ANALYSIS OF PERCEIVED EASE OF USE, USEFULNESS, AND SECURITY TOWARDS USAGE OF E-MONEY PAYMENT SYSTEM AND THE EFFECT OF GOVERNMENT REGULATIONS

Written and Presented as a Partial Fulfillment of the Requirements to Obtain the Bachelor Degree in Accounting Department





Student Number: 16312180

INTERNATIONAL PROGRAM ACCOUNTING FACULTY OF BUSINESS AND ECONOMICS UNIVERSITAS ISLAM INDONESIA YOGYAKARTA

ANALYSIS OF PERCEIVED EASE OF USE, USEFULNESS, AND SECURITY TOWARDS USAGE OF E-MONEY PAYMENT SYSTEM AND THE EFFECT OF GOVERNMENT REGULATIONS



Language Advisor,



Alfi Zakiya., S.Kom., S.Pd.

April, 9th 2020

ANALYSIS OF PERCEIVED EASE OF USE, USEFULNESS, AND SECURITY TOWARDS USAGE OF E-MONEY PAYMENT SYSTEM AND THE EFFECT **OF GOVERNMENT REGULATIONS**

A BACHELOR DEGREE THESIS

By:

MUHAMMAD REZA FALETEHAN

Student Number: 16312180

Defended before the Board of Examiners On April 27th, 2020, and Declared Acceptable

Board of Examiners

Examiner I

Afairina

Ayu Chairina Laksmi, S.E., M.App.Com., M.Res., Ph.D.

Examiner II

(tranha

Sigit Handoyo, S.E., M.Bus

April, 27th 2020

April, 27th 2020

Yogyakarta, April 9th, 2020 International Program Faculty of Business and Economics ersitas Islam Indonesia SLAD

Dean, YOGYAKART ana, S.E., M.Si., Ph.D.

Page | 2

DECLARATION OF AUTHENTICITY

I hereby declare the originality and the authenticity of this thesis. I have not presented a work composed by someone else to obtain my bachelor's degree nor have I included someone else's ideas, opinions, or expressions in this work without proper acknowledgement or credit. All citations contained within this work are listed in the bibliography of this thesis. If in the future this statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequence.



Muhammad Reza Faletehan

ACKNOWLEDGEMENT

Assalamu'alaikum Warahmatulahi Wabarakatuh

Praise Allah SWT, the Lord of the Worlds. I bear witness that none is worthy of worship but Allah SWT, alone with no partners. And I bear witness that Prophet Muhammad SAW is His Messenger, may Allah SWT exalt his mention.

This thesis titled "Analysis of Perceived Ease of Use, Usefulness, and Security Towards Usage of E-money Payment System and the Effect of Government Regulations" composed as a partial requirement to obtain the bachelor degree in Accounting is finally finished. During the writing of this thesis, I, Muhammad Reza Faletehan, underwent many hardships. However, I would like express my gratitude to several parties who helped me endure and go through the said hardships. Most prominently, my family which consists of my parents and my two siblings for their continued support, my content advisor Miss Ayu Chairina Laksmi and my language advisor Miss Alfi Zakiya who helped me writing my thesis from the beginning until completion, and many other parties whom I cannot mention one-by-one who helped me finish this thesis with their constant aid and support.

May this research be useful to all parties in the future for the development and improvement on the currently growing e-money system.



Yogyakarta, April 9th 2020



Muhammad Reza Faletehan

TABLE OF CONTENTS

Approval Page i
Legalization Page ii
Declaration of Authenticity iii
Acknowledgementiv
Table of Contentsv
List of Tablesvi
List of Figures vii
Abstract viii
Abstrakix
Chapter 1: Introduction 12
1.1 Problem Formulation
1.2 Research Objective14
1.3 Research Benefit
Chapter 2: Literature Review 15
2.1 Electronic Money 15
2.2 Theory of Reasoned Behavior16
2.3 Technology Acceptance Model
2.4 Hypothesis Formulation
Chapter 3: Research Method
3.1 Data Collection and Sampling
3.2 Research Variables
3.2.1 Dependent Variable
3.2.1.1 E-money Usage
3.2.2 moderating Variables
3.2.2.1 Perceived Ease of Use
3.2.2.2 Perceived Usefulness
3.2.2.3 Perceived Risk
3.2.3 Independent Variable
3.2.3.1 Government Regulations
3.3 Data Analysis

3.3.1 Validity and Reliability Testing	
3.3.2 Hypothesis Testing	
Chapter 4: Findings	27
4.1 Questionnaire Results	
4.2 Validity Test	52
4.3 Reliability Test	57
4.4 Hypothesis Test	57
4.5 Discussion	
4.5.1 E-money Usage and Perceived Ease of Use	
4.5.2 E-money Usage and Perceived Usefulness	59
4.5.3 E-money Usage and Perceived Risk	
4.5.4 Government Regulations	61
Chapter 5: Conclusion	
5.1 Conclusion	
5.2 Research Implication	
5.3 Research Limitations	
5.4 Recommendation	
References.	
Appendix	69



LIST OF TABLES

Table 1 E-money issued in Indonesia from January 2019 to January 2020	12
Table 2 Results of Pearson Correlation Test.	53
Table 3 Multiple linear regression results between e-money usage and PEOU, PU, and PR. PR. PR.	57
Table 4 Multiple linear regression results between PEOU and GR	58
Table 5 Multiple linear regression results between PU and GR	58
Table 6 Multiple linear regression results between PR and GR	58
Table 7 Multiple linear regression results between e-money usage and GR	59
Table 8 Results of hypothesis test 1	61
Table 9 Results of hypothesis test 2	63



LIST OF FIGURES

Figure 1 Theory of reasoned behavior	. 16
Figure 2 Technology acceptance model	. 17
Figure 3 Technology acceptance model 2	. 17
Figure 4 Theoretical framework for TAM and TAM 2	. 18
Figure 5 Figure used in this research	. 20
Figure 6 Distribution of the responses to questionnaire item 1	27
Figure 7 Distribution of the responses to questionnaire item 2	28
Figure 8 Distribution of the responses to questionnaire item 3	29
Figure 9 Distribution of the responses to questionnaire item 4	30
Figure 10 Distribution of the responses to questionnaire item 5	31
Figure 11 Distribution of the responses to questionnaire item 6	32
Figure 12 Distribution of the responses to questionnaire item 7	33
Figure 13 Distribution of the responses to questionnaire item 8	34
Figure 14 Distribution of the responses to questionnaire item 9	35
Figure 15 Distribution of the responses to questionnaire item 10	36
Figure 16 Distribution of the responses to questionnaire item 11	37
Figure 17 Distribution of the responses to questionnaire item 12	38
Figure 18 Distribution of the responses to questionnaire item 13	39
Figure 19 Distribution of the responses to questionnaire item 14	40
Figure 20 Distribution of the responses to questionnaire item 15	41
Figure 21 Distribution of the responses to questionnaire item 16	42
Figure 22 Distribution of the responses to questionnaire item 17	43

Figure 23 Distribution of the responses to questionnaire item 18	44
Figure 24 Distribution of the responses to questionnaire item 19	45
Figure 25 Distribution of the responses to questionnaire item 20	46
Figure 26 Distribution of the responses to questionnaire item 21	47
Figure 27 Distribution of the responses to questionnaire item 22	48
Figure 28 Distribution of the responses to questionnaire item 23	49
Figure 29 Distribution of the responses to questionnaire item 24	50
Figure 30 Distribution of the responses to questionnaire item 25	51
Figure 31 Distribution of the responses to questionnaire item 26	52



