wallet adoption might be affected due to the government policy and encouragement. Yet, currently there are only little studies discuss the effect of government roles influence the adoption of e-wallet.

Besides, as the pandemic of Covid-19 is getting more serious all around the world, people and society are promoted to use e-wallet instead of cash payment. This is because consumers are more concern about their health as the WHO suggested people use e-wallet instead of cash payment to defense against the spread of Covid-19. As a result, the usage of mobile wallet will be increase during this period as health concern among people has increased. However, there are only a few studies use health awareness as a variable that affect e-wallet usage intention.

Government and health awareness play a vital role in intention of adoption of e-wallet especially in pandemic period; yet less research study this area. The absence of this kind of research may mislead people to think that government and health awareness are not related in encouraging the adoption of e-wallet and make wrong effort to defend Covid-19 pandemic. This may lead to a worsening of the pandemic situation. People should realize that as government has the ability to promote the functionality of e-wallet mainly during the Covid-19 pandemic as it could assist market growth and fight against the spread of Covid-19. The failure of having correct understanding may cause the Malaysia economy to be worsen as the money is hard to flow into the market. Besides, the Covid-19 pandemic in Malaysia will be worsen as cash payment and face to face interaction will lead to the spread of virus. As a result, the economics of Malaysia might face a downturn.

1.2 Objectives

1.2.1 General Objective

1. Determine the factors that affect the intention of Malaysian young adult to adopt e-wallet during Covid-19 pandemic.

1.2.2 Specific Objective

To find out the impact of:

- Perceived ease of use on the intention of Malaysian young adult to adopt ewallet during Covid-19 pandemic.
- 2. Perceived usefulness on the intention of Malaysian young adult to adopt ewallet during Covid-19 pandemic.
- 3. Perceived privacy and security on the intention of Malaysian young adult to adopt e-wallet during Covid-19 pandemic.
- Government roles on the intention of Malaysian young adult to adopt ewallet during Covid-19 pandemic.
- Health awareness on the intention of Malaysian young adult to adopt ewallet during Covid-19 pandemic.

1.3 Research Questions

- 1. Does perceived ease of use can affect the intention of Malaysian young adult to adopt e-wallet during Covid-19 pandemic?
- 2. Does perceived usefulness can affect the intention of Malaysian young adult to adopt e-wallet during Covid-19 pandemic?
- 3. Does perceived privacy and security can affect the intention of Malaysian young adult to adopt e-wallet during Covid-19 pandemic?
- 4. Does government role will affect the intention of Malaysian young adult to adopt e-wallet during Covid-19 pandemic?
- 5. Does health awareness will affect the intention of Malaysian young adult to adopt e-wallet during Covid-19 pandemic?

1.4 Significance of Study

During Covid-19 pandemic, there are few factors that will promote the usage of ewallet instead of using cash or card as a payment method. However, there are less previous studies related to how Covid-19 pandemic affect the intention to adopt ewallet. Through this research, it is aiming to provide more detail information about how Covid-19 pandemic affect the adoption of e-wallet. Hence, this research aims to collect the latest information during the Covid-19 pandemic and contribute the latest information to those researchers who need this kind of information.

Government roles are a significant factor that will improve the e-wallet usage of Malaysian. The e-wallet voucher, cashback or discount on the e-wallet platform will enhance the intention to adopt e-wallet. Besides that, government policy such as MCO in Malaysia also will lead to an increasing of e-wallet usage. During MCO period, people are not allowed to go out simply, so most of the people will get a food delivery using e-wallet. Due to a lot of circumstances, it identifies that government roles can

promote the usage of e-wallet, but there are less previous studies discuss about it. Hence, through this research, it is aiming to collect the feedback from Malaysian citizens about the intention to adopt e-wallet during the Covid-19 pandemic, in order to provide the information to government sector to establish new incentives and policies to promote the usage of e-wallet.

Moreover, health awareness has being concerned by Malaysian d the Covid-19 pandemic. When using e-wallet as a payment method, people can reduce the interaction between the seller and the buyer. If e-wallet is adopted by most of the Malaysian, the risk of infection will become lower. Hence, the intention to adopt e-wallet will be increase due to the pandemic. This research is aiming to determine whether the health awareness is the factors considered by Malaysian to adopt e-wallet during Covid-19 pandemic, so that e-wallet companies and government can establish more policies to promote the e-wallet usage.

This study will discuss on what factors will affect the intention to adopt e-wallet during Covid-19 pandemic in Malaysia by adding government roles and health awareness as new factors. The study will be unique, and it will provide more detail information to academia, government and public sector based on the theoretical concept, model and test with the hypothesis.

1.5 Concluding Remark

The rest of this paper is organized as follows: Chapter 2 reviews relevant literature on independent variables (perceived ease of use, perceived usefulness, perceived privacy and security, government roles, health awareness). Besides, this chapter will also introduce our research framework. Chapter 3 presents the population and sampling

target. The method used to examine the data will also be presented. In Chapter 4, the analysis of demographic data and variable data will be clarified. In Chapter 5, we will summarize the results of the research. In addition, we will provide the significance, limitations and recommendations of the research.
CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This part is organized by underlying theories, review of variables, gaps, conceptual framework, and hypothesis development. First, we will discuss the theory applied in adopting new technology. There are two theories to be discussed in the theory part. We will also discuss the variables that may affect the intention of people to use e-wallet. There are five variables to be identified in the review of variables part. Moreover, we will explore the gap of these journals. Other than that, our conceptual framework for this research will be shown following by the hypothesis development.

2.1 Underlying Theories

2.1.1 Theory Acceptance Model (TAM)

In 1989, Davis introduced TAM to study the factors and the way humans adopt to new technology (Davis, 1989). It added some variables based on Theory of Planned Behaviour (TPB) model. TAM is frequently used to explain the intention to use the new technology and the adoption of behavioral intention. PEU is proposed as an antecedent of PU in TAM. According to Mondego, et al. (2018), TAM has been used 29 times in the mobile payment area during 2013 - 2017. According to Surendran (2012), he mentioned that PU is the consumers's subjective probability that utilize a particular technology will improve their life or job performance. For the PEU, it can be known as the consumer's expects the particular technology to be free of effort. Besides, this PU and PEU can be affected by other external variable for instance, social, cultural and political factors. Social factor may be classified as the facilitating condition. Politics factor can be known as government influence or politics crisis and cultural factors can be known as the consumer desirability toward the particular technology. This model had been frequently applied by many studies and used two variables which are PEU and PU to examine the intention to use technology.

Amin (2009) used TAM to identify linkage between PEU and usage intentions. Besides, to better reflect mobile wallet acceptance, perceived expressiveness, knowledge about mobile wallet and perceived credibility are added and these variables will affect PU. Next, Trivedi (2016) used TAM to conduct his research. Trivedi (2016) used PEU, PU, subjective norms, perceived trust, and self-efficacy as IVs and behavioural intention as DV to examine the acceptance of e-wallet among Generation Y in India. Matemba and Li (2018) designed model based on TAM. They think that privacy concern and relative advantage can affect technology P2P adoption intentions. Moreover, they also think that security and trust may influence privacy concern while PEU may influence relative advantage. Shankar and Datta (2018) used TAM as a theoretical base while inserting trust, subjective norms, personal innovation, and self-efficacy as DVs to find the possible factors that affect the adoption of mobile payment in India.

Yap and Ng (2019) included PU as the DV to conduct their research while PU is one of the variables developed in the TAM. Chawla and Joshi (2020) applied TAM in the research. However, they included concept of mediator. They set

several situations which include PU as mediator between PEU and trust, PU and trust as mediator between PEU and attitude, PU as mediator between facilitating condition and attitude, PU and attitude as mediator between facilitating condition and behavioural intention. Chua et al. (2020) included the attitude when using technology, actual system uses, behavioural intention to use with the variable of PU and PEU in the TAM. They believed that PU could enhance PEU. Besides, they claimed that the attitude toward using technology had influenced behavioural intention of actual system use. Aji et al. (2020) claimed the knowledge of TAM by including the variables of perceived Covid-19 risk, government support, perceived usefulness towards the intention to use e-wallet. Besides, Tan, el al (2020), and Liew (2019) applied the same framework in the TAM.

2.1.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

Unified Theory of Acceptance and Use of Technology (UTAUT) is evolved from TAM which was introduced by Venkatesh et al. (2003). UTAUT was upgraded from TAM and used to understand new technology acceptance level. It used performance expectancy, effort expectancy, social influence, and facilitating conditions to measure behavioural intentions. Mondego et al. (2018) indicated UTAUT has been used 10 times in the mobile payment area during 2013-2017. In addition, variables like experience, age, gender and voluntariness of use can influence the relationship between the previous four variables and behavioural intention. Intarot and Beokhalmook (2018), Chern et al. (2018) also used UTAUT in their research. Teoh et al. (2020) thought that performance expectation, effort expectation, social influence, perceived risk and perceived cost may affect the behavioral intention to use e-wallet. Chawla and Joshi (2020) applied UTAUT in their research and applied the mediator concept into the model.

2.2 Review of Variables

2.2.1 Perceived Ease of Use (PEU)

PEU refers to the ease of the e-wallet system for the user to operate it. The reason to adopt PEU is because most journals use TAM and PEU is one of the variables which are included by TAM. PEU was found to affect e-wallet acceptance among bank customers in Amin (2009). They indicated that PEU can positively affect the behavioral intention of Sabahan customer to use e-wallet, which means that bank customers are likely to adopt e-wallet when it is easy to use. Trivedi (2016) found that PEU has a significant influence on attitude and behavioral intentions towards e-wallet usage. It emphasized that younger user (18-35 years old) is more open to accept e-wallet. In the questionnaire, he tended to ask about how easy the e-wallet is used by users, for example like will users keep making errors while using e-wallet, if the e-wallet is clear and understandable. Shankar and Datta (2018) identified that PEU has a positive influence on adopt of mobile wallet in India. It mentioned that users will only choose to adopt a new method when the new method is better to compare to other methods. Singh (2019) supported PEU and stated that the

users feel easy as they only need to scan the QR code provided, so it eliminated the entering of card PIN number. Karim et al. (2020) indicated PEU has a significant effect to behavioural intention. The recognition of the e-wallet is easy which directly influence the user's behavioral intention. Chua et al. (2020) found that the relationship between PEU and consumers behaviour will become positive if the registration of the mobile wallet application is easy. Tan et al. (2020) identified that PEU is more important than PU in influencing intention to use e-wallet. The study showed that PEU between previous experiences and facilitating condition present a strong correlation with intention to use e-wallet. Singh et al. (2020) also proved that there is a positive relationship between PEU and intention to use e-wallet.

