CHAPTER II

LITERATURE REVIEW

2.1. Literature Review

Literature review reveals that abundant researches on mobile technologies adoption especially in mobile banking and mobile payment adoption with the particular focus on the consumer adoption perspective. Most of researches were primarily using TAM, UTAUT, UTAUT2 model as theoretical model. UTAUT and UTAUT2 have gained popularity in recent years.

In Europe, many empirical studies had been investigated in different countries including Ireland, England, Portugal, and France. Duane et al. (2014) developed a model to understand consumer's willingness to use mobile payment through their smartphones in Ireland using extended TAM and found that Trust is strongly affect willingness to use alongside perceive ease of use and perceive usefulness. Slade et al. (2014) investigated consumer adoption of proximity mobile payments in England by applying UTAUT2 model with two additional variables including trust and perceived risk. The study found that Intention to use were not significantly affected by Performance Expectancy, Habit, Trust, and Hedonic Motivation. Slade et al. (2016) also developed a model to understand consumer's intention to use remote mobile payment by extending UTAUT with Innovativeness, Risk, and Trust. The result of this study found that Trust was not significantly affect adoption intention.

Two studies also had been conducted by Oliveira et al. (2014,2016) in Portugal. Oliveira et al. (2014) investigated mobile banking adoption by integrating UTAUT, TTF, as well as ITM model and found that only Performance Expectancy and Trust were directly significant toward intention to use mobile banking. Oliveira et al. (2016) also investigated mobile payment adoption by incorporating UTAUT2, DOI, and Perceived Technology Security. This study found that Effort Expectancy, Facilitating Conditions, Hedonic Motivation, as well as Price Value were not significantly affect intention to adopt mobile payment in Portugal. In France, Koenig-Lewis et al. (2016) also studied mobile payment adoption by extending TAM with enjoyment and social influence. The study reveals that Perceive Ease of Use was the only factors that insignificant toward intention to use.

Few investigations have been conducted in South America as well as in North America. A consumer adoption model for mobile wallet has been developed by Kafsh (2015) in Canada by combining TAM and IDT. The result found that Trialability and Awareness were important predictors. In Brazil, Abrahao et al. (2016) investigated intention to adopt mobile payment by incorporating UTAUT model with perceived risk as well as perceived cost and found that the intention to adopt mobile payment were affected by performance expectancy, effort expectancy, social influence, and perceived risk.

In Africa, Several researches have been conducted in Malawi, Tanzania, and Mozambique. Unyolo (2012) developed consumer mobile money adoption in Malawi

and found that Performance Expectancy, Effort Expectancy, Facilitating Conditions, Price Value, Trust, and Experience were significantly affect intention to use whereas social influence and infrastructure reliability were insignificantly affect intention to use. In Tanzania, Tossy (2012) also developed consumer adoption model for mobile payment system specifically for primary and secondary school student examination fees by incorporating UTAUT with trust as well as perceived risk. The study reveals that intention to use greatly affected by performance expectancy, social influence, trust, and perceived risk. Baptista and Oliveira (2015) investigated mobile banking acceptance in Mozambique by using UTAUT2. The result revealed that performance expectancy, hedonic motivation, and habit were the main predictor toward intention to use mobile banking.

Abundant studies were found in many different sub-regions throughout Asia including East Asia, Western Asia, South Asia, as well as Southeast Asia. In East Asia, Shin (2009) investigated consumer acceptance of mobile wallet in South Korea and suggested that trust were influenced by word of mouth from users. Investigation toward Mobile banking adoption also have been conducted by Yu (2012) in Taipei using UTAUT2 model. The result from the study found that intention to use were significantly influenced by social influence, perceived financial cost, performance expectancy, as well as perceived credibility.

In China, Zhou et al. (2010) and Zhong et al. (2013) investigated the adoption of mobile banking and the adoption of mobile payment respectively. By Incorporating

TTF and UTAUT, Zhou et al. (2010) found that user adoption were significantly affected by performance expectancy, social influence, facilitating conditions, as well as technology task fit whereas Zhong et al. (2013) found that compatibility and interconnection were strongly influence intention to use. In addition, another study of mobile banking adoption were conducted by Liu et al. (2009). In this study, the role of trust were examined as multi-dimensional variables.

In Western Asia, Alkhunizan & Love (2012) investigated factors that drive mobile commerce adoption in Saudi Arabia by extending UTAUT model with Perceived Cost and Trust. The study found that intention to use were greatly influenced by Perceived Cost, Performance Expectancy, and Effort Expectancy. In the same year, Al Jabri and Sohail (2012) also investigate mobile banking adoption in Saudi Arabia by applying DOI and found that trialability, complexity, and perceived risk were not significant toward mobile banking adoption.