Abstract

The use of e-money has been growing from each year since its introduction the the country of Indonesia. With the GNTT policy published by Bank Indonesia published in 2014 aiming to make Indonesia into a "cashless society", the government has made electronic money into one of the national payment gateway and published a regulation enforcing the use of e-money; regulation published by the Minister of Employment and Housing 16/PRT/M/2017 states that tollbooth payment must be paid using electronic money and it has been applied since October 17, 2017. This research uses technology acceptance model (TAM) theory to determine the correlation between users perceived ease of use (PEOU), perceived usefulness (PU), and perceived risk (PR) and e-money usage. The results show that PEOU and PU has positive effect on the use of e-money, but PR has no relationship with the use of e-money. This research also correlates government regulations with users' perception and e-money usage. Government regulations has positive relation on PU, but negative and non-significant relation with PEOU and PR. It is also discovered that government regulations positively effects e-money usage. This research is aimed to provide insight on what drives people to use e-money and the effect of government regulations on it. It is hoped that this research can aid institutions that utilize e-money payment system to improve their currently existing system and to government who seek to make Indonesia into a "cashless society".

Keywords: e-money, perceived ease of use, perceived usefulness, perceived risk, technology acceptance model (TAM), government regulations, Indonesia

Abstrak

Penggunaan e-money telah berkembang setiap tahunnya sejak masa diperkenalkannya di negara Indonesia. Dengan kebijakan GNTT yang dipublikasikan Bank Indonesia yang bertujuan menjadikan Indonesia "cashless society", pemerintah telah menjadikan uang elektronik sebagai salah satu instrumen pembayaran nasional dan mengeluarkan kebijakan yang mewajibkan penggunaan e-money; peraturan yang diterbitkan oleh Menteri Pekerjaan Umum dan Perumahan Rakyat 16/PRT/M/2017 menyatakan bahwa pembayaran jalan tol harus dilakukan menggunakan uang elektronik dan kebijakan ini sudah berlangsung sejak 17 Oktober 2017. Penelitian ini menggunakan technology acceptance model (TAM) untuk mengetahui hubungan antara persepsi kemudahan (PEOU), persepsi kegunaan (PU), dan persepsi resiko (PR) dengan penggunaan e-money. Hasil menunjukan PEOU and PU memiliki hubukan positif dengan penggunaan e-money; tetapi PR tidak memiliki hubungan dengan penggunaan e-money. Penelitian ini juga menghubungkan peraturan pemerintah dengan persepsi pengguna dan penggunaan e-money. Peraturan pemerintah memiliki hubungan positif dengan PU, tetapi memiliki hubungan negatif dan tidak signifikan dengan PEOU dan PR. Hasil juga menunjukkan bahwa peraturan pemerintah memiliki hubungan positif dengan penggunaan e-money. Penelitian ini bertujuan untuk memberi pengetahuan tentang apa yang membuat orang-orang menggunakan e-money dan pengaruh peraturan pemerintah terhadapnya. Penelitian ini diharapkan dapat membantu institusi yang telah menerapkan e-money untuk memperbaik sistem mereka dan untuk pemerintah yang bertujuan memjadikan Indonesia "cashless society".

Kata kunci: e-money, persepsi kemudahan, persepsi kegunaan, persepsi resiko, technology acceptance model (TAM), peraturan pemerintah, Indonesia

Chapter 1

Introduction

Money has become a part of every human's life and is a requirement to obtain necessities and tertiary needs. As of now, there are two kinds of money: cash and electronic money.

In 2014, the Indonesian government and the National Bank of Indonesia (BI) issued a policy under the name of Gerakan Nasional Non Tunai (GNTT). This policy is aimed to transform the country of Indonesia into a cashless society--a society where use of physical currency are less common. To start, electronic money (e-money) has been included in the government regulation (specifically 19/10/PADG/2017) to be one of the payment instruments in the National Payment Gateway (NPG). According to BI, as of the January the year 2020, there were 313,785,298 e-money cards that have been issued throughout Indonesia. This number is higher than the average number throughout the year 2019.

	2020	
TZ.	2019	2020
January	173,825,919	313,785,298
February	189,222,546	
March	199,174,153	and the second second
April	197,413,945	
May	198,790,786	
June	209,891,847	
July	232,348,971	
August	250,477,938	
September	257,078,749	
October	269,340,218	
November	277,925,012	
December	292,299,320	

 Table 1 Number of e-money issued in Indonesia from January 2019 to January

 2020

(Source: Bank Indonesia).

With those issued cards, there are 3,359,914,630 e-money transactions with the total value of Rp 145,165,468 in the year 2019 and 457,944,919 e-money transactions with the total value of Rp 15,872,433 in January 2020.

A survey conducted by Mandiri Tirto and Jakpat in October 2017 discovered that out of 1.002 participants, 17,07% had not started using e-money. The survey discovered that 64,14% of e-money users use the service for bus tickets, 63,18% of e-money users use the service for commuter line payment, and 55,96% of e-money users use the service for toll payment. It was also discovered that 48,01% of users use e-money for shopping. According to the survey conducted by Mandiri Tirto and Jakpat in October 2017, 86,28% of users stated that their respective use of e-money was driven by self-interest. The remaining percentage of users stated that they were influenced by third party such as their colleagues, promotions from the e-money service provider, or the government or the Bank of Indonesia. Users of e-money also stated that they were aware of the risk of use of e-money. 50,90% of responding users stated that they have concerns regarding the safety of their data as data were recorded in each use of e-money.

Some usage of e-money are enforced leaving users with no other payment method than using e-money. An example of this is the e-toll, where drivers are required to pay tollbooth using e-money cards issued by various banks. This policy was officially published through "PERATURAN MENTERI PEKERJAAN UMUM DAN PERUMAHAN RAKYAT REPUBLIK INDONESIA NOMOR 16/PRT/M/2017" and was applied beginning in October 17, 2017. Although not governed by regulations, using e-money to pay for certain bus tickets are considered mandatory as the ticket can only be bought using e-money.

This paper will explain what affects people's intention to use e-money payment system by incorporating Technology Acceptance Model (TAM) proposed by Davis (1989). In addition, this paper will also explain whether government regulations or general regulations that enforce the use of e-money affect users' perception of ease, usefulness, and security in using e-money payment system.

Problem Formulation

1. Do perception of ease of use, usefulness, and risk affect the usage of e-money payment system?

2. Do government regulations affect users' perception of ease of use, usefulness, and security towards the usage of e-money payment system?

Research Objective

1. To discover whether perception of ease of use, usefulness, and risk of e-money affect e-money usage or not.

ISLAM

2. To discover whether government regulation affect users' perception of ease, usefulness, and security towards usage of e-money payment system.

Research Benefit

1. To provide understanding on consumers' reasoning in using e-money payment system and connection between government regulation and perceived ease of use, perceived usefulness, and perceived risk of e-money usage.

2. Hopefully to become the basis of improvement for existing e-money services that it can better suit the users.

Chapter 2

Literature Review

2.1 Electronic Money

Created because of advancement of technology, electronic money is a cryptocurrency. According to Vlasov (2017) cryptocurrency is technically not a currency, but rather data stored within the digital space. For this matter, the data stored is in the form of credits which are purchased using actual money. These credits can then be used to replace money in certain circumstances hence the name "electronic money" or e-money for short (Vlasov, 2017).