2.2.2 Perceived Usefulness (PU)

PU means the degree of performance experience that can be influenced by using application. If e-wallet has a high PU, it will make users remain using e-wallet rather than other payment methods. The reason we explore PU is because it is an important criterion in TAM and frequently exist in many studies. Amin (2009) found that PU is significantly associated with usage intentions. When a mobile wallet is useful, bank customers' intention to adopt it would be greater. Trivedi (2016) found that PU also influenced the usage intentions. The young users found e-wallet useful as e-wallet make their life easy and fasten the transaction. In the questionnaire of Trivedi (2016), some questions were asked, such as will it be time consuming less while using an e-wallet, is e-wallet useful in the buying process and so on. In Shankar and Datta (2018), PU has a positive impact on the adoption of technology-based products. In this concept, users will only try to adopt new technology when it can fulfil their specific demand.

Chawla and Joshi (2020) found that higher PU could lead to higher trust, attitude and behavioural intention. In addition, higher PU will make the user feel that using e-wallet is beneficial for them in making financial deals. In Karim et al. (2020), PU has a significant effect on intention of Malaysian young adult to adopt e-wallet. Chua et al. (2020) found that PU significantly related to consumers' behaviour. If the overall using mobile wallet is advantageous, the relationship between PU and consumers behaviour will be positive. Tan et al. (2020) found that PU can show that social influence, perceived enjoyment and "information and knowledge" has a moderate relationship with the intention to use e-wallet. Singh et al. (2020) found that PU has a positive and significant relationship toward intention to use e-wallet in their study, which is presented as a most important antecedent.

2.2.3 Perceived Privacy and Security (PPS)

Perceived privacy refers to the concern of people toward their security of their personal information while perceived security defines as users feel no risk when using the new technology. The reason to adopt perceived privacy and security as one variable is because they are essentially the same. In other words, people are concern with the security issue, especially related to their personal information. Besides, the reason we use this variable is that some journals like Mombeuil (2020) claimed that little research is known for PPS. Moreover, some journals like Matemba and Li (2018) claimed that they have an intention that perceived privacy can directly influence P2P adoption intention. We adopted this variable in our research as an extension of TAM model. This can be proven by journals like Matemba and Li (2018) who also included privacy and security as their variables based on original TAM model. Chellappa (2007)

indicated that PPS is the factor that affects consumers' trust in electronic commerce transaction. In addition, it emphasized that the impact of perceived privacy on commercial transaction trust is strongly regulated by perceived security. Matemba and Li (2018) found that one of the variables that enable South African people to adopt WeChat wallet is privacy. Research found that a reliable mobile wallet will encourage people to use mobile wallets as they have less worries about private information losses. Besides, it exposed that secure mobile wallets will positively affect people to start adopting and using mobile wallets. This is because it has a lesser risk of data losses. Singh (2019) stated that e-wallet is secure. Nowadays, e-wallet is securitized and most of the ewallet has applied extra security such as face authorized, fingerprint authorized to increase the security standard. In Mombeuil (2020), people are more willing to adapt and use mobile wallets with higher privacy protection and security. Low privacy protection will make them reluctant to adopt mobile wallets. Moreover, if mobile wallets give people a sense of high security risks, their willingness to adopt mobile wallets will be reduced. Karim et al. (2020) agreed that perceived privacy and security has a positive relationship with behavioural intention. It clarified that when the user thinks the security of e-wallet is strong, he may adopt the e-wallets. However, Chern et al. (2018) and Chua et al. (2020) reached a different result in term of security. They found that security had no effect or significant relationship to the adoption of e-wallet. This represents that the security of e-wallet may not be the major concern of the user. Chern et al. (2018) claimed that the reason of respondent does not take privacy and security as major concern is because they believed with the rule and regulation government set to prevent against fraud.

2.2.4 Government Roles (GR)

GR refers to the government support provided to the new information technology including government incentive or bonus given. We adopted this variable as an extension of TAM model. Malaysia government has provided RM30 e-tunai initiative and RM50 e-penjana initiative in January 2020 and July 2020 respectively. Haderi (2014) conducted the investigation in Yemen and the result showed that the government support can positively affect to the behavior intention to use the information technology. Sarika and Vasantha (2019) pointed that the government initiative can boost the usage of digital payment in India. Aji et al. (2020) investigated the relationship of Covid-19 and e-wallet usage intention with the analysis between Indonesia and Malaysia. There were 259 respondents and 207 respondents collected in Indonesia and Malaysia respectively. The study identified that the result of government support in Malaysia and Indonesia were different. In Malaysia, the government support is positively related with the e-wallet usage intention, but Indonesia is opposite which is because the trust of government and consumer's characteristic and lifestyle. According to Brown (2020), he mentioned that the government support can be translated into network infrastructure, policy packages, access speeds, and security guarantees in digital transaction in the context of e-wallet. Hence, the e-wallet users will more likely to adopt e-wallet, if they perceive the support from government.

2.2.5 Health Awareness (HA)

HA refers to the conscious of people toward their health. We adopted this variable as an extension of TAM model. During the Covid-19 pandemic, the WHO has encouraged the physical distancing policy which encourages people to lessen the interaction among each other. For example, contactless payments

during the transaction process. Since people are concerned about the coronavirus will be spread through the physical cash, so the perceived risk of infection by the Covid-19 will be higher while using physical cash as a payment method. Hence, HA should be concerned by Malaysian to prevent themselves from the Covid-19. Aji, et al. (2020) mentioned that the use of e-wallet is the best way to prevent the risk of transmitting Covid-19. He mentioned that when the Covid-19 risk on physical cash perceived by the individuals is high, the intention to use e-wallets for the payment transaction will be higher. This means that if the consumer is more aware about their health during the pandemic of Covid-19, the usage of e-wallet will be higher to prevent themselves from the infection of Covid-19. In other words, when consumers are more concerned about HA, they will tempt to minimize the risk of getting infected by Covid-19, hence, they will select to use e-wallet to make payment rather than physical cash. As a result, there is a positive relationship between the HA and the usage of e-wallet during the pandemic of Covid-19. Hasan et al. (2017) indicated that the disease risk is the likelihood of individuals affected by an epidemic such as MARS, SARS, Anthrax, AIDS and so on. Therefore, in order to prevent the risk of infecting Covid-19, using the e-wallet will be the solution.

2.3 Gaps of Literature Review

The first gap explored from the previous study is **only little studies discussing the effect of Covid-19 to e-wallet**. After investigation, there is only little studies discussing the influence of Covid-19 to e-wallet adoption since it first identified during December 2019. There is some evidence showed Covid-19 had effected e-wallet adoption such as "Your MCO buddy" introduced by TouchnGo e-wallet ("Your MCO Buddy," 2020), reward distribution to MYSejahtera user and so on (Maulana, 2020). The second gap is **only few journals that assign government roles as an IV** in technology adoption intention research. In Malaysia, the government encouragement and government policy conducted can influence e-wallet adoption. During the middle of January, Malaysian government provided RM30 award payment through Boost, TouchnGo, and GrabPay. In the following June, Malaysia government planned to provide RM50 vouchers, cashback, or discount to e-wallet platforms for e-wallet encouragement (PYMNTS, 2020). Furthermore, Prime Minister Muhyiddin Yassin announced a government policy which was the MCO that started from 18 March 2020. During the MCO period, people are not allowed to go out simply. In that situation, people may choose to get a food delivery using an e-wallet for the payment as some e-wallet platforms provided free delivery and cash back on food order ("E-wallet use increase in Malaysia during Movement Control Order," 2020). Therefore, the government plays an important role in influencing intention to adopt e-wallet, yet only few journals expose this variable. Therefore, we will add-in government roles as new variables to identify its effect.

The third gap is **only little studies discussing health awareness on the usage of mobile wallet due to Covid-19**. As the problem of Covid-19 is getting more serious all around the world, people nowadays are more aware of their own health. WHO suggested people to use digital payment instead of physical cash to eliminate the spread of Covid-19 (Muldowney, 2020). Moreover, the chief executive officer of TNG Digital, Ignatius Ong mentioned that people are able to keep down human contact and keep away from touching physical cash by using the e-wallet as it is much more shielded and cleanliness. This results in the acceptance of e-wallet and the uses of contactless payments are on growth in Malaysia ("COVID-19 outbreak steepens adoption curve of e-wallets in Malaysia," 2020). As a result, health awareness effectively influences the intention to adopt e-wallet but few journals to study on this factor. Therefore, health awareness will be one of the variables for our research topic.

2.4 Conceptual Framework



Figure 2.1. Proposed model.

We selected five variables which include perceived ease of use, perceived usefulness, perceived privacy and security, government roles, and health awareness as our IVs. Besides, the intention of Malaysians young adult to adopt e-wallet will be our DV. We believe that these IVs can effectively influence the intention of Malaysians young adult to adopt e-wallet.

2.5 Hypothesis Development

2.5.1 Perceived Ease of Use (PEU)

- H₀: The relationship between PEU and Y is insignificant.
- H₁: The relationship between PEU and Y is significant.

Amin (2009) stated that the PEU is significantly related to intention to adopt ewallet among bank customers. Besides, Trivedi (2016) argued that PEU has a significant impact on the attitude and behavioral intentions of using e-wallets. Moreover, Shankar and Datta (2018) identified that PEU has a positive influence on adoption of e-wallet in India. It found that a user will only adapt new method when it is better than old method. On the other hand, Singh (2019), Karim et al. (2020), Chua et al. (2020), Tan et al. (2020), and Singh et al. (2020) also supported the idea of positive relationship between PEU and intention to adopt e-wallet.

2.5.2 Perceived Usefulness (PU)

- H₀: The relationship between PU and Y is insignificant.
- H₁: The relationship between PU and Y is significant.

Amin (2009) stated that PU is significantly related to intention to adopt e-wallet. Besides, Shankar and Datta (2018) mentioned that PU can positively influence the adoption of technology-based products as user only will adopt new technology when it can fulfill their demand. Chawla and Joshi (2020) indicated higher PU can lead to higher trust, attitude, and behavioural intention. On the other hand, Trivedi (2016), Karim et al. (2020), Chua et al. (2020), Tan et al (2020), Singh et al. (2020) also support that there is a relationship between PU and intention of e-wallet.

2.5.3 Perceived of Privacy & Security (PPS)

- H₀: The relationship between PPS and Y is insignificant.
- H₁: The relationship between PPS and Y is significant.

Matemba and Li (2018) found that PPS can reach a positive influence P2P adoption intention. Besides, Mombeuil (2020), Singh (2019), Karim et al. (2020) also supported the idea of positive relationship between PPS and intention to adopt e-wallet. However, Chern et al. (2018) and Chua et al. (2020) found that security had no effect to the e-wallet adoption.