Qasim & Abu Shanab (2015) studied the impact of network externalities in mobile payment adoption by using UTAUT as primary theoretical foundation and found that network externalities were important factor driving mobile payment acceptance alongside performance expectancy, social influence, and trust. A study of mobile banking adoption by incorporating UTAUT model has been conducted in Iran by Saadi and Khoshtinat (2015). The study found that intention to use were greatly affect by effort expectancy and subjective norms.

In South Asia, Kappor and Dwivedi (2015) studied the role of three sets of innovations on mobile payment service adoption by using DOI as main theoretical model. The result showed that adoption intention were significantly affected by relative advantages, compatibility, complexity, trialability, voluntariness, and demonstrability. Shah et al. (2013) investigated mobile commerce adoption in Pakistan by incorporating TAM with several additional variables and found that intention to use were greatly influenced by perceived ease of use, perceived usefulness, social influence, perceived cost, trust, and awareness. In addition, Afshan and Shariff (2015) developed model for mobile banking acceptance in Pakistan by combining UTAUT, TTF, and ITM. The result suggest that banks should worked on increasing trust, technology task fit, as well as facilitating conditions. Two studies to develop model using UTAUT2 as theoretical background and PLS as data analysis tool have been conducted by Mahfuz et al. (2016) and Abdullah et al. (2016) in Bangladesh. While Mahfuz et al. (2016) found that intention to use mobile banking service were significantly influenced by performance expectancy, facilitating conditions, price value, and power distance, Abdullah et al. (2016) found that effort expectancy and social influence were the only significant predictors.

Several studies have been conducted in Malaysia. Vaithilingam (2013) investigated the effect of trust and security for mobile banking adoption and found that both trust and security were important factors toward development of mobile banking. Ewe et al. (2014) also investigated mobile banking adoption by extending

DOI with network externalities and found that intention to use were significantly affected by compatibility, complexity, as well as the perceived availability of complementary services. Moreover, Teo et al (2015) investigated the effect of convenience and speed in mobile payment in Malaysia by applying UTAUT model and found that effort expectancy and facilitating conditions were significantly influenced behavioral intention.

In Southeast Asia, in addition to Malaysia, study of mobile banking adoption using extended TAM have been conducted in Indonesia by Arahita and Hatammimi (2015). The study found that Awareness, Social Influence, as well as Perceived Ease of Use were important. In Thailand, Phontanukitithaworn et al. (2015) investigated mobile payment adoption from the early adopters using TAM as main theoretical model and found that Compatibility, Subjective Norms, Trust, and Perceived Cost were significantly influenced intention to use mobile payment in Thailand.

In addition, a study also have been conducted in Oceania. Xin et al. (2015) investigated the antecedents of consumer trust in mobile payment adoption in New Zealand and found that consumers are not concerned with the risk of their information will inappropriately exploited by service providers as well as mobile payment providers. Table 2.1. below summarized the literature review in order of its publication date with UTAUT or UTAUT2 as main theoretical model. The complete summary can be seen in Appendix I.

Table 2.1. Summary Of Previous Studies about Mobile Adoption.

Title Author (Pub. Year)	Object / Base Model	Sample / Location / Method	Relationship toward BI	
			Sig	Not Sig.
Towards an understanding of the consumer acceptance of mobile wallet Shin (2009)	M-Wallet / UTAUT	296 respondents in Korea / CB-SEM	Perceived Security, Attitude, Trust	Social Influence Self-Efficacy
Integrating TTF and UTAUT to explain mobile banking user adoption Zhou et al. (2010)	M-Banking / UTAUT + TTF	250 respondents in China / PLS-SEM	Performance Expectancy, Social Influence, Facilitating Conditions, Task Tech. Fit	Effort Expectancy
Building Consumer Mobile Money Adoption and Trust in Conditions Where Infrastructures are Unreliable (Unyolo, 2012)	M-Money / UTAUT2	508 respondents in Malawi / CB-SEM	Performance Expectancy, Effort expectancy, Facilitating Conditions, Price Value, Trust, Experience	Social Influence, Infrastructure Reliability
Factors Affecting Individuals to adopt Mobile Banking : Empirical Evidence from the UTAUT Model Yu (2012)	M-Banking / UTAUT	441 respondents in Taipei / PLS-SEM	Performance Expectancy, Social Influence, Perceived Credibility, Perceived Financial Cost	Effort Expectancy,
What drives mobile commerce ? An empirical evaluation of revised UTAUT model Alkhunaizan & Love (2012)	M-Commerce / UTAUT	574 respondents in Saudi Arabia / Regression	Cost, Performance Expectancy, Effort Expectancy	Trust, Social Influence
Modelling The Adoption Of Mobile Payment System For Primary And Secondary School Student Examination Fees In Developing Countries: Tanzanian Experience Tossy (2014)	M-Payment / UTAUT	182 respondents in Tanzania / PLS-SEM	Performance Expectancy, Social Influence, Trust, Perceived Risk	Facilitating Conditions, Effort Expectancy

Title Author (Pub. Year)	Object / Base Model	Sample / Location / Method	Relationship toward BI	
			Sig