In Indonesia, the use of e-money has constantly grown since 2008. People prefer to use e-money to pay because the system is fast, practical, easy to use, and cheap (Tayibnapis et al., 2018). Despite that, people still disagreed with e-money being used as a mandatory payment, for example, e-toll payment. People are concerned about fraud and theft in making transactions using e-money in the tollbooth, aside from that, people are concerned that there may be congestion at the tollbooth (Tayibnapis et al., 2018).

Another research by Ferdiana and Darma (2019) discovered that there was a possibility that consumers' hesitation to use e-money are caused by misunderstanding of the term "cashless". Interviewee in Ferdiana and Darma's research (2019) expressed that they did not truly understand the term "cashless" and rather interpreted it as "cash and less". Suhud et al. (2020) suggested that infrastructures for e-money system in Indonesia are not fully ready to be used. With e-money infrastructures that are fully ready for both sellers and buyers parties, the pressure to use e-money for both sellers and buyers are stronger thus adoption of e-money and increase.

The above evidence should be considered a hindrance to the goal of making Indonesia and "cashless society". Security concerns, lack of education in e-money, and infrastructures that are not fully ready are the major obstacles in the realization of making Indonesia a "cashless society".

2.2 Theory of Reasoned Behavior

Ajzen and Fishbein (1980) proposed theory of reasoned action. This theory is a social psychology model which states that an individual's action is determined by the individual's behavior.



In the model, individual's behavior is affected by the individual's motivation, beliefs, attitude, and subjective norm (Ajzen & Fishbein, 1980). Those four elements would then become the determinants of the individual's behavioral intention which would become the drive for an individual's actual behavior. According to Ajzen and Fishbein (1980), subjective norm is the individual's perception of what is important to them and what is not; attitude towards behavior is the individual's feelings towards the action that is to be performed. Individual's attitude is affected by the individual's salient beliefs while the subjective norm is affected by the individual's normative beliefs and motivation.

2.3 Technology Acceptance Model

In technology acceptance model (TAM), individuals' use of the system are influenced by their own perception of ease of use and usefulness of the system which would determine the individual's behavioral intention of use and lead to the actual use of the system (Davis, 1986). Igbaria et al. (1997) then stated that perceived ease of use and perceived usefulness in TAM are the most important factors in the determination of technology adoption.

Venkatesh and Davis (2000) then proposed a newer model of technology acceptance model referred as technology acceptance model 2 (TAM2). The research conducted on the proposed TAM2 then discovered that subjective norm would affect behavioral intention to use if the use is mandatory and subjective norm would not affect behavioral intention to use if the system use is voluntary.



Source: Venkatesh & Davis (2000)

Figure 3 Technology Acceptance Model 2

Venkatesh and Bala (2008) then developed a theoretical framework on factors affecting perceived usefulness and perceived ease of use for TAM and TAM2. The framework contains four factors: individual differences, system characteristics, social influence, and facilitating conditions (see Figure 3). Individual differences refer to users' personality and attitude; system characteristics refer to the features offered by the system; social influence refers to various social events that form individual's perception towards the system; and facilitating conditions refer to the support from organizations that support the use of the system.



Source: Venkatesh & Bala (2008)

Figure 4 Theoretical framework for TAM & TAM2

Complying with the theoretical framework provided by Venkatesh and Bala (2008), system security can be included under the "facilitating features". However, according to the survey conducted by Mandiri Tirto, users keep using e-money service despite acknowledging the security risks that come with the service. However, these uses are typically for payments that are regulated by regulations such as e-toll payment.

The behavioral intention to use e-money is affected by users' personal habit. (Khatimah et al., 2019). Personal habit has a significant influence over users' intention to use e-money which shows that users need to use e-money system to fulfill their daily needs. Aside from personal habit, Khatimah et al. (2019) also stated that intention to use e-money are also affected by hedonic motivation and social norms. However, Ayudya and Wibowo (2018) stated that social norms only significantly affect rural communities. This is due to the different sociology between rural area and

urban area. Influential figures put more pressure in rural community and they can practically decide how rural communities should behave.

Research conducted by Mentari et al. (2018) discovered that consumers' desire to use the e-money system is not affected by the perceived benefits in using the e-money system. However, this statement is only true if the consumers are on the receiving side of the transaction. This perception of comes mainly from the merchants who prefer to receive payments using credit card instead of e-money since credit cards provide them with credits that can be converted into cash. It was also discovered that desire to use e-money is not affected by perception of convenience. They argued that this is due to that e-money is not usable in all transactions there are possible errors in the e-money facilities.

For this research, we will use a modified and simplified TAM figure. In this figure, the independent variable is government regulation where the moderating variables are the perceived ease of use (PEOU), perceived usefulness (PU) and perceived risk (PR). The dependent variable, the one that is affected and does not affect, is the use of technology. According to TAM theory, use of technology is affected by perceived ease of use and perceived usefulness of the users towards the technology. Therefore, we consider PEOU and PU to be moderating variables. Past research by Syahril and Rikumahu (2019) discovered that use of technology (e-money) is affected by perceived risk. Therefore, PR is also considered to be moderating variables. Those following factors are considered to be moderating variables because they bridge the gap between independent variable and dependent variable. In this research, the dependent variable is government regulation as social influence. Past research by Rahmatika and Fajar (2019) and Ayudya and Wibowo (2018) discovered that government regulations affect the use of e-money. Therefore, we create a direct connection between the independent variable and the dependent variable. For reference to this explanation, the research figure is drawn below.



2.4 Hypothesis Formulation

In TAM, users' use of technology is determined by users' perceived ease of use (PEOU) and perceived usefulness (PE). In this case, PEOU and PE are going to affect users' use of e-money. However, as discovered by Syahril and Rikumahu (2019), the users' use of e-money is positively affected by users' perceived risk (PR) on the system. Therefore, the following hypotheses are formulated.

H1a: There is a positive relationship between PEOU and e-money usage in Yogyakarta

H1b: There is a positive relationship between PU and e-money usage in Yogyakarta

H1c: There is a positive relationship between PR and e-money usage in Yogyakarta

Certain use of e-money in Indonesia is affected and governed by government regulation--which can be classified under social influence. An example of this issue is the implementation of e-toll system. Users of e-toll are forced to use the e-money system to pay when crossing a tollbooth as regulated by 16/PRT/M/2017. In TAM, social influence consists of three elements: compliance, internalization, and

identification (French & Raven, 1959). Past research by Ayudya and Wibowo (2018) and Rahmatika and Fajar (2019) had shown that e-money usage is affected by government regulations. This is caused by people's compliance to government regulations and the existence of punishment for disobedience. Therefore, the following hypotheses are formulated.

H2a: There is a positive relationship between government regulations and PEOU

H2b: There is a positive relationship between government regulations and PU

H2c: There is a positive relationship between government regulations and PR

H2d: There is a positive relationship between government regulations and e-money usage



Chapter 3

Research Method

3.1 Data Collection and Sampling

This research was classified under quantitative research because it used numerical data and was processed statistically. The data were obtained using a questionnaire containing 26 questions grouped based on the variables used in this research. The questionnaire would be distributed online through Google Forms. Participants could access this questionnaire using the link provided to them by the researcher. The questionnaire that was distributed used 4-interval scale questions with the following classification:

			and the second sec
Strongly disagree	Disagree	Agree	Strongly Agree
1	2	3	4

"Strongly Disagree" will be valued 1 and "Strongly Agree" will be valued 4.