2.5.4 Government Roles (GR)

- H₀: The relationship between GR and Y is insignificant.
- H₁: The relationship between GR and Y is significant.

Haderi (2014) indicated government support has a positive effect to the behavior intention to use the information technology. Besides, Aji et al. (2020) investigate the relationship of Covid-19 and e-wallet usage intention with the analysis between Indonesia and Malaysia. In addition, it showed that government support has positive relationship to the e-wallet adoption in Malaysia but had an opposite result in Indonesia. Furthermore, Sarika and Vasantha (2019) also supported the idea of positive relationship between government role and intention to adopt e-wallet.

2.5.5 Health Awareness (HA)

- H₀: The relationship between HA and Y is insignificant.
- H₁: The relationship between HA and Y is significant.

HA indicates people's concern about their health and will take action to ensure health. During Covid-19 pandemic, Malaysians became more aware of their own health. Aji et al. (2020) mentioned that the use of e-wallet is the best way to prevent the risk of transmitting Covid-19. This represents that their awareness toward health increase. As a result, there is a positive relationship between the HA and the usage of e-wallet during the pandemic of Covid-19.

CHAPTER 3: METHODOLOGY

3.0 Introduction

Briefing of research method is discussed in detail in this chapter. We justify the design of the research and sampling; explain the method we choose for data collection; list out the proposed data analysis tool; and present pilot test result.

3.1 Research Design

We chose to adopt descriptive research in our research. Descriptive research can be referred as the scientific method which aimed at observing and describing situations. We can find the answer for when and where this happened. However, descriptive research will not tell us why this happened. Besides, descriptive research is suitable for identifying features, frequencies, trends, and categories. Since our research aims to track the trend of e-wallet usage during the Covid-19 pandemic, descriptive research is very suitable for use.

Descriptive research can be divided into qualitative and quantitative research. We adopted quantitative research in designing research. Research data is collected through survey by distributing questionnaires to the audience while the analysis tool will be used to analyse the relationship between variables by providing in a numeric way. The analysis result can be performed in table, chart, and graph which is easy for interpretation (McCombes, 2020b).

3.2 Sampling Design

3.2.1 Target Population

We targeted Malaysian who aged between 18 and 35 years old as target population. They can be categorized as young adult. According to Petry (2002), they divided three age groups: young adult (18-35 years old), middle-aged adult (36-55 years old), and older adult (over 55 years old). Moreover, Nihtila et al. (2016) also assumed that person between 18 and 35 years old are young adult in their health research. In addition, countries such as Canada define young adult as people within 18 and 35 age group (Church of the Nazarene USA/Canada Region, 2020; Canadian Unitarian Council, 2021). We selected this age range as our population as because they are mainly smartphone users. Besides, they are more aware of e-wallet, and most of them have the experience of using e-wallet (Fenchi Melissa et al., 2018). In addition, they are active users of social media such as Facebook, WhatsApp, and Instagram, therefore it will be easier for them to access our survey form since our survey is spread online.

3.2.2 Sampling Frame and Sampling Location

Young adults from modern cities were targeted in our research. Modern cities in Malaysia includes Kuala Lumpur, Georgetown, Kota Bharu, Kota Kinabalu, and etc. The reason for choosing them is that modern cities have advanced technology and modern lifestyle. As citizens young adult mostly hold a smartphone in hand, they have higher exposure to e-wallet knowledge and more active to use e-wallet. Besides, Malaysia was selected as our sampling location. This is due to the e-wallet usage rate in Malaysia showed a gradual increase during Covid-19 pandemic. Therefore, we would like to study the factor behind it.

3.2.3 Sampling Technique

First of all, our study adopted non-probability sampling. This sampling method has lower cost and is easy to implement. However, it has a chance of sampling deviation (McCombes, 2020a). Our research chose to use convenience sampling from the non-probability sampling. This means that the sample is taken from the people that researchers easy to reach. This sampling is easier for us to collect data and it has lower cost.

3.2.4 Sampling Size

According to Department of Statistics Malaysia (2020), the population of Malaysia is about 32.7 million in 2020. We referred Appendix 3.1 to determine our sampling size. The maximum population in Appendix 3.1 is shown until 1,000,000 and our population is more than the listed populations. By following Appendix 3.1, at least 384 responses are needed. Besides, Krejcie and Morgan (1970) mentioned that the sample size increase at a diminishing rate as the population increase and it relatively stable in more than 380 cases. Therefore, we collected 425 responses to prevent incomplete data. This can be supported

by Chua et al. (2020) as they stated that the minimum sampling size of Malaysia was 350 respondents and they had collected 539 sets of data. Besides, Teoh et al. (2020) collected 210 respondents for their e-wallet study for whole Malaysia.

3.3 Data Collection Methods

We collected primary data for this research. The technique of data collection was survey questionnaires, the questionnaires was performed in Google Forms. Google Forms is an online form that require us to distribute the Google link online, and the link can direct the respondent to the questionnaire form and answer questions. We chose Google Forms because Malaysia is having serious Covid-19 pandemic, therefore online distribution is the only way we collect responses as face-to-face distribution will help in spreading Covid-19 virus. Besides, the form can be distributed online to reach more people.

The questionnaire consisted of 39 questions. There were two sections in the questionnaire. The questions in section A focused on demographic area, including gender, age, occupation, employment and so on. In section B, there were five IVs (PEU, PU, PPS, GR, HA) and one DV (Y) and each variable had five questions. We created Google Forms and distributed it through online such as WhatsApp, Facebook, Instagram, and so on.

3.4 Proposed Data Analysis Tool

SPSS software was applied in our research to figure out the relationship between DV and IV. We collected 425 questionnaires from Malaysian young adult which mainly focus on 18-35 years old who familiar with e-wallet.

3.4.1 Descriptive Analysis

Descriptive analysis can provide a basic outline and measures of the demographic data in our research. It assists us to express, display and recap the data in table and figure form. It also helps us to simplify a large amount of data and allow us to make a simple description of the data we study (Trochim, 2020). In other words, descriptive analysis only shows us the main quantitative data analysis together with graphs like histogram or pie chart. It can only explain what the data showing (Sharma, 2019). In this analysis, we calculated frequency and percentage for each of the demographic questions.

3.4.2 Reliability Analysis

Table 3.1:

Cronbach's Alpha	Internal Consistency
$\alpha \ge 0.9$	Excellent
$0.9 > \alpha \ge 0.8$	Good
$0.8 > \alpha \ge 0.7$	Acceptable
$0.7 > \alpha \ge 0.6$	Questionable

Rule of Thumb for Cronbach's Alpha

$0.6 > \alpha \ge 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Note. From Stephanie. (2014, Dec 8). *Cronbach's Alpha: Simple Definition, Use and Interpretation.*

We can test the reliability of our research by using a reliability test. Reliability analysis allows us to determine the degree of correlation between the items in the questionnaire. An index of the repeatability or internal consistency of the scale can be obtained and the problem items that omitted from the scale can be identified ("Reliability Analysis," n.d.). Reliability means testing of consistency. Through the use of reliability analysis, the same results can be obtained consistently by the same method under the same conditions, so the measurement is considered reliable. Besides, the findings should be reproduced under the same conditions when the research is repeated. Moreover, the consistency of the results can also be identified by time, different observations, and part of the test itself. However, we can only find consistency and reliability, but it is not always valid. Hence, the result of reliability analysis may be reliable and consistent, but it is not necessarily correct (Middleton, 2019). The most common measurement for reliability analysis is Cronbach's Alpha (Stephanie, 2014). The rule of thumb is shown in Table 3.1. We can assume that our data is reliable if the internal consistency is excellent, good, or acceptable, otherwise the data is not suitable for use.

3.4.3 Pearson Correlation Analysis

Positive	Negative Direction	Correlation Coefficient
Direction		
0	0	No Correlation
$-0.20 \ge R$	$R \leq +0.20$	Very Weak Correlation
-0.20 > R >-0.35	+0.20 < R < +0.35	Weak Correlation
$-0.35 \ge R > -0.50$	$+0.35 \le R < +0.50$	Moderate Correlation
$-0.50 \ge R > -0.70$	$+0.50 \le R < +0.70$	Strongly Considerable
		Correlation
$-0.70 \ge R > -1.00$	$+0.70 \le R < +1.00$	Very Strongly Considerable
		Correlation
1	1	Perfect Correlation

. ___

Table 3.2:

Note. From Senthilnathan (2019). Usefulness of Correlation Analysis.

Correlation analysis was adopted in this research to measure the closeness association between two variables. Correlation analysis can be divided into linear and non-linear correlation analysis. In our research, we applied Pearson Correlation Analysis as it could find a linear relationship between two variables (Schober et al., 2018). Correlation analysis is very powerful in finding the associative relationship between two variables. The relationship can be categorized into positive, negative and zero correlation. Positive correlation means that two variables move in the same direction, while negative correlation represents that two variables move in the opposite direction. A zero correlation indicates that two variables do not have relationship, but this situation rarely happen. On the contrary, correlation analysis is not equal to causality, nor does

it allow us to exceed the given data (McLeod, 2020). The rule of thumb for correlation coefficient is shown in Table 3.2.

3.4.4 Multiple Regression Analysis

Multiple regression analysis is extended from simple regression analysis and can help us determine the relationship between DV and IV. This analysis contains of model fitness, ANOVA and Coefficients.

First, we used R square and adjusted R square to measure the goodness of fit of our model. A higher R square indicates that the data has a higher fit to the model and versa visa. However, R square has a problem of having more IVs will increase the fitness of the model, therefore adjusted R square appear to solve this problem.

Besides, ANOVA is the test which tests for the statistical significance of the means of three and above IVs. By using the ANOVA, we can apply F statistic or p-value for testing the means significance. The result is determined when the F test statistic is more than the critical value or the p-value is lower than the significant level, which prove that all the means are the same (Berg, 2021). The major limitations of ANOVA are it is not the best way to test against specific hypotheses and it may not provide accurate p-value when the data distribution is more concentrated at the tails than the normal (Good & Lunneborg, 2006).

Moreover, coefficient table can tell us whether the IV is significant to find out the DV or not. We can answer this question by using p-value. An IV is considered significant when its p-value is lower than significant level and versa visa. Besides, we can find out the exact number of DV change when IV change by one unit through this analysis. This can be done by viewing beta.

3.5 Pilot Test

We applied pilot test in order to evaluate the questionnaire set's validity and reliability. It is run by selecting a small group from the sample and collect the response. It is crucial for researcher to check and improve the quality and efficiency of the research (In, 2017). Although executing a pilot test will not promise a success of the study, but it effectively increases the chance of success. As Browne (1995) mentioned that minimum of 30 sample sizes are required in pilot test, we randomly selected 50 Malaysian young adult to participate in the pilot study through online survey. The data was processed through SPSS software. We used Cronbach Alpha and Pearson Correlation to test the reliability and validity of each variables.

