UNIVERSITI TEKNOLOGI MARA

MITIGATING FRAUD RISK IN PAYMENT SYSTEM VIA E-WALLET IMPLEMENTATION: DETERMINING USER ACCEPTANCE IN INDONESIA

MACHMUDIN EKA PRASETYA

Thesis submitted in fulfillment of the requirements for the degree of **Doctor of Philosophy** (Financial Criminology)

Accounting Research Institute

July 2022

ABSTRACT

Credit and debit cards were the first digital payment innovations, followed by internet banking, mobile banking, e-payments, and mobile payments, which are now considered the most recent innovations in e-wallet payment. Despite its benefits, e-wallet payment usage in Indonesia remains low when compared to total internet users, particularly mobile internet users, because e-wallet is typically used on a mobile phone (smartphone). The purpose of this research is to describe how e-wallet payments can mitigate the risk of fraud in traditional cash payments and to empirically investigate the factors influencing the acceptance of e-wallet payment systems among Indonesian users. The study was divided into two sections: the first addressed how e-wallet payment could reduce fraud risk, and the second area of the study addressed factors determining the acceptance of e-wallet payment in Indonesia. Thematic analysis of a systematic literature review was used in the first area of the study, which was supported by interviews and focus group discussions. The second area of the study involved an empirical study that combined the two most prominent technology acceptance theories: extended variables from the technology acceptance model (TAM) and the unified theory of acceptance and use of technology (UTAUT). The study's model is divided into two parts: the relationship between all of the extended TAM variables that eventually influence behavioural intention and the classical relationship between UTAUT predictors and behavioural intention. Age and negative past experience were also tested as moderator variables that could influence the relationship of independent variables to dependent variables. In the second area of research, questionnaire surveys were used with structural equation modelling (SEM) as a data analysis method. The survey gathered 470 responses from postgraduate students at Indonesia's top five universities, according to the 2019 OS World Ranking. According to the findings of the first area of the study, there is a need to switch from cash to e-payment, subject to the obstacles and requirements in the switching process. Infrastructure, user safety, acceptability and availability, and the established ecosystem environment are among the obstacles. One of the outcomes of the switching process will be a reduction in fraud risk. The survey data was analysed in two parts: (1) only perceived privacy was not significant in extended TAM, (2) all UTAUT variables significantly influenced behavioural intention, and facilitating conditions significantly influenced usage adoption behaviour. Behavioral intention influenced usage adoption significantly and mediated the relationship between all predictors and usage adoption behaviour. Finally, negative past experience was not found to be a significant moderator on the relationship between behavioural intention and usage adoption behaviour. Simultaneously, age was found to be a significant moderator of the relationship between all UTAUT predictors and behavioural intention and usage adoption behaviour. The only difference was in which was more pronounced between younger and older users. The findings from the first area of research will back up the findings from the second area of research. It will have theoretical and practical implications that can be used to improve e-wallet payment services by all e-wallet stakeholders. This study will benefit all parties involved, including e-wallet vendors, the government as a regulator, and merchants. As a result, it can develop the right policy to encourage potential users to use e-wallet payment systems and merchants to attract potential customers.

ACKNOWLEDGEMENT

First and foremost, I wish to thank Allah the Almighty for providing me with the opportunity and health to embark and complete this long and difficult journey. Without Allah's power and blessing, none of this is possible. My heartfelt gratitude and appreciation go to my main supervisor, Dr. Intan Salwani Mohamed, as well as my other supervisors, Dr. Shuhaida Mohamed Shuhidan and Dr. Gde Harja Wasistha. Thank you for your perseverance, support, kindness, patience, and wealth of ideas in assisting me in making it happen.

My heartfelt gratitude goes to my wife, Narita Dini Anggraini, for her endless love and patience, which kept me going through the thick and thin of this journey. My two sons and daughter Althaf, Lala and Biyan for unending support throughout the journey. Their patience, sacrifices and support along the way increased my motivation to finish the journey quickly. This achievement is dedicated to each and every one of you.