The population for this research consisted of people who had experience in using e-money system in Daerah Istimewa Yogyakarta (DIY) and was not be separated whether they live in urban or rural area. Sample was collected using convenience sampling method. Convenience sampling is a non-probability sampling method where the researchers select the samples from a population that meet certain criteria set by the researchers (Etikan et al., 2016). The criterion set for the population of this research were: 1) people who live in DIY and; 2) people who have experiences in using e-money.

The total population of people who met this criteria is 240. The sample required was calculated using the Slovin formula as follows:

 $n = N / N(d)^2 + 1$

in which:

- n = Total sample
- N = Total population
- d = 95% confidence value (sig. = 0,05)

From the total population of 240, we determined that the number of samples used in this research were 150.

3.2 Research Variables

3.2.1 Dependent Variable

3.2.1.1 E-money Usage

Research conducted by Mentari et al. (2018) discovered the usage of e-money is affected by the users' perception of ease and usefulness. These affected both users as customers and merchants. However, while both parties agreed that e-money was easier to use than payment using cash, merchants found e-money payment to be less beneficial as they preferred to receive payment using actual cash or credit cards. The questions regarding this variable consisted of questions asking the respondents' experience in using e-money.

The questions were:

- 1. I have plenty of experience in using e-money
- 2. I plan to use e-money in the future
- 3. I will continue to use e-money in the future
- 4. I hope that e-money will remain in the future
- 5. I always try to use e-money over cash

3.2.2 moderating Variable

3.2.2.1 Perceived Ease of Use

According to Davis (1989), perceived ease of use (PEOU) was the degree of how a user saw that using technology would lessen the effort required. Past research by

Danuarta and Darma (2018) and Sultan et al. (2019) had shown that perceived ease of use positively affects users' use of a system. Questions regarding this variably in the questionnaire covered respondents' opinions on the difficulty of e-money usage.

Examples of the questions are:

- 1. Learning e-money is easy for me
- 2. Using e-money is easy for me
- 3. E-money is easy to understand for me
- 4. I am easily adapted to e-money

3.2.2.2 Perceived Usefulness

Davis (1989) stated that perceived usefulness was the degree on how much a user saw a technology aided them in performing their tasks. Past research by Danuarta and Darma (2018) had shown that perceived usefulness positively affected users' use of the system. The questions regarding this in the questionnaire will cover whether e-money usage has made payment easier or not.

ISLAM

The questions were:

- 1. Using e-money saves plenty of time for me
- 2. Using e-money makes payment simpler for me
- 3. Using e-money is convenient for me
- 4. Using e-money is easier than using cash for me
- 5. I find it easier to keep track of money using e-money than cash

3.2.2.3 Perceived Risk

Danuarta and Darma (2019) stated that perceived risk is the uncertainty and the unintended consequences in using services. Danuarta and Darma (2019) discovered that perceived risk significantly and negatively affect the use of e-money payment system meaning that the higher the perceived risk, the lower the intention to use becomes. Questions in the questionnaire relating to perceived risk will cover the respondent's opinions on the risk and reliability in using e-money system.

The questions were:

1. Using e-money is risky for me



- 2. I have concerns regarding the security of e-money system
- 3. I have concerns that e-money transactions are not reliable
- 4. I have concerns that my personal information may become visible to other people when using e-money
- 5. I have concerns that my money may be stolen by using e-money
- 6. I am not comfortable in using e-money system
- 7. I do not trust the e-money system

3.2.3 Independent Variable

3.2.3.1 Government Regulation

Danuarta and Darma (2019) and Ayudya and Wibowo (2018) discovered that social influence affected the perception of usefulness of technology users. In this research, government regulation would be considered to be social influence. Questions within the questionnaire focused on discovering whether there was a relationship between government regulation and the moderating variables or not.

The questions were:

- 1. I am aware that there is e-money usage that is mandatory
- 2. I am aware that there is government regulation enforcing the use of e-money
- 3. I will obey government regulations that forces me to use e-money
- 4. I will use e-money if it is regulated by the government or mandatory
- 5. I will use e-money if it is regulated by the government or mandatory even when I have concerns regarding the security of the system

3.3 Data Analysis

3.3.1 Validity and Reliability Testing

The gathered data underwent two tests: validity and reliability tests. The purpose of these tests was to determine the validity and credibility of the questionnaire and its responses. Validity test and reliability tests would be conducted using the SPSS application. More specifically, validity test would be performed using Pearson Correlation test and reliability test would be performed using Cronbach-Alpha test.

3.3.2 Hypothesis Testing

Hypothesis testing would be done using multiple regression equation using the following formula.

Y1 = A + B1X1 + B2X2 + B3X3 + e

 $\mathbf{Y1} = \mathbf{A} + \mathbf{B4X4} + \mathbf{e}$

Y2 = A + B4X4 + e

Y3 = A + B4X4 + e

Y4 = A + B4X4 + e



Chapter IV

Findings

4.1 Questionnaire Results

The questionnaire was distributed to 150 participants through Google Forms. The data collection period was February 1, 2020 to March 5, 2020. The participants consisted of 67 male and 83 female and all of the participants had experience in using e-money.

The following figures were from Section 1 of the questionnaire. Section 1 consisted of question about the participants' use of e-money.



(Source: Data Output, 2020)

Figure 6 Distribution of the responses to questionnaire item 1

Figure 6 was the pie chart for the statement "I have plenty of experience in using e-money". 53 participants strongly agreed that they have plenty of experience in using e-money, 76 participants agreed that they have plenty of experience in using e-money,

18 participants disagreed that they have plenty of experience in using e-money, 3 participants strongly disagreed that they have plenty of experience in using e-money.



Figure 7 Distribution of the responses to questionnaire item 2

Figure 7 was the pie chart representing the answers to the statement "I plan to use e-money in the future". 93 participants strongly agreed to that statement, 51 participants agreed to that statement, 6 participants disagreed with that statement, and no participants strongly disagreed with that statement.



⁽Source: Data Output, 2020)

Figure 8 Distribution of the responses to questionnaire item 3

Figure 8 was the pie chart representing the answers to the statement "I plan to continue using e-money in the future". 83 participants strongly agreed, 56 participants agreed, 8 participants disagreed, and 0 participant strongly disagreed.





(Source: Data Output, 2020)

Figure 9 Distribution of the responses to questionnaire item 4

Figure 9 was the pie chart representing the answers to the statement "I hope e-money will remain exist in the future". 105 participants strongly agreed, 42 participants agreed, 2 participants disagreed, 1 participant strongly disagreed.





⁽Source: Data Output, 2020)

Figure 10 Distribution of the responses to questionnaire item 5

Figure 10 was the pie chart representing the answers to the statement "I always try to use e-money over cash". 105 participants strongly agreed, 42 participants agreed, 2 participants disagreed, 1 participant strongly disagreed.

The following figures were from Section 2 of the questionnaire. Section 2 consists of questions about participants' perceived ease of use of e-money.