3.5.1 Reliability Analysis

Table 3.3:

Variables	Cronbach's Alpha	No. of Items	Internal Consistency
PEU	0.891	5	Good
PU	0.859	5	Good
PPS	0.822	5	Good

GR	0.829	5	Good
HA	0.771	5	Acceptable
Y	0.872	5	Good

From the Table 3.3, the result shows that PEU, PU, PPS, GR, and Y has a good internal consistency as their Cronbach's Alpha fall between 0.8 and 0.9 while HA has an acceptable internal consistency as the Cronbach's Alpha falls between 0.7 and 0.8. Therefore, we can conclude that all variables are reliable.

3.5.2 Validity Analysis – Pearson Correlation

We used Pearson Correlation Analysis to test for validity and the results are shown in Appendix 3.2. We assume that the data is valid if the Pearson correlation value is higher than critical value (r). First, we use 0.10 as the significant level. As our respondents in pilot test is 50 person (N), the degree of freedom will be 48 (N-2). Therefore, the r will be 0.231 by referring to Appendix 3.3. When the Pearson correlation coefficient is higher than the r, we can determine that the variable is valid, and vice versa. From Appendix 3.2, we can clearly see that every Pearson Correlation value of PEU, PU, PPS, GR, HA, and Y variables are more than r. Therefore, we can conclude that all the data are valid.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

We have distributed 425 questionnaires via Google Form to respondents between the ages of 18 and 35. The following part will discuss about statistical result analysis.

4.1 Descriptive Analysis

4.1.1 Gender

Table 4.1:

Gender

	Frequency	Percent (%)
Male	161	37.9
Female	264	62.1
Total	425	100.0



Figure 4.1. Gender.

Table 4.1 shows the respondent gender. Based on Table 4.1, the male respondents have 161 people and represent 37.9% of respondents; while 264 respondents are female and represent 62.1% of respondents.

4.1.2 Education Level

Table 4.2:

Education Level

	Frequency	Percent (%)
Secondary School	72	16.9
College	55	12.9

Undergraduate	282	66.4
Postgraduate	9	2.1
Master	7	1.6
Total	425	100.0



Figure 4.2. Education level.

Table 4.2 represents the education level completed by respondents. The highest educations achieved by most respondents are undergraduates, which contains 282 people (66.4%) of the respondents, following by 55 people (12.9%) respondents who achieve college education level. There are 72 people (16.9%) of respondents achieve secondary school education level, 9 people (2.1%) of respondents reach postgraduate education level, 7 people (1.6%) reach master education level.

4.1.3 Occupation Status

Table 4.3:

Occupation Status

Frequency	Percent (%)
312	73.4
30	7.1
46	10.8
17	4.0
20	4.7
425	100.0
	Frequency 312 30 46 17 20 425



Figure 4.3. Occupation status.

Table 4.3 shows the occupation status of respondents. The largest response group is student, which contains 312 people (73.4%). The rest 5 groups are parttime representing 30 people (7.1%), full time representing 46 people (10.8%), self-employed consists of 17 people (4%) and unemployed contains 20 people (4.7%) of the questionnaire respondents.

4.1.4 Current Income

Table 4.4:

Current Income

	Frequency	Percent (%)
Lower than RM1,000	307	72.2
RM1,001-RM2,000	62	14.6
RM2,001-RM3,000	31	7.3
RM3,001-RM4,000	14	3.3
RM4,000 and above	11	2.6
Total	425	100.0



Figure 4.4. Current income.

Table 4.4 shows the income level of respondents. There are 307 people (72.2%) earn less than RM1,000, which is the largest group of the respondents. Besides, the income level of RM1,001-RM2,000, RM2,001-RM3,000, RM3,001-RM4,000 and above RM4,000 consists of 62 people (14.6%), 31 people (7.3%), 14 people (3.3%) and 11 people (2.6%) respectively.

4.1.5 Period of using E-wallet

Table 4.5:

Period of Using E-wallet

	Frequency	Percent (%)
Never	17	4.0

Less than 1 year	112	26.4
1-2 years	201	47.3
2-3 years	61	14.4
3 years and above	34	8.0
Total	425	100.0



Figure 4.5. Period of using e-wallet.

Table 4.5 illustrates period of respondents using the e-wallet. There are 4% of the respondents who never use e-wallet. The length of time from Covid-19 pandemic until our research date is almost 1-2 years. The user who uses e-wallet less than 1 year and 1-2 years is mostly among the respondents, which are 26.4% and 47.3% respectively. We believe it is because of the Covid-19 pandemic and government incentives given. Besides, the respondents who use e-wallet for 2-3 years and 3 years and above are 14.4% and 8% of the respondents respectively.

4.1.6 Monthly Top-up of E-wallet

Table 4.6:

Monthly Top-up

	Frequency	Percent (%)
Not using E-wallet	26	6.1
Never	43	10.1
RM1-RM100	260	61.2
RM101-RM200	61	14.4
RM201-RM300	14	3.3
RM301 and above	21	4.9
Total	425	100.0



Figure 4.6. Monthly top-up of e-wallet.

Table 4.6 shows the monthly top-up to e-wallet of respondents. There are 26 respondents (6.1%) who are not using e-wallet and do not top-up e-wallet. There are also 43 respondents (10.1%) who never top-up the e-wallet yet still using e-wallet due to government incentive. The largest group is top-up RM1-RM100 monthly, with 260 respondents (61.2%). The group of top-up RM101-RM200 monthly contains 61 peoples (14.2%). The rest of response groups are top-up RM201-RM300 and above RM300 monthly, consists of 14 people (3.3%) and 21 people (4.9%) respectively.

4.1.7 Types of E-wallet Used

Table 4.7:

Types of E-wallet Used

	Frequency	Percent (%)
Boost	140	17.3
TouchnGo	332	41.1
BigPay	33	4.1
GrabPay	160	19.8
Wechat Pay	42	5.2
Alipay	21	2.6
AEON wallet	5	0.6

Favor Pay	0	0.0
Samsung Pay	6	0.7
Others	69	8.5
Total	808	100



Figure 4.7. Types of e-wallet used.

Table 4.7 shows the types of e-wallet used of the respondents were allowed to select multiple types of e-wallet used. The e-wallet that Malaysian young adult frequently use is TouchnGo, with 332 responses (41.1%). The second e-wallet commonly used by respondents is GrabPay which shows 19.8% of the responses, followed by Boost which indicates 17.3%. The e-wallet that Malaysian young adults do not use is Favor Pay, which shows 0 people from the respondents. The other e-wallets are BigPay, Wechat Pay, Alipay, AEON wallet and Samsung Pay, which show 4.1%, 5.2%, 2.6%, 0.6% and 0.7% respectively. There is also other e-wallet used by Malaysian young adult, it shows 8.5% of the respondents.

4.2 Inferential Analysis

Inferential analysis can make a more reasonable estimation by using the sample about the larger population. The data only can be collected from samples in most circumstances, due to the high cost and difficulty to acquire the data from whole population that is required in our research. According to Bhandari (2020), inferential analysis is important for further exploring since descriptive analysis only can be used in summarizing the characteristics of a sample. Therefore, Cronbach's Alpha, Pearson Correlation Analysis and Multiple Regression Analysis will be conducted for the purpose to investigate the relationship between the DV and IVs.

4.2.1 Reliability Analysis – Cronbach's Alpha

Table 4	4.8:
---------	------

Cronbach Alpha Result

Variables	Cronbach's Alpha	No. of Items	Internal Consistency
PEU	0.868	5	Good
PU	0.903	5	Excellent
PPS	0.865	5	Good
GR	0.824	5	Good
HA	0.839	5	Good

Y	0.913	5	Excellent	

Table 4.8 reflects Cronbach's Alpha value between IV and DV. PU and Y which exceeds 0.9, indicating that both variables have the highest reliability and excellence among other variables. Besides, PEU, PPS, GR, and HA fall between 0.8 - 0.9, describing that these variable have a good reliability level. As conclusion, all variables show good and excellent reliability levels, indicating that the entire model is highly reliable and acceptable.

4.2.2 Pearson Correlation Analysis

Table 4.9:

		PEU	PU	PPS	GR	HA	Y
	Pearson Correlation	1	0.670**	0.564**	0.621**	0.313**	0.562**
PEU	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	Ν		425	425	425	425	425
PU	Pearson Correlation		1	0.554**	0.621**	0.425**	0.695**
	Sig. (2-tailed)			0.000	0.000	0.000	0.000
	Ν			425	425	425	425
PPS	Pearson Correlation			1	0.566**	0.360**	0.502**
	Sig. (2-tailed)				0.000	0.000	0.000
	Ν				425	425	425

Pearson Correlation Result
	Pearson Correlation	1	0.537**	0.668**
GR	Sig. (2-tailed)		0.000	0.000
	Ν		425	425
	Pearson Correlation		1	0.616**
HA	Sig. (2-tailed)			0.000
	Ν			425
	Pearson Correlation			1
Y	Sig. (2-tailed)			
	Ν			

According to Frost (2020), he indicated that the stronger the relationship, the correlation coefficient absolute value is greater. When the correlation coefficient value is positive, the value of a variable increases, the value of another variable will increase also. According to Jaadi (2019), it indicated that it is a moderate relationship while the absolute value of the correlation coefficient value falls between 0.5 - 0.7. According to Table 4.9, the DV and IV have a moderate positive relationship. The relationship between Y towards PEU, PU, PPS, GR, and HA are 0.562 (56.2%), 0.695 (69.5%), 0.502 (50.2%), 0.668 (66.8%) and 0.616 (61.6%) respectively, which are all positively related. Besides, the relationship between the DV and IV is significant, since all the P-value is less than the 0.01 significant level.

4.2.3 Multiple Regression Analysis

Table 4.10:

Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of Estimate	Durbin-
					Watson
1	0.802	0.643	0.639	0.41595	1.802

Dependent Variable: Y

Predictors: (Constant), HA, PEU, PPS, PU, GR

Table 4.11:

ANOVA Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	130.824	5	26.165	151.228	0.000 ^b
	Residual	72.493	419	0.173		
	Total	203.318	424			

a. Dependent Variable: Y

b. Predictors: (Constant), HA, PEU, PPS, PU, GR

Table 4.12:

Coefficient

Model	Unstandardized	Standardized			
	Coefficient	Coefficients			
	В	Std. Error	Beta	Т	Sig.
Constant	0.143	0.154		0.927	0.355
PEU	0.074	0.045	0.072	1.669	0.096

PU	0.375	0.044	0.368	8.485	0.000
PPS	0.021	0.035	0.023	0.613	0.540
GR	0.23	0.048	0.213	4.802	0.000
НА	0.28	0.031	0.314	8.912	0.000

Dependent Variable: Y

The result can be interpreted as:

- There are 64.3% of the variation in the predicted Y is explained by PEU, PU, PPS, GR, and HA.
- There are 63.9% of the variation in the predicted Y is explained by PEU, PU, PPS, GR, and HA after the degree of freedom taking into account.
- 3. The difference between some of the means are statistically significant, given the p-value of ANOVA is lower than 0.1 significant level.
- 4. PEU, PU, GR and HA are statistically significant as their p-value (0.096, 0,0,0) are lower than significant level (0.1).
- 5. PPS is statistically insignificant because the p-value (0.54) is higher than the 0.01 significant level.