I would also like to thank GOT 2 Universitas Indonesia members who have enrolled in a Ph.D. program at the Accounting Research Institute. Our camaraderie adds color and cheer to this journey; special thanks to my survey club seniors, Ibu Ipung and Pak Iyul, for our fruitful discussion and sharing session about topics other than research methodology.

My gratitude also goes to my shadow supervisors, Dr. Gita Gayatri and Dr. Setyo Hari Wiyanto, who helped me with some aspects of the journey, as well as my English mentor, Ibu DJ Sulichah, who assisted me with the pre-IELTS test.

Finally, this thesis is dedicated to my mother, Nurainah, who has had the vision and determination to ensure that I have received an education since elementary school. "It's for you Ma". My father, even if only for a few stages of my life, for his love and care. This triumph is dedicated to both of you. Alhamdulillah.

TABLE OF CONTENTS

			Page
CON	FIRMA	TION BY PANEL OF EXAMINERS	ii
AUT	HOR'S	DECLARATION	iii
ABS	ΓRACT		iv
ACK	NOWL	EDGEMENT	v
TAB	LE OF	CONTENTS	vi
LIST	OF TA	BLES	xii
LIST	OF FIG	GURES	xvii
LIST	OF SY	MBOLS	XX
LIST	OF AB	BREVIATIONS	xxi
СНА	PTER (ONE INTRODUCTION	23
1.1	Introd	uction	23
1.2	Defini	tion of Topic	24
	1.2.1	E-wallet Payment System	24
	1.2.2	Fraud and Fraud Risk Management	26
	1.2.3	User Acceptance	28
1.3	Backg	Background of Study	
1.4	Issues	and Problem Statement	31
1.5	Resea	Research Objectives	
	1.5.1	Main Objectives	32
	1.5.2	Specific Objective	33
1.6	Scope	and Limitation of the Study	33
1.7	Justifi	Justification of the Study	
	1.7.2	Gaps in Knowledge Area	34
	1.7.3	Justification for the Selection of the E-wallet Payment	System in
		Indonesia	37
	1.7.4	Potential Outcomes and Practices	41
1.8	Signif	Significant Contribution to New Knowledge 4	
1.9	Organization of the Chapters 42		

1.10	Chapter	Summary

1	3
4	- 1

СНА	PTER 7	ΓWO LITERATURE REVIEW	45			
2.1	Introduction					
2.2	Mobile Payments and Fraud Risk Reduction.					
2.3	The Evolution of Payment Systems					
	2.3.1	Traditional Payment Systems	49			
	2.3.2	Credit Card	50			
	2.3.3	Debit Card	52			
	2.3.4	The Emergence of Electronic/Mobile Payment System	52			
2.4	Mobil	e Payment System and E-Wallet System.	53			
	2.4.2	E-wallet Payment from Global Perspective	55			
	2.4.3	E-wallet Payment from Asia Perspective	57			
	2.4.4	E-wallet Payment from Indonesia Perspective	61			
2.5	Early	Theories About the Adoption Process	68			
	2.5.1	Diffusion of Innovation Theory (DOI)	68			
	2.5.2	Theory of Reasoned Action (TRA)	71			
	2.5.3	Theory of Planned Behavior (TPB)	74			
	2.5.4	Technology Acceptance Model (TAM)	75			
	2.5.5	Unified Theory of Acceptance and The Use of Technology	(UTAUT)			
			86			
2.6	Summ	Summary on Theories Related to New Innovation Adoption Process and New				
	Techn	nology Acceptance and Adoption Behavior.	98			
2.7	Gaps	in Knowledge Area	102			
2.8	Devel	Development of Research Model				
	2.8.1	Drivers to Behavioral Intention to Adopt E-wallet Paymen	t Systems.			
			106			
	2.8.2	Behavioral Intention to Adopt and Usage Behavior	119			
	2.8.3	The Measurement of Behavioral Intention to Adopt and Usag	e behavior			
			121			
	2.8.4	Age (Moderating Variable)	122			
	2.8.5	Negative Past Experience (NPE) (Moderating Variable)	125			
2.9	Chapt	er Summary	126			