Figure 11 Distribution of the responses to questionnaire item 5

Figure 11 represented the answer to the question "Learning e-money is easy for me". 79 participants strongly agreed, 67 participants agreed, 4 participants disagreed, 0 participants strongly disagreed.





Figure 12 Distribution of the responses to questionnaire item 7

Figure 12 represented the responses to the statement "Using e-money is easy for me". 103 participants strongly agreed, 44 participants agreed, 3 participants disagreed, 0 participant strongly disagreed.





Figure 13 Distribution of the responses to questionnaire item 8

Figure 13 represented the responses to the statement "E-money is easy to understand for me". 79 participants strongly agreed, 65 participants agreed, 5 participants disagreed, 1 participant strongly disagreed.





Figure 14 Distribution of the responses to questionnaire item 9

Figure 14 represented the responses to the statement "I am easily adapted to e-money". 76 participants strongly agreed, 64 participants agreed, 10 participants disagreed, 0 participant strongly disagreed.

The following figures were from Section 3 of the questionnaire. Section 3 consisted of questions about participants' perceived usefulness of e-money.


Figure 15 Distribution of the responses to questionnaire item 10

Figure 15 represented the responses to the statement "Using e-money saves plenty of time for me". 108 participants strongly agreed, 34 participants agreed, 8 participants disagreed, 0 participants strongly disagreed.





Figure 16 Distribution of the responses to questionnaire item 11

Figure 16 represented the responses to the statement "Using e-money makes payment easier". 102 participants strongly agreed, 42 participants agreed, 5 participants disagreed, 1 participant strongly disagreed.





Figure 17 Distribution of the responses to questionnaire item 12

Figure 17 represented the responses to the statement "Using e-money is convenient for me". 74 participants strongly agreed, 68 participants agreed, 8 participants disagreed, 0 participant strongly disagreed.





Figure 18 Distribution of the responses to questionnaire item 13

Figure 18 represented the responses to the statement "Using e-money is easier than using cash for me". 48 participants strongly agreed, 73 participants agreed, 27 participants disagreed, 2 participants strongly disagreed.





Figure 19 Distribution of the responses to questionnaire item 14

Figure 19 represented the responses to the statement "It is easier to keep track of my money using e-money than cash for me". 64 participants strongly agreed, 68 participants agreed, 14 participants disagreed, 4 participants strongly disagreed.

The following figures were from Section 4. Section 4 consisted of questions about the participants' perceived risk in e-money.



Figure 20 Distribution of the responses to questionnaire item 15

Figure 20 represented the responses to the statement "Using e-money is risky for me". 15 participants strongly agreed, 32 participants agreed, 86 participants disagreed, 17 participants strongly disagreed.





Figure 21 Distribution of the responses to questionnaire item 16

Figure 21 represented the responses to the statement "I have concerns regarding the security of e-money". 15 participants strongly agreed, 42 participants agreed, 70 participants disagreed, 23 participants strongly disagreed.





Figure 22 Distribution of the responses to questionnaire item 17

Figure 22 represented the responses to the statement "I have concerns that e-money transactions are not reliable". 4 participants strongly agreed, 15 participants agreed, 79 participants disagreed, 53 participants strongly disagreed.





Figure 23 Distribution of the responses to questionnaire item 18

Figure 23 represented the responses to the statement "I have concerns that my personal information may become visible to other people when using e-money". 21 participants strongly agreed, 35 participants agreed, 55 participants disagreed, 39 participants strongly disagreed.





(Source: Data Output, 2020)

Figure 24 Distribution of the responses to questionnaire item 19

Figure 24 represented the responses to the statement "I have concerns regarding theft in using e-money". 20 participants strongly agreed, 55 participants agreed, 68 participants disagreed, 7 participants strongly disagreed.





Figure 25 Distribution of the responses to questionnaire item 20

Figure 25 represented the responses to the statement "I am not comfortable in using e-money system". 6 participants strongly agreed, 15 participants agreed, 75 participants disagreed, 54 participants strongly disagreed.





Figure 26 Distribution of the responses to questionnaire item 21

Figure 26 represented the responses to the statement "I do not trust the e-money system". 4 participants strongly agreed, 7 participants agreed, 60 participants disagreed, 79 participants strongly disagreed.

The following figures were from Section 5. Section 5 consisted of questions about participants' opinions on government regulations towards e-money.



Figure 27 Distribution of the responses to questionnaire item 22

Figure 27 represented the responses to the statement "I am aware that there is e-money usage that is mandatory". 56 participants strongly agreed, 64 participants agreed, 18 participants disagreed, 12 participants strongly disagreed.





Figure 28 Distribution of the responses to questionnaire item 23

Figure 28 represented the responses to the statement "I am aware that there is government regulation enforcing the use of e-money". 15 participants strongly agreed, 62 participants agreed, 59 participants disagreed, 14 participants strongly disagreed.





Figure 29 Distribution of the responses to questionnaire item 24

Figure 29 represented the responses to the statement "I will obey government regulations that forces me to use e-money". 58 participants strongly agreed, 79 participants agreed, 11 participants disagreed, 2 participants strongly disagreed.





Figure 30 Distribution of the responses to questionnaire item 25

Figure 30 represented the responses to the statement "I will use e-money if it is regulated by the government or mandatory". 59 participants strongly agreed, 75 participants agreed, 14 participants disagreed, 2 participants strongly disagreed.





Figure 31 Distribution of the responses to questionnaire item 26

Figure 31 represented the responses to the statement "I will use e-money if it is regulated by the government or mandatory even when I have concerns regarding the security of the system". 33 participants strongly agreed, 83 participants agreed, 26 participants disagreed, 8 participants strongly disagreed.

4.2 Validity Test

Validity test is conducted using Pearson Correlation test on SPSS with the following basic rule.

Sig > 0.5	= Invalid
Sig < 0.5	= Valid
rxy > r	= Valid
rxv < r	= Invalid

In this test, the value of r according to Pearson Correlation R-table was 0.159. After running the test on SPSS, we received the following results.

1 0411		
Q1	Pearson Correlation	.619
	Sig. (2-tailed)	.000
	Ν	150
Q2	Pearson Correlation	.429
	Sig. (2-tailed)	.000
0	Ν	150
Q3	Pearson Correlation	.468
15	Sig. (2-tailed)	.000
	Ν	150
Q4	Pearson Correlation	.354
Ιž	Sig. (2-tailed)	.000
ĪŻ	Ν	150
Q5	Pearson Correlation	.591
ĸ	Sig. (2-tailed)	.000
	Ν	150
Q6	Pearson Correlation	.520
	Sig. (2-tailed)	.000
	Ν	150
Q7	Pearson Correlation	.487
	Sig. (2-tailed)	.000

Pearson Correlations Test Results

	Ν	150
Q8	Pearson Correlation	.435
	Sig. (2-tailed)	.000
	Ν	150
Q9	Pearson Correlation	.514
	Sig. (2-tailed)	.000

	N ISLAN	150
Q10	Pearson Correlation	.417
١S	Sig. (2-tailed)	.000
	Ν	150
Q11	Pearson Correlation	.410
U	Sig. (2-tailed)	.000
<u> </u> 2	Ν	150
Q12	Pearson Correlation	.502
P	Sig. (2-tailed)	.000
ĸ	Ν	150
Q13	Pearson Correlation	.624
	Sig. (2-tailed)	.000
	Ν	150
Q14	Pearson Correlation	.357