Based on the research, it showed that PEU, PU, PPS, GR, and HA are the IVs and Y is the DV. Besides, the ANOVA table shows that the F-statistic is significant; the value of F test is 151.228. The result shows a good descriptor of the relationship between the dependent variable and predictor variables. Hence, all the IV is significant to explain the intention to adopt e-wallet.

The correlation coefficient between the DV and IVs taken together is the R value. The R value is 0.802. This reveals a positive correlation between DV and IVs. The R square is 0.643 while the adjusted R square is 0.639. Hence, it

indicates that there are 64.3% of the data fit the regression model. As we have two new variables in our research, we selected the significant level at 10% in order to prevent any losses from incorrect decision and minimize the expected losses.

The result shows that PEU, PU, GR and HA are statistically significant while PPS is statistically insignificant to the Y. Among the predictor variables, PU performed the highest variation of the DV among all predictor variables with the Beta value of 0.368. The second highest contribution is HA with the Beta value of 0.314. The third goes to GR with the Beta values of 0.213, followed by PEU which has the Beta values of 0.072. While the lowest contribution is PPS, its Beta value is 0.023.

4.3 Concluding Remark

We embrace descriptive analysis, scale measurement and inferential analyses. For descriptive analysis, we distributed the questionnaires that we designed for the purpose of collecting data to identify and analyze the demographic characteristic, charts, tables and the mean of sample. For scale measurement, we are able to identify the Cronbach's Alpha of every variable. While for inferential measurement, we used to identify the relationship between each variable and other variable.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Discussion of Major Findings

Table 5.1:

Table of Hypothesis Statement Acceptance

Hypotheses	Result	Accepted/Rejected
H 1:	$\beta = 0.074$	Accepted
The relationship between PEU and Y is	P = 0.096	
significant.	(P < 0.1)	
H 2:	$\beta = 0.375$	Accepted
The relationship between PU and Y is	P = 0.00	
significant.	(P < 0.1)	
Н 3:	$\beta = 0.021$	Rejected
The relationship between PPS and Y is	P = 0.54	
insignificant.	(P > 0.1)	
H 4:	$\beta = 0.230$	Accepted
The relationship between GR and Y is	P = 0.00	
significant.	(P < 0.1)	
Н 5:	$\beta = 0.280$	Accepted
	P = 0.00	

The relationship between HA and Y is (P < 0.1) significant.

5.0.1 Relationship between PEU and Y

As stated by the result, we accept H1. There is a significant positive relationship between PEU and Y. This indicates that when the e-wallet is easy to use, the intention of Malaysian young adult to adopt e-wallet will increase.

According to Shankar and Datta (2018), they found that PEU has a positive clout on enactment of mobile wallet in India. People will only choose to adopt new method when the new method is better to compare to other methods. Besides, Amin (2009) mentioned that people are willing to adopt e-wallet when it is easy to use. Trivedi (2016) also mentioned that PEU has significant impact on the attitude and behavioural intention on adopt the e-wallet.

5.0.2 Relationship between PU and Y

According the result, we accept H2 since the p-value is lower than 0.1 which enumerate that there is a significant positive relationship between PU and Y. When perceived of usefulness is high, the intention of Malaysian young adult to adopt e-wallet will be high. According to Amin (2009), he found that PU is significantly associated with usage intentions. The intention to adopt e-wallet will be greater when it is useful. Besides, Trivedi (2016) also stated that PU will influence the usage intention as e-wallet makes consumer feels easy and fasten the transaction.

5.0.3 Relationship between PPS and Y

As stated on the result, we reject H3. There is a positive and insignificant relationship between PPS and Y. The value of 0.021 indicates that PPS is slightly correlated to Y. Although there is a slight relationship between PPS and Y, but it is less influence in affecting the intention to adopt e-wallet amid young adult. This proves that PPS is the least contribution to Y.

There are few journals claimed that there is a positive relationship between PPS and intention of adopting e-wallet. These journals include Chellappa (2007), Matemba and Li (2018), Singh (2019), Mombeuil (2020), and Karim et al. (2020). However, Chern et al. (2018) found that security has no sense to the adoption of e-wallet and shall not be the major concern of the user. They found that the consumer has a low level of concern toward the security of e-wallet instead of usefulness. Besides, Chua et al. (2020) also indicated that security do not have significant relationship with the behavioural to accept the mobile wallet. The reason of respondents do not care about the privacy and security was stated in Chern et al. (2018). It is because the user start concern about the financial institution take step to solve the issue regarding security. Besides, the regulation set by the government will also increase the confidence of the respondents to use e-wallets. Furthermore, the regular warning will be provided to the users by financial institution, it also enhance the confidence of the users

to use the e-wallets. Moreover, the privacy and security of the e-wallet is no longer to become the concern of consumers to use e-wallets.

This result shows that Malaysian young adults do not care about the privacy and security in adopting e-wallet during Covid-19 pandemic. This situation happens may due to Malaysian young adult still need to use e-wallet for transaction, which makes them overlook the privacy and security level of ewallets. The first reason is that MCO in Malaysia forces them to use e-wallet for online purchases as they need to stay at home. The second reason is they care about their healthy due to coronavirus has the opportunity to spread through cash; this force them to adopt e-wallet under all conditions. As the saying goes, different country may have a different opinion on e-wallet based on their culture, environment, income status and habit. Hence, it might have some identical between previous study. As our study is more focus on Malaysian young adult and they think that PPS is not vital during this Covid-19 pandemic. This may because Malaysian young adults are more concern on the health awareness during this pandemic of Covid-19 rather than privacy and security.

5.0.4 Relationship between GR and Y

As claimed by the result, H4 is accepted since the p-value is lower than 0.1 which verify that there is a significant positive relationship between GR and Y. When government promotes the e -wallet, the intention of Malaysian young adult to adopt e-wallet will be high.

Haderi (2014) found out that government encouragement has a positive effect to the behaviour intention to use the information technology. Besides, Aji et al. (2020) also stated that government support is positively related with the e-wallet usage as trust of consumer toward government may affect the consumer's characteristic and lifestyle.

This result shows that the effort of Malaysian government to encourage e-wallet adoption is successful. The incentives such as providing free RM30 of e-Tunai and RM50 to MYSejahtera user via e-wallet can increase the adaption of e-wallet among Malaysian young adult. According to the questionnaire result in this research, we found that there are still some of the users do not top up, but they select to use e-wallet as government provided free money to them through e-wallet. Hence, it presents that GR is vital and has a significant relationship on Y.

5.0.5 Relationship between HA and Y

As claimed by the result, H5 is accepted since the p-value is lower than 0.1 which stipulates that there is a significant positive relationship between HA and Y. When Malaysian young adults are more concern and aware on their health during Covid-19 pandemic, the intention of Malaysian young adult to adopt e-wallet will be high.

According to Aji et al. (2020), it mentioned that if the consumer is more aware about their health during the pandemic of Covid-19, the usage of e-wallet will be higher in order to prevent themselves from the infection of coronavirus as ewallet may lower the risk of transmitting coronavirus. The awareness of Malaysian young adult to their health encourage them to adopt e-wallet as e-wallet can help in reducing cash usage and virus spreading. The result of e-wallet usage period can directly show the increase in e-wallet before and during the pandemic. The Covid-19 pandemic has just occurred in Malaysia for over a year. First, we can clarify a total of 61 respondents has been used the e-wallet before the pandemic as they have used e-wallet for 2-3 years. However, there are 313 respondents who only adopted e-wallet for less than two years. This indirectly shows that young adult only adopts e-wallet during the Covid-19 pandemic. There is an obvious increase in adoption of e-wallet before and during the pandemic.

5.1 Implications of the Study

The findings of this research are significant to e-wallet companies, government and academia. It allows them to have a deeper understanding about the determinants of factors that significantly influence the intention of young adult to adopt e-wallet during the Covid-19 pandemic in Malaysia. Hence, policies, marketing strategies, further researches can be developed in more effective ways.

First, our study provides some implications to e-wallet companies. The relationship between PEU and Y is significant. This indicates that if the e-wallet is easy to use, more Malaysian young adults will adopt the e-wallet as their payment method. This result provides an indicator to the e-wallet companies to simplify their e-wallet applications. This is because most people will adopt the e-wallet if the payment method is simple. Hence, e-wallet companies will attract more new users while their applications are easy to use. Next, PU is one of the factors that influence Y. The more useful the e-wallet, the more likely Malaysian young adults adopt e-wallet. Thus, this study provides information to e-wallet companies to further improve the e-wallet applications. Since usefulness is one of the determinants that influence Malaysian young adult in adopting e-wallet, so e-wallet companies can enhance the usefulness such as accessibility, convenience and so on to gain and remain more users.

Next, we look into the implication to government. This research indicates that GR is important in promoting the usage of e-wallet. Hence, government can encourage Malaysian to use e-wallet by providing some incentives during the Covid-19 pandemic. For example, government can provide an incentive such as RM30 for the new users. Besides, government can also provide some e-wallet vouchers to e-wallet users from time to time to promote the usage. Government is also responsible in ensuring e-wallet server facilities in Malaysia are comprehensive to provide e-wallet users a better experience. HA also has a significant effect on Y. Most people reluctant to take risk of making payment using cash and they worry about being infected by coronavirus when using physical cash. Therefore, e-wallet companies can promote the sense of using e-wallet throughout the Covid-19 pandemic to prevent the physical interaction between buyer and seller, thus persuade more Malaysian to adopt e-wallet.

Lastly, there are some implications to academia. Covid-19 is a recently discovered coronavirus-caused infectious disease, so it is lack of previous studies. Previously, only a few researchers used GR and HA to examine the influence on e-wallet intention. Thus, this research provides information to academia that GR and HA are the factors that affect the intention of young adult to adopt e-wallet during the Covid-19 pandemic in Malaysia. This allows future researchers to further explore and discuss the influence of GR and HA towards e-wallet intention.