Sig. (2-tailed) .000

150

Ν

Q15	Pearson Correlation	.320
	Sig. (2-tailed)	.000
	Ν	150
Q16	Pearson Correlation	.311
	Sig. (2-tailed)	.000
	Ν	150
Q17	Pearson Correlation	.350
10	Sig. (2-tailed)	.000
12	Ν	150
Q18	Pearson Correlation	.219
17	Sig. (2-tailed)	.007
lŭ	Ν	150
Q19	Pearson Correlation	.241
Z	Sig. (2-tailed)	.003
E	N	150
Q20	Pearson Correlation	.269
	Sig. (2-tailed)	.001
	Ν	150
Q21	Pearson Correlation	.305
	Sig. (2-tailed)	.000
	Ν	150
Q22	Pearson Correlation	.447



Table 2 shows that each questionnaire item has N = 150, this was because all questionnaire items were distributed to 150 participants. We could also see that the value of Sig. on all of the questionnaire items were lower than 0.5 and the value of Pearson Correlation (rxy) for all of the questionnaire items were higher than the determined r-value (0.159). From these results we concluded that all of the questionnaire items are valid.

4.3 Reliability Test

Reliability test was conducted using Cronbach-Alpha Test with the following rules:

Alpha > 0.9	= Very high reliability
0.9 > Alpha > 0.7	= High reliability
0.7 > Alpha > 0.5	= Quite high reliability
Alpha < 0.5	= Low reliability

Using the test performed in SPSS, we discovered that the research questionnaire consisting of 26 questions items and 150 responses had Alpha value of 0,717. This meant that the questionnaire has a high reliability.

4.4 Hypothesis Test

Hypothesis testing was done twice. The first test was to determine whether there was a relationship between PEOU, PU, PR, and usage of e-money and the second test was to see whether there was a relationship between government regulation and and PEOU, PU, and PR. Using Multiple Linear Regression analysis on SPSS, we obtained the following results.

Table 3 Correlation between e-money usage and PEOU, PU, and PR.

				Coefficients ^a				
		Unstandardize	d Coefficients	Standardized Coefficients			95,0% Confider	nce interval for B
Model		в	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	.809	.305	that for a	2.654	.009	.207	1.411
	PU	.489	.077	.460	6.386	.000	.337	.640
	PEOU	.297	.073	.288	4.087	.000	.153	.441
	PR	080	.051	098	-1.577	.117	180	.020

⁽Source: Data Output, 2020)

From the results above, we created the following formula.

Use of E-money = 0.809 + 0.297PEOU + 0.489PU - 0.8PR + e

				Coefficients	1			
Madal		Unstandardize B	d Coefficients Std. Error	Standardized Coefficients Beta		Sig	95,0% Confider	nce Interval for B
wouer		-	ora. Enor	Dota	· ·	org.	Lottor Dound	oppor bound
1	(Constant)	3.236	.232		13.974	.000	2.778	3.693
	GR	.098	.078	.103	1.255	.212	056	.252

Table 4 Correlation between PEOU and GR

(Source: Data Output, 2020)

From the results above, we created the following formula.

PEOU = 3.326 + 0.098GR + e

Table 5 Correlation between PU and GR

			1					
			2	Coefficients ^a				
		Unstandardize	d Coefficients	Standardized Coefficients		(₁ .)	95,0% Confiden	ce Interval for B
Model		В	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	2.711	.218		12.436	.000	2.280	3.142
	GR	.245	.074	.264	3.330	.001	.100	.390
a. D)ependent Vari	able: PU						
			(Source	e [.] Data Outr	nut 202))		
			(50010	e. Duit Out	202	<i>.</i> ,	171	
			2				1.0	
F	rom the r	esults abov	e, we crea	ited the follo	wing fo	rmula.		
			÷		U			
			$\mathbf{PII} = \mathbf{i}$	2711 ± 0.24	5 CR +	ρ		
			10	4•/11 · 0•47		C		
		1.6		deservice of	and the second	i sa tu	1 Same	
		Tab	le 6 Corr	alation hoty	voon PR	and C	R	
		1 40				anu O		
				Coefficients	1			
				Standardized				
		Unstandardize	d Coefficients	Coefficients			95.0% Confider	nce Interval for B
Model		В	Std. Error	Beta	t	Sig	Lower Bound	Upper Bound
l	(Constant)	2 090	295	2.014	7 089	000	1 508	2 673
	GR	003	.200	002	030	976	- 194	2.075
		.003	.033	.002	.030	.370	134	.200
a. L	ependent Vari	able: PR						

(Source: Data Output, 2020)

From the results above, we create the following formula.

$$PR = 2.090 + 0.003GR + e$$

				Coefficients	3			
Unstandardized Coefficie			d Coefficients	Standardized Coefficients			95,0% Confidence Interval for B	
Model		В	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	2.523	.230		10.988	.000	2.069	2.977
	GR	.287	.077	.292	3.710	.000	.134	.440

Table 7 Correlation between e-money usage and government regulations

(Source: Data Output, 2020)

From the results above, we created the following formula.

Use of e-money = 2.523 + 0.287GR + e

4.5 Discussion

4.5.1 E-money usage and perceived ease of use

From Table 3, we discovered that PEOU had a positive and significant relationship with e-money usage. This is indicated by the value of B (0.297) and the value of p (Sig. = 0.000) respectively. The majority of the respondents exclaimed that e-money was easy to learn and used and they claimed to have used and continued using e-money. This was consistent to the findings from Tayibnapis et al. (2018) where it was stated that people in Indonesia thought that e-money was practical and easy to use. Because of this, we accepted H1a.

This finding was consistent with past research by Danuarta and Darma (2019), Syahril and Rikumahu (2019) and Sultan et al. (2019). They discovered that perceived ease of use had a positive and significant relationship with e-money usage. This finding meant that people would use e-money more the easier its usage was.

4.5.2 E-money usage and perceived usefulness

From Table 3, we discovered that PU had a positive and significant relationship with e-money usage. This was indicated by the value of B (0.489) and the value of p (Sig. = 0.000) respectively. The majority of the respondents had exclaimed that

e-money had made payment easier and they would and had continued using e-money. Because of this, we accepted H1b.

This finding was consistent with past research by Danuarta and Darma (2019), Syahril and Rikumahu (2019) and Sultan et al. (2019) as they also discovered that PU, along with PEOU and PR, positively and significantly affected e-money usage. Users of GO-PAY, as stated by Danuarta and Darma (2019), would use GO-PAY daily because they felt that they received more benefit from daily uses.

However, this result was partially in contrary with the findings from Mentari et al. (2018). Perceived usefulness (benefits) did not have a positive relationship with e-money usage only if the users were sellers. This results came from the fact that sellers would prefer credits that are convertible to cash. Ferdiana and Darma (2019) stated that this way of thinking may come from the fact that certain people may interpret "cashless" into "cash and less".

4.5.3 E-money usage and perceived risk

From Table 3, we discovered that PR had a negative relationship with e-money usage. This means that the lower the perceived risk, the higher e-money usage would be. This is indicated by the value of B (-0.08) and the value of p (Sig. = 0.117) respectively. This was not significant because the value of p was bigger than 0.05. From the responses, the respondents had little concerns regarding the security risk in e-money and would and had continued to use e-money. This statement was in contrary with the findings of Tayibnapis et al. (2018) who stated that people are concerned about theft in using e-money. Because of this, we rejected H1c.