5.2 Limitations of the Study

There are some limitations in this research. The first limitation of this study is time limitation. Due to time limitation, we can only include five IVs, which are PEU, PU, PPS, GR and HA when examining the relationship between Y and the five IVs. Besides, due to the time limitation, our research is more focus to indicate the relationship between IVs and DV and less concern about other effect which can also affect the variables.

Furthermore, in the literature review part, only less studies investigated the influence of Covid-19 to the usage of e-wallet. According to WHO, using e-wallet will have the significant effect to decrease the infection of Covid-19. As Covid-19 is worsen, the people will more concern about their health. The way can prevent of the infection of Covid-19 will be adopted by people.

In addition, there are less research indicate the relationship of HA and GR toward the adoption of e-wallet. It is because HA and GR are the new variables for the recent research environment.

Besides, this study only focuses on the age group of 18-35 years old (80's and 90's generation). When the future researchers need to examine other age groups such as 36-80 years old, this study may not be suitable for them to adopt. Furthermore, when the researchers need to inspect the intention of adopting e-wallet, they are not only focus for the 18-35 years old, so the views of 80's and 90's generation are not representative of all population. The reason for not choosing older generation is because the distribution method is via Google Forms. This is because only a few older generations can do survey online. Lastly, more than three quarters of our respondents are formed by students. It is because our target population is 18-35 years old population and most

of them are still pursuing study. This represents that our study is less taking account the opinion from working young adult.

5.3 Recommendation for Future Research

Some recommendations are needed for future researchers. First, we suggest future researchers to overcome time limitation and include more variables as this study does not include more IVs that may affect Y. Our result shows that PPS is insignificant to the adoption of e-wallet usage among Malaysian young adult. PPS may have different result if those missing IVs are admitted in the future research. They may also study the mediation and moderation effect between variables.

Next, we recommend future researchers to have a deep exploration toward the relationship between e-wallet and the Covid-19 pandemic. As the pandemic happened and seriously affected the global development, therefore researchers need to explore further in this area to reinforce the factors that can increase the e-wallet adoption during Covid-19 pandemic to help in reduce or eliminating the pandemic. The more they explore, the stronger and more definitive evidence that some factors can certainly bring a positive effect toward e-wallet adoption during pandemic.

Furthermore, as HA and GR are quite new for the research due to only little journals are including these two variables as the factor of affecting the adoption of e-wallet, therefore our study only focuses on the relationship between the two variables and Y. We encourage future researchers to do further study of these components toward advanced analysis such as identifying the moderation and mediation effect between the two variables and Y.

Moreover, our study only focuses Malaysian young adult who aged 18-35 years old and most respondents are students. Our result is only representing the views of young generation to adopt e-wallet, but it could not reflect the views of middle aged (36-55 years old) and elder (56-80 years old). We recommend future researchers to consider these two groups during their research. Future researchers should these two groups as different generation have different opinion and adoption level to technology to obtain more accurate and realistic results. These two groups may less willing to adopt e-wallet because the process of using e-wallet may be more difficult to them. Furthermore, as most respondents in our study are students, the status of young Malaysians is not accurately stated, which leads to biased results. This is because Malaysian young adult is made up not only of students, but also workers. Therefore, we recommend that future researchers collect on average the responses of students, employees, employers, selfemployed persons, and other identities to obtain more realistic statistics.

REFERENCES

- Aji, H. M., Berakon, I., & Husin, M. M. (2020). COVIDS-19 and e-wallet usage intention: A multigroup analysis between Indonesia and Malaysia. Cogent Business & Management, 7(1). doi:10.1080/23311975.2020.1804181
- AmBank Group. (2020). AmBank collaborates with WeChat Pay MY. Retrieved from https://www.ambankgroup.com/eng/Announcements/Pages/AmBankWeChatP ay.aspx
- Amin, H. (2009, June). Mobile Wallet Acceptance in Sabah: An Empirical Analysis. Labuan Bulletin of International Business & Finance, 7, 34-52.
- Aydin, G. (2016, March). Adoption of mobile payment systems: a study on mobile wallets. *Pressacademia*, 5(1), 73-92. doi:10.17261/Pressacademia.2016116555
- Bank Negara Malaysia. (2020a). *Lists of Regulates*. Retrieved from https://www.bnm.gov.my/index.php?ch=ps&pg=ps_regulatees
- BankNegaraMalaysia. (2020b).ElectronicPayments:VolumeandValueofTransactions.Retrievedfromhttps://www.bnm.gov.my/index.php?ch=34&pg=163&ac=2&bb=file
- Bank Negara Malaysia. (2020c). Number of Cards and Users of Payment Instruments. Retrieved from https://www.bnm.gov.my/documents/20124/57659/03_cards.pdf
- Berg, R. G. (2021). ANOVA Super Simple Introduction. Retrieved from https://www.spss-tutorials.com/anova-what-is-it/
- Best, R. d. (2021). *Number of users of selected global mobile payment platforms 2017*. Retrieved from https://www.statista.com/statistics/744944/mobile-payment-platforms-users/#statisticContainer
- Bhandari, P. (2020). *An introduction to inferential statistics*. Retrieved from https://www.scribbr.com/statistics/inferential-statistics/

- Birruntha, S., & Nharul, M. A. (2020). *E-Wallet adoption on the rise during MCO*. Retrieved from https://themalaysianreserve.com/2020/05/21/e-wallet-adoption-on-the-rise-during-mco/
- Brown, D. (2020). Can cash carry coronavirus? World Health Organization says use digital payments when possible. Retrieved from https://www.usatoday.com/story/money/2020/03/ 06/coronavirus-covid-19concerns-over-using-cash /4973975002/
- Browne, R. H. (1995). On the use of a pilot sample for sample size determination. *Statistics in Medicine*, 14(17), 1933-1940. doi:10.1002/sim.4780141709
- Buchholz, K. (2020). *China's Mobile Payment Adoption Beats All Others*. Retrieved from https://www.statista.com/chart/17909/pos-mobile-payment-user-penetration-rates/
- Canadian Unitarian Council. (2021). Young Adults (18 35). Retrieved from https://cuc.ca/community/young-adults/
- Chain, N. (2019). The Constant Evolution of Digital Wallets: What It Means In Shaping The Future. Retrieved from https://medium.com/@nexuschain/the-constantevolution-of-digital-wallets-what-it-means-in-shaping-the-futurebf7017d81fc1
- Chawla, D., & Joshi, H. (2020). Role of Mediator in Examining the Influence of Antecedents of Mobile Wallet Adoption on Attitude and Intention.
- Chellappa, R. K. (2007). Consumers' Trust in Electronic Commerce Transactions : The Role of Perceived Privacy and Perceived Security.
- Chern, Y. X., Kong, S. Y., Lee, V. A., Lim, S. Y., & Ong, C. P. (2018). Moving into cashless society: Factors Affecting Adoption of E-wallet. 1-154.
- Chua, C. J., Lim, C. S., & Aye, A. K. (2020). Consumers' Behavioural Intention to Accept of the Mobile Wallet in Malaysia. *Journal of Southwest Jiaotong University*, 55(1), 460. doi:10.35741/issn.0258-2724.55.1.3

- Church of the Nazarene USA/Canada Region. (2020). What is a Young Adult? Retrieved from https://www.usacanadaregion.org/sites/usacanadaregion.org/files/PDF/young %20adult-2.pdf
- Constantinescu, R. (2019). E-wallets, Mobile Wallets, and P2P Payments: The Evolution and Adoption of E-wallets. *The Paypers*.
- Covid-19 (coronavirus) impact on payments and fintech. (2020). Retrieved from https://www.mercury-processing.com/industry-news/covid-19-coronavirus-impact-on-payments-and-fintech/
- Covid-19 outbreak steepens adoption curve of e-wallets in Malaysia. (2020). Retrieved from https://www.thestar.com.my/news/regional/2020/04/28/covid-19outbreak-steepens-adoption-curve-of-e-wallets-in-malaysia
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-34. doi:10.2307/249008
- *Definition of 'E-wallets'.* (2020). Retrieved from https://economictimes.indiatimes.com/definition/e-wallets
- Department of Statistics Malaysia. (2020). Current Population Estimates, Malaysia, 2020. Retrieved from https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=155& bul_id=OVByWjg5YkQ3MWFZRTN5bDJiaEVhZz09&menu_id=L0pheU43 NWJwRWVSZkIWdzQ4TlhUUT09
- *E-wallet use increases in Malaysia during movement control order*. (2020). Retrieved from https://thepaypers.com/mobile-payments/e-wallet-use-increases-in-malaysia-during-movement-control-order--1242065#

- Fenchi Melissa, C., Chamroeun, K., & Sivmey, T. (2018, December 21-22). Consumer Adoption of E-wallets: A Study of Millennials at the Institute of Foreign Languages, Cambodia. Conference proceedings of the 21st Asia-Pacific Conference on Global Business, Economics, Finance (AP18Taiwan Conference) Taipei-Taiwan. Retrieved from http://globalbizresearch.org/Taiwan_Conference_Dec_2018_2/docs/doc/2.%2 0Global%20Business,%20Economics%20&%20Sustainability/W812_Abstrac t.pdf
- Frost, J. (2020). Multicollinearity in Regression Analysis: Problems, Detection, and Solutions. Retrieved from https://statisticsbyjim.com/regression/multicollinearity-in-regression-analysis/
- Gazi, F. (2020). *Here's How To Claim Your Free RM30 From Boost, Grab, And TNG eWallet*. Retrieved from https://www.imoney.my/articles/rm30-e-tunai-rakyat-ewallet-credit
- Good, P. I., & Lunneborg, C. E. (2006). Limitations Of The Analysis Of Variance. Journal of Modern Applied Statistical Methods, 5(1), 41-43. doi:10.22237/jmasm/1146456240
- Haderi, S. M. (2014). The influences of Government Support in Accepting the Information Technology in Public Organization Culture. *International Journal of Business and Social Science*, 5(5), 118-124.
- Hasan, M. K., Ismail, A. R., & Islam, M. F. (2017). Tourist risk perceptions and revisit intention: A critical review of literature. *Cogent Business and Management*, 4(1), 1-21. doi:10.1080/23311975.2017. 1412874
- In, J. (2017, December). Introduction of a pilot study. Korean Journal of Anesthesiology, 70(6), 601-605. doi:10.4097/kjae.2017.70.6.601
- Intarot, P., & Beokhaimook, C. (2018). Influencing Factor in e-wallet Acceptance and Use. *International Journal of Business and Administrative Studies*, 167-175.
- Jaadi, Z. (2019). Everything you need to know about interpreting correlations. Retrieved from https://towardsdatascience.com/eveything-you-need-to-knowabout-interpreting-correlations-2c485841c0b8