This finding was similar with the findings from Danuarta and Darma (2019). They discovered that users of GO-PAY preferred to avoid using e-money if the uncertainty was higher. This finding was also in-line with findings from Rahmatika and Fajar (2018), showing that perception of financial, social, time, usage, and security risk did not have positive relations with e-money usage.

However, this finding was in contrary to the findings of the research by Syahril and Rikumahu (2019). They discovered that perceived risk positively and significantly affected the intention to use e-money. They also explained that the 71% of the use of e-money could be explained by PEOU, PU, and PR.

The first hypothesis testing results can be seen in the table below. Hypothesis is accepted if t > 1.6551 and p-value < 0.05

Hypothesis		t	p-value	Supported?
111	U DEOU	(20(0.000	X 7
HIa	Usage > PEOU	6.386	0.000	Yes
H1b	Usage > PU	4.087	0.000	Yes
H1c	Usage > PR	-1.577	0.117	No
		ISI A		

Table 8 Results of hypothesis test 1

(Source: Data Output, 2020)

4.5.4 Government regulations

Table 4, 5, and 6 showed the Multiple Linear Regression test results between Government Regulations (GR) and PEOU, PU, and PR. It was shown that GR had positive relationship with PEOU, PU, and PR (as indicated by the value of B of GR is 0.098, 0.245 and 0.003 for PEOU, PU, and PR respectively). However, the relationship was only significant when GR was matched with PU (as the p-value shown on table 5 shows Sig. = 0.001 and it is lower than 0.05). The relationship of GR and PEOU or PR were shown to be not significant (as the p-value on table 4 and table 6 showed the value to be higher than 0.05; Sig. = 0.212 and Sig. = 0.976 respectively).

Responses showed that the majority of people in Yogyakarta would use e-money if it was regulated by the government and would obey regulations that made certain e-money usage mandatory. This could be implied that the difficulty of usage would not affect people's use of government-regulated e-money. For that reason, we reject H2a. Responses also showed that majority of the users in Yogyakarta would use government-regulated e-money even when they have concerns with the security. This could be implied that government regulations caused users to overlook the other factors affecting the use of e-money. This was inconsistent with the findings by Tayibnapis et al. (2018) who stated that people were displeased and hesitant to use government-regulated e-money system due to security concerns. For that reason, we reject H2c. The majority of the respondents seemed to be aware of the existence of mandatory uses of e-money and the regulations by government. Despite few of the respondents not wanting to accept mandatory use of e-money, the majority of the respondents claimed that they would use e-money if it was mandatory under government regulations. Compared with the positive relationships between GR and the three factors and non-significant relationships between GR and PEOU and PR, it could be implied that government regulations caused e-money users in Yogyakarta to overlook the three factors.

From Table 6, there was a positive relationship between government regulations and e-money usage. This meant that the stronger the government regulations, the more people would use e-money. This was further supported by the research of Ayudya and Wibowo (2018) and Rahmatika and Fajar (2019), who discovered that there was a positive and significant relationship between government regulations and e-money usage. Because of this, we accept H2d.

Similar to the findings on the research by Suhud et al. (2020), regulations set by government positively affected the perceived usefulness and perceived ease of use of e-money usage in Indonesia and essentially positively affected the e-money usage too. These positive relationships meant that the stronger the regulation enforcing the use of e-money, the stronger the perceived ease of use, usefulness, and risk in using e-money became. However, it should be noted that in this research, government regulations did not have a significant relationship with perceived ease of use.

From the results above, the following hypothesis test results were obtained. Hypothesis is accepted if t > 1.6551 and p-value < 0.05.

Hypothesis		t	p-value	Supported?
H2a	GR > PEOU	1.255	0.212	No
H2b	GR > PU	3.330	0.001	Yes
H2c	GR > PR	0.300	0.976	No
H2d	GR > Usage	3.710	0.000	Yes
		ICI A		

Table 9 Results of hypothesis test 2

(Source: Data Output, 2020)



Chapter 5

Conclusion

5.1 Conclusion

Based on the hypothesis test, e-money usage was positively affected by the two main factors affecting the use of technology in TAM, which are perceived ease of use (PEOU) and perceived usefulness (PU) meaning that the simplicity and benefits from e-money would result in the rise of e-money usage. However, e-money usage was not significantly affected by perceived risk (PR) as proven by the hypothesis test and the questionnaire responses.

Out of three TAM factors, only PU was positively affected by government regulations based on hypothesis test result. This meant that stronger regulations affect users' perception that they would receive bigger benefits from using e-money. However, based on the hypothesis test, PEOU and PR were not significantly affected by government regulations as proven by hypothesis test and questionnaire responses. Despite of this, e-money usage is directly affected by government regulations. Stronger regulations would mean more people using e-money.

5.2 Research Implication

As stated before, this research was hopefully able to aid institutions that had utilized e-money to improve their services. From the findings, we discovered that perceived ease of use and perceived usefulness of users living in Yogyakarta area had positive relations with e-money usage. Therefore, it was implied that e-money usage should remain easily accessible and usable to users. It was also implied that e-money usage to not burden the users such as by leaving paper trails and e-money usage should be faster and more convenient that cash usage. Perceived risk had a non-significant negative relation with e-money usage. Users in Yogyakarta did not seem to care about the risk that may come with e-money usage.

For government who sought to make Indonesia into a "cashless society" in compliance to the GNTT policy published by Bank Indonesia, it should be noted that government regulations had positive relationship with e-money usage. This meant that stronger regulations would cause people to use e-money more. For the factors of e-money usage, government regulations only has positive relation with the perceived usefulness of e-money users in Yogyakarta. This meant that stronger regulations would and should cause people to receive more benefits from e-money usage. Government regulations had non-significant relationship with the perceived ease of use and perceived risk of e-money users in Yogyakarta. This meant that however strong the regulation is, perception of e-money's ease of use and the risk of the users in Yogyakarta in e-money usage would not change. This can be implied that government regulations caused people to overlook the risk and the difficulty of usage of using e-money.

ISLAM

5.3 Research Limitations

Measurement of the data was done separately while it should have been done together to comply with the research figure used in this research. This research used an incomplete TAM figure and it was apparent from the lack of "attitude towards using" factor. Because of that, it was recommended that future research covering this topic to include attitude as a factor influencing actual use of e-money for more definitive results. This research also overlooked a certain factor for the respondents. The location of the respondents should be considered as past research by Ayudya and Wibowo (2018) put that factor into consideration and discovered differing results from groups of people living in urban and rural areas. Samples for this research only includes people living in Yogyakarta, therefore, the results may not represent the view and opinions of people in the whole country of Indonesia.

5.4 Recommendation

It was recommended for future research covering this topic to improve the TAM figure used in the research by putting attitude in the TAM figure. This would create more definitive results to the research. It was also recommended for future research covering this topic to put factors such as social influence and living area into consideration and they should include government regulations as a moderating variable. If the model is similar to the one used in this research, it is strongly recommended for the measurements to be conducted together. If future researchers would want to measure separately, it is recommended to create two different research models.

For the readers, this paper was hopefully able to provide insight on consumers' needs and wants in the e-money system and become the base for improvement of the e-money system. In meeting the goal of making Indonesia into a "cashless society", the government should publish more regulations enforcing the use of e-money. However, it was important that e-money usage to remain simple and not tedious for users and that the current flaws and defects in e-money system to be patched first as they would encourage more people to use e-money.