- Karim, M. W., Haque, A., Ulfy, M. A., & Hossain, A. (2020). Factors Influencing the Use of E-wallet as a Payment Method among Malaysian Young Adults. *Journal of International Business and Management*, 01-12.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 607-610.
- Liew, J. M. (2019). A Study of Factors Influencing Customers' Acceptance of Mobile Payments in Malaysia.
- Malaysians on Malaysia Q1 2020: Malaysian Consumer Confidence Dampened by COVID-19 Pandemic. (2020). Retrieved from https://www.oppotus.com/malaysian-consumer-confidence-q1-2020dampened-covid19/
- Matemba, E. D., & Li, G. (2018). Consumers' willingness to adopt and use WeChat wallet: An empirical study in South Africa. *Technology in Society*, 55-68.
- Maulana, A. (2020). You can only redeem your free RM50 Ewallet credits after downloading MySejahtera app. Retrieved from https://pokde.net/system/software/mobile-application/rm50-ewallet-creditsmysejahtera
- McCombes, S. (2020a). An introduction to sampling methods. Retrieved from https://www.scribbr.com/methodology/sampling-methods/
- McCombes, S. (2020b). *Descriptive Research*. Retrieved from https://www.scribbr.com/methodology/descriptive-research/
- McLeod, S. (2020). *Correlation Definitions, Examples & Interpretation*. Retrieved from https://www.simplypsychology.org/correlation.html
- Middleton, F. (2019). *Reliability vs validity: what's the difference?* Retrieved from https://www.scribbr.com/methodology/reliability-vs-validity/

- Mombeuil, C. (2020, July). An exploratory investigation of factors affecting and best predicting the renewed adoption of mobile wallets. *Journal of Retailing and Consumer Services*, 55, 102-127. doi:10.1016/j.jretconser.2020.102127
- Mondego, D., Gide, E., & Chaudhry, G. (2018). The Effect of Personal Factors on Consumers' Trust in Mobile Payment Systems in Australia. 2018 5th Asia-Pacific World Congress on Computer Science and Engineering (APWC on CSE), 156-163.
- Muldowney, S. (2020). Cashless payments spike in fight against COVID-19. Retrieved from https://www.intheblack.com/articles/2020/06/01/cashless-paymentsspike-in-fight-against-covid19
- *Navigating the E-Wallet Landscape of Malaysia*. (2019). Retrieved from https://www.oppotus.com/e-wallet-landscape-malaysia/
- Nihtila, A., West, N., Lussi, A., Bouchard, P., Ottolenghi, L., Senekola, E., . . . Bourgeois, D. (2016). Oral Health Behavior and Lifestyle Factors among Overweight and Non-Overweight Young Adults in Europe: A Cross-Sectional Questionnaire Study. *Healthcare*, 4(2), 21. doi:10.3390/healthcare4020021
- On the Evolution of E-Commerce and the Rise of E-Wallets. (2020). Retrieved from http://blog.unibulmerchantservices.com/on-the-evolution-of-e-commerce-and-the-rise-of-e-wallets/
- Petry, N. M. (2002, Feb 1). A Comparison of Young, Middle-Aged, and Older Adult Treatment-Seeking Pathological Gamblers. *The Gerontologist*, 42(1), 92-99. doi:10.1093/geront/42.1.92
- PYMNTS. (2020). *Malaysia Promotes Cashless Society with eWallet Incentive Award*. Retrieved from https://www.pymnts.com/news/international/2020/malaysiapromotes-cashless-society-with-ewallet-incentive-award/
- Reliability Analysis. (n.d.). Retrieved from https://www.ibm.com/support/knowledgecenter/en/SSLVMB_25.0.0/statistics _____mainhelp_ddita/spss/base/idh_reli.html

- Roy, D., Tripathy, S., Kar, S. K., Sharma, N., Verma, S. K., & Kaushal, V. (2020, June). Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian Journal of Psychiatry*, 51, 102083. doi:10.1016/j.ajp.2020.102083
- Sachdev, N. (2019). The evolution of ewallets: history, benefits and withdrawals. Retrieved from https://sociable.co/mobile/evolution-ewallets-history-benefitswithdrawals/#:~:text=The%20form%20of%20digital%20payments,is%20beli eved%20as%20the%20origin
- Sarika, P., & Vasantha, S. (2019). Impact of mobile wallets on cashless transaction. International Journal of Recent Technology and Engineering (IJRTE), 1164-1171.
- Schober, P., Boer, C., & Schwarte, L. A. (2018, May). Correlation Coefficients: Appropriate Use and Interpretation. Anesthesia & Analgesia, 126(5), 1763-1768. doi:10.1213/ANE.00000000002864
- Senthilnathan, S. (2019, July). Usefulness of Correlation Analysis. SSRN Electronic Journal. doi:10.2139/ssrn.3416918
- Shankar, A., & Datta, B. (2018). Factors Affecting Mobile Payment Adoption Intention: An Indian Perspective. 19(3), 72-89. doi:10.1177/0972150918757870
- Sharma, S. (2019). Descriptive Statistics. *Descriptive Statistics and Factorial Design*, 1-14.
- Singh, G. (2019). A Review of Factors Affecting Digital Payments and Adoption Behaviour for Mobile e-wallets. *International Journal of Research in Management & Business Studies*, 89-96.
- Singh, N., Sinha, N., & Liebana-Cabanillaw, F. J. (2020). Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. *International Journal of Information Management*, 191-205.

- Statista Research Department. (2021). COVID-19 impact on digital payment app usage in India 2020. Retrieved from https://www.statista.com/statistics/1111087/india-coronavirus-impact-ondigital-payment-app-usage/#statisticContainer
- Statistics Solutions. (2021). *Table of Critical Values: Pearson Correlation*. Retrieved from https://www.statisticssolutions.com/table-of-critical-values-pearson-correlation/
- Stephanie. (2014, Dec 8). Cronbach's Alpha: Simple Definition, Use and Interpretation. Retrieved from https://www.statisticshowto.com/cronbachs-alpha-spss/
- Surendran, P. (2012). Technology Acceptance Model: A Survey of Literature. 2(4), 175-177. doi:10.18533/ijbsr.v2i4.161
- Tan, J. (2020). Mastercard: Malaysia Has Highest Mobile Wallet Usage in Southeast Asia. Retrieved from https://ringgitplus.com/en/blog/e-wallet/mastercardmalaysia-has-highest-mobile-wallet-usage-in-southeast-asia.html
- Tan, K. O., Aziz, F. b., Ong, C. H., Goh, C. F., Lim, K. Y., Saadon, M. S., & Choi, S. L. (2020). E-Wallet Acceptance among Undergraduates in Malaysia. *Test Engineering & Management*, 12990-12998.
- Tan, R. (2019). *Leaders in e-wallet emerge*. Retrieved from https://www.thestar.com.my/business/business-news/2019/12/02/leaders-in-e-wallet-emerge
- Teoh, M. T., Hoo, C. Y., & Lee, T. H. (2020). E-wallet Adoption: A Case in Malaysia. International Journal of Research in Commerce and Management Studies, 2(2), ISSN 2582-2292.
- TouchnGo eWallet. (2019). *TNG digital partners lazasa allowing e-wallet payment on the platform*. Retrieved from https://www.tngdigital.com.my/news-list/207tng-digital-partners-lazada-allowing-e-wallet-payment-on-the-platform
- Trivedi, J. P. (2016). Factors Determining the Acceptance of E Wallets. *International Journal of Applied Marketing and Management.*, 1(2), 42-53.

- Trochim, W. M. (2020). Research Methods Knowledge Base. Sydney, Australia: Conjoint.ly.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425-428.

World Health Organization. (2020). Coronavirus.

- Yap, C. M., & Ng, B. A. (2019). Factors Influencing Consumer's Perceived Usefulness of M-Wallet in Klang Valley, Malaysia. *Review of Integrative Business and Economics Research*, 8(4), ISSN: 2304-1013.
- Yeoh, A. (2020). *ePenjana: How to redeem your RM50 e-wallet credit from July 31*. Retrieved from https://www.thestar.com.my/tech/technews/2020/07/30/epenjana-how-to-redeem-your-rm50-e-wallet-credit-fromjuly-31
- Your MCO Buddy. (2020). Retrieved from https://www.tngdigital.com.my/your-mcobuddy

APPENDICES

Appendix 3.1:

Kreicie	and	Morgan	Table
m cjew	ana	morgan	Indic

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361

110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384
				1	

Note. N is population size. S is sample size.

Source: Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 607-610.

Appendix 3.2:

		Total PEU
PEU1	Pearson Correlation	0.876**
	Sig. (2-tailed)	0.000
	Ν	50
PEU2	Pearson Correlation	0.866**
	Sig. (2-tailed)	0.000
	Ν	50
PEU3	Pearson Correlation	0.864**
	Sig. (2-tailed)	0.000
	Ν	50
PEU4	Pearson Correlation	0.817**
	Sig. (2-tailed)	0.000
	Ν	50
PEU5	Pearson Correlation	0.750**
	Sig. (2-tailed)	0.000
	Ν	50

Partial Result of Pearson Correlation (PEU, PU, PPS, GR, HA, Y)

		Total PU
PU1	Pearson Correlation	0.828**
	Sig. (2-tailed)	0.000
	Ν	50
PU2	Pearson Correlation	0.836**
	Sig. (2-tailed)	0.000
	Ν	50
PU3	Pearson Correlation	0.749**
	Sig. (2-tailed)	0.000
	Ν	50
PU4	Pearson Correlation	0.830**
	Sig. (2-tailed)	0.000
	Ν	50
PU5	Pearson Correlation	0.777**
	Sig. (2-tailed)	0.000
	Ν	50

		Total PPS
PPS1	Pearson Correlation	0.621**
	Sig. (2-tailed)	0.000
	Ν	50
PPS2	Pearson Correlation	0.874**
	Sig. (2-tailed)	0.000
	Ν	50
PPS3	Pearson Correlation	0.832**
	Sig. (2-tailed)	0.000
	Ν	50
PPS4	Pearson Correlation	0.766**
	Sig. (2-tailed)	0.000
	Ν	50
PPS5	Pearson Correlation	0.722**
	Sig. (2-tailed)	0.000
	Ν	50

		Total GR
GR1	Pearson Correlation	0.668**
	Sig. (2-tailed)	0.000
	Ν	50
GR2	Pearson Correlation	0.778**
	Sig. (2-tailed)	0.000
	Ν	50
GR3	Pearson Correlation	0.855**
	Sig. (2-tailed)	0.000
	Ν	50
GR4	Pearson Correlation	0.750**
	Sig. (2-tailed)	0.000
	Ν	50
GR5	Pearson Correlation	0.842**
	Sig. (2-tailed)	0.000
	Ν	50

		Total HA
HA1	Pearson Correlation	0.797**
	Sig. (2-tailed)	0.000
	Ν	50
HA2	Pearson Correlation	0.819**
	Sig. (2-tailed)	0.000
	Ν	50
HA3	Pearson Correlation	0.805**
	Sig. (2-tailed)	0.000
	Ν	50
HA4	Pearson Correlation	0.632**
	Sig. (2-tailed)	0.000
	Ν	50
HA5	Pearson Correlation	0.543**
	Sig. (2-tailed)	0.000
	Ν	50

		Total Y
Y1	Pearson Correlation	0.811**
	Sig. (2-tailed)	0.000
	Ν	50
Y2	Pearson Correlation	0.850**
	Sig. (2-tailed)	0.000
	Ν	50
Y3	Pearson Correlation	0.899**
	Sig. (2-tailed)	0.000
	Ν	50
Y4	Pearson Correlation	0.754**
	Sig. (2-tailed)	0.000
	Ν	50
Y5	Pearson Correlation	0.741**
	Sig. (2-tailed)	0.000
	Ν	50

Appendix 3.3:

<u>N</u>	<u>0.1</u>	<u>0.05</u>	<u>0.01</u>
1	0.988	0.997	0.999
2	0.900	0.950	0.990
3	0.805	0.878	0.959
4	0.729	0.811	0.917
5	0.669	0.754	0.875
6	0.621	0.707	0.834
7	0.584	0.666	0.798
8	0.549	0.632	0.765
9	0.521	0.602	0.735
10	0.497	0.576	0.708
11	0.476	0.553	0.684
12	0.458	0.532	0.661
13	0.441	0.514	0.641
14	0.426	0.497	0.623
15	0.412	0.482	0.606
16	0.400	0.468	0.590
17	0.389	0.456	0.575
18	0.378	0.444	0.561
19	0.369	0.433	0.549
20	0.360	0.423	0.537

Pearson Correlation Critical Value Table

21	0.352	0.413	0.526
22	0.344	0.404	0.515
23	0.337	0.396	0.505
24	0.330	0.388	0.496
25	0.323	0.381	0.487
26	0.317	0.374	0.479
27	0.311	0.367	0.471
28	0.306	0.361	0.463
29	0.301	0.355	0.456
30	0.296	0.349	0.449
35	0.275	0.325	0.418
40	0.257	0.304	0.393
45	0.243	0.288	0.372
50	0.231	0.273	0.354
60	0.211	0.250	0.325
70	0.195	0.232	0.303
80	0.183	0.217	0.283
90	0.173	0.205	0.267
100	0.164	0.195	0.254
150	0.134	0.159	0.208
300	0.095	0.113	0.148

Note. 2-tailed. Degree of freedom = N-2

Source: Statistics Solutions (2021). Table of Critical Values: Pearson Correlation.

Appendix 3.4: Survey Questionnaire

RESEARCH TOPIC:

The Intention of Young Adult to Adopt E-wallet During the Covid-19 Pandemic in Malaysia

Hi! We are Banking and Finance students from the Faculty of Business and Finance in UTAR. Currently, we are progressing our Final Year Project and we need your help. We are proposing to develop this questionnaire to study possible factors that influence the intention to adopt e-wallet during the COVID-19 pandemic in Malaysia.

We would appreciate it if you could take some time to fill out this questionnaire. Thank you!

Instruction: There are two sections in this questionnaire. Please tick the options that suit your situation.

Section A – Demographic Data

1. What is your gender?

Male	
Female	

3. What is your highest education?

Primary School	
Secondary School	

2. What is your current age?

18 - 35 years old

4. What is your current working

status?

Students

College	
Undergraduate	
Postgraduate	
Master	
PhD	

Part-time	
Full-time	
Self-employed	
Retired	
Unemployed	

5. How much is your current income?

Below RM1,000	
RM1,001 – RM 2,000	
RM2,001 – RM3,000	
RM3,001 - RM4,000	
Above RM4,000	

Never

Less than 1 year

1-2 years

2-3 years

Above 3 years

6. Do you use e-wallet?

Y	es	
N	0	

7. How long have you used e-wallet? 8. How much do you top-up for e-

wallet monthly?

Never top-up	
RM1 - RM100	
RM101 - RM200	
RM201 - RM300	
Above RM300	

9. Which e-wallet do you usually use? (can choose more than one)

Boost	
Touch'n Go	
BigPay	
GrabPay	
WeChat Pay	
Alipay	

AEON wallet	
Favor Pay	
Samsung Pay	
Others	

Section B: Independent Variables

	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
PEU1	It is easy for me to use an e-wallet.	1	2	3	4	5
PEU2	I rarely feel confused while using an e-wallet.	1	2	3	4	5
PEU3	The process of using an e-wallet in the transaction is clear and understandable.	1	2	3	4	5
PEU4	I rarely make mistakes when using an e-wallet.	1	2	3	4	5
PEU5	I rarely feel frustrated while using an e-wallet.	1	2	3	4	5

(i) Perceived Ease of Use

(ii) Perceived Usefulness

	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
PU1	Using an e-wallet as payment method is less time consuming.	1	2	3	4	5
PU2	E-wallet is useful to me in the buying process.	1	2	3	4	5
PU3	E-wallet allows me to buy easily.	1	2	3	4	5
PU4	Using e-wallet can increase my effectiveness in the payment process.	1	2	3	4	5
PU5	Using e-wallet would increase my performance in the payment process.	1	2	3	4	5
	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
------	--	----------------------	----------	---------	-------	-------------------
PPS1	I am aware of the information that I provided to the company during a transaction.	1	2	3	4	5
PPS2	I believe that this store will not leak out my information without my permission during the transaction.	1	2	3	4	5
PPS3	I feel confidence in the security when I make the e-wallet transaction with the store.	1	2	3	4	5
PPS4	I believe that the private information I provide during e-wallet transaction with this store will only reach this store.	1	2	3	4	5
PPS5	I believe the information I provide during e-wallet transaction with this store will not be exploit by inappropriate parties.	1	2	3	4	5

(iii) Perceived Privacy and Security

(iv) Government Roles

	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
GR1	The government encourage using the e-wallet to conduct transaction during Covid-19 pandemic	1	2	3	4	5
GR2	The government controls and supervises the operation of e-wallet payment during the Covid-19 pandemic.	1	2	3	4	5
GR3	The government ensures that there are complete electronic wallet server	1	2	3	4	5

	facilities in the country during the					
	Covid-19 pandemic.					
	I increase the usage of e-wallet after					-
GR4	participating in government e-wallet	1	2	3	4	5
	promotion events.					
	I am willing to use e-wallet if the					
GR5	government continues to allocate	1	2	3	4	5
	more funds into e-wallet promotion.					

(v) Health Awareness

	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
HA1	I am worried about being infected by Covid-19 when using physical cash as payment method.	1	2	3	4	5
HA2	I am afraid about there is a coronavirus attaches on the physical cash.	1	2	3	4	5
HA3	It is uncomfortable to me as using physical cash as payment method during Covid-19 pandemic.	1	2	3	4	5
HA4	I prefer to order food online during the pandemic of Covid-19.	1	2	3	4	5
HA5	I am worried about myself and my close one regarding the spread of Covid-19.	1	2	3	4	5

Section C: Dependent Variable

(i) Intention to Adopt E-wallet

	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Y1	During Covid-19 pandemic, I will choose to use e-wallet to make payment.	1	2	3	4	5
Y2	During Covid-19 pandemic, I prefer to use e-wallet to make payment.	1	2	3	4	5
Y3	I will use e-wallet to pay in the future.	1	2	3	4	5
Y4	I will plan to use it if I can use an e- wallet.	1	2	3	4	5
Y5	I plan to use the e-wallet when opportunities arise.	1	2	3	4	5

Variables		Questions	Sources
	PEU1	It is easy for me to use an e-wallet.	
	PEU2	I rarely feel confused while using an e-	
		wallet.	
Perceived	DEL13	The process of using an e-wallet in the	
Fase of Use	1L05	transaction is clear and understandable.	Trivedi (2016)
	DELIA	I rarely make mistakes when using an e-	
	1 LO4	wallet.	
	PEU5	I rarely feel frustrated while using an e-	
	1L05	wallet.	
	DI ⊺1	Using an e-wallet as payment method is	
	101	less time consuming.	
	DI 12	E-wallet is useful to me in the buying	
Perceived	102	process.	
Usefulness	PU3	E-wallet allows me to buy easily.	Trivedi (2016)
	PU4	Using e-wallet can increase my	
		effectiveness in the payment process.	
	PU5	Using e-wallet would increase my	
	105	performance in the payment process.	
		I am aware of the information that I	
	PPS1	provided to the company during a	
		transaction.	
Perceived		I believe that this store will not leak out	
Privacy and	PPS2	my information without my permission	Chellappa (2007)
Security		during the transaction.	
		I feel confidence in the security when I	
	PPS3	make the e-wallet transaction with the	
		store.	

	Appendix	3.5:	Sources	of Que	estionna	aire
--	----------	------	---------	--------	----------	------

		I believe that the private information I	
	PPS4	provide during e-wallet transaction with	
		this store will only reach this store.	
		I believe the information I provide during	
	PPS5	e-wallet transaction with this store will	
		not be exploit by inappropriate parties.	
		The government encourage using the e-	
	GR1	wallet to conduct transaction during	
		Covid-19 pandemic.	
		The government controls and supervises	
	GR2	the operation of e-wallet payment during	
		the Covid-19 pandemic.	
		The government ensures that there are	
Government	GDA	complete electronic wallet server	
Roles	GR3	facilities in the country during the Covid-	Aji et al. (2020)
		19 pandemic.	
		I increase the usage of e-wallet after	
	GR4	participating in government e-wallet	
		promotion events.	
		I am willing to use e-wallet if the	
	GR5	government continues to allocate more	
		funds into e-wallet promotion.	
		I am worried about being infected by	
	HA1	Covid-19 when using physical cash as	
		payment method.	
Health	114.0	I am afraid about there is a coronavirus	
Awareness	HA2	attaches on the physical cash.	Aji et al. (2020)
		It is uncomfortable to me as using	
	HA3	physical cash as payment method during	
	1		

	HA4	I prefer to order food online during the pandemic of Covid-19.	Rov et al. (2020)
	HA5	I am worried about myself and my close one regarding the spread of Covid-19.	100 00 00 (2020)
Intention to Adopt E-	Y1	During Covid-19 pandemic, I will choose to use e-wallet to make payment.	
wallet	Y2	During Covid-19 pandemic, I prefer to use e-wallet to make payment.	Aji et al. (2020)
	Y3	I will use e-wallet to pay in the future.	
	Y4	I will plan to use it if I can use an e-wallet.	Trivedi (2016)
	Y5	I plan to use the e-wallet when opportunities arise.	Aydin (2016)