References

- Ajzen, I. & Fishbein, M. (1980). Understand Attitudes and Predicting Social Behavior. Prentice-Hall: Englewood Cliffs, New Jersey.
- Ayudya, A. C. & Wibowo, A. (2018). The intention to use e-money using theory of planned behavior and locus of control. *Jurnal Keuangan dan Perbankan 22*(2).
- Danuarta, G. L. D. & Darma, G. S. (2019). Determinants of Using Go-Pay and its Impact on Net Benefits. *International Journal of Innovative Science and Research Technology* 4(11).
- Davis, F.D., (1989). A technology acceptance model for empirically testing new end user information systems: theory and results. Doctoral Dissertation. Sloan School of Management, Massachusetts Institute of Technology
- Etikan et al. (2016). Comparison of convenience sampling and purposive sampling. American Journal of Theoretical and Applied Statistics 5(1), p. 1-4.
- Ferdiana, A. M. K. & Darma, G. S. (2019) Understanding Fintech Through Go Pay. International Journal of Innovative Science and Research Technology 4(2).
- Fishbein, M.A. & Ajzen, I. (1980). Belief, attitude, intention and behavior: an introduction to theory and research. AddisonWesley. Reading, Massachusetts
- French, J. R. P. & Raven, B. (1959). The bases of social power. In D. Cartwright (Ed.). Studies in social power. Institute for Social Research: Ann Arbor, Michigan, p. 150–167.
- Igbaria, M., Zinatelli, N., Cragg, P., Cavaye, A.L.M. (1997). Personal computing acceptance factors in small firms: a structural equation model. *MIS Quarterly (September)*, p. 279–305.
- Khatimah et al. (2019). Hedonic motivation and social influence on behavioral intention of e-money: the role of payment habit as a mediator. *International Journal of Entrepreneurship 23*(1).
- Mentari, N. W. et al. (2018). Influence factor of consumers interest on using e-Money. International Journal of Social Sciences and Humanities 3(2), p. 176-178.
- Rahmatika, U, & Fajar, M. A. (2019) Faktor-faktor yang mempengaruhi minat penggunaan electronic money: integrasi model TAM TPB dengan perceived risk. *Jurnal Nominal* 8(2).
- Suhud, U. et al. (2020). Antecedents of e-money adoption intention among Indonesian and Turkish consumers. *Management Science Letters 10*.
- Sultan, R. R. et al. (2019). Analisis technology acceptance model generasi milenial Jakarta terhadap penggunaan e-money. *Jurnal PILAR Nusa Mandiri 15*(1).
- Syahril, W. N. & Rikumahu, B. (2019). Penggunaan technology acceptance model (TAM) dalam analisis minat perilaku penggunaan e-money pada mahasiswa Universitas Telkom. Jurnal Mitra Manajemen 3(2).

- Tayibnapis, A. Z. et al. (2018). The development of digital technology in Indonesia. International Journal of Management & Business Studies 8(3).
- Venkatesh, V. & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences 39*(2).
- Venkatesh, V. & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science 46*, p. 186–204
- Vlasov, A. V. (2017) The evolution of e-money. *European Research Studies XX*, p. 215-224.



Appendix

Questionnaire

Assalamualaikum wr. wb.

Nama saya Muhammad Reza Faletehan dan saya adalah mahasiswa Fakultas Bisnis dan Ekonomi di Universitas Islam Indonesia. Sebagai tugas akhir, saya mengadakan penelitian berjudul "ANALYSIS OF PERCEIVED EASE OF USE, USEFULNESS, AND SECURITY TOWARDS USAGE OF E-MONEY PAYMENT SYSTEM AND THE EFFECT OF GOVERNMENT REGULATIONS".

Sebagai bagian dari penelitian tersebut, saya mengadakan survey yang bertujuan untuk mengetahui persepsi orang terhadap teknologi e-money. Bila ada pertanyaan mengenai kuesioner ini, anda bisa mengirim e-mail ke 16312180@students.uii.ac.id.



Nama

.....

Jenis Kelamin

O Pria

O Wanita



Untuk mengisi survei ini, responden dapat memberi tanda centang ($\sqrt{}$) pada kotak pilihan jawaban yang tersedia sesuai pendapat responden saja. Responden hanya dapat menyentang satu pilihan untuk setiap pertanyaan.

Skala penilaian adalah sebagai berikut:

- 1 = Sangat tidak setuju
- 2 = Tidak setuju
- 3 =Setuju
- 4 = Sangat setuju
- 1. Penggunaan E-money

lo ser	1	2	3	4
Saya punya banyak pengalaman menggunakan e-money		7	2	
Saya berencana untuk menggunakan e-money di masa kedepan		-		
Saya akan tetap menggunakan e-money di masa kedepan				
Sava berbaran e money akan tetan ada di masa kedenan		1	1	
Saya bemarap e-money akan tetap ada di masa kedepan				
Saya selalu mencoba menggunakan e-money daripada uang tunai 2. Persepsi kemudahan		C		
Saya selalu mencoba menggunakan e-money daripada uang tunai 2. Persepsi kemudahan	1			4
Saya selalu mencoba menggunakan e-money daripada uang tunai 2. Persepsi kemudahan Belajar menggunakan e-money mudah bagi saya	1	2	3	4
Saya selalu mencoba menggunakan e-money daripada uang tunai 2. Persepsi kemudahan Belajar menggunakan e-money mudah bagi saya Menggunakan e-money mudah bagi saya	1		3	4
Saya selalu mencoba menggunakan e-money daripada uang tunai 2. Persepsi kemudahan Belajar menggunakan e-money mudah bagi saya Menggunakan e-money mudah bagi saya Saya mudah memahami e-money	1		3	4

and the second s					_
	1	2	3	4	
Menggunakan e-money mempercepat transaksi bagi saya					
Menggunakan e-money membuat pembayaran lebih sederhana bagi saya					
Menggunakan e-money tidak menyusahkan bagi saya					
Menggunakan e-money lebih mudah daripada menggunakan uang tunai bagi saya					
Saya lebih mudah mengetahui jumlah uang saya dengan menggunakan e-money daripada uang tunai					

4. Persepsi resiko

	1	2	3	4
Menggunakan e-money beresiko bagi saya				
Saya khawatir akan keamanan dalam menggunakan e-money				
Transaksi e-money kurang bisa dipercaya bagi saya				
Saya khawatir bahwa informasi pribadi saya akan tersebar karena menggunakan e-money				
Saya khawatir akan pencurian dalam penggunaan e-money				
Saya kurang nyaman dalam menggunakan e-money				
Saya tidak mempercayai sistem e-money				
5. Peraturan pemerintah

	1	2	3	4
Saya tahu bahwa ada pengunaan e-money yang diwajibkan peraturan pemerintah				
Saya tahu bahwa ada peraturan pemerintah yang mewajibkan penggunaan e-money				
Saya akan mematuhi peraturan pemerintah yang mengharuskan saya untuk menggunakan e-money				
Saya akan menggunakan e-money bila penggunaannya diatur pemerintah atau wajib				
Saya akan menggunakan e-money bila penggunaannya diatur pemerintah atau wajib meskipun saya masih khawatir akan keamanan e-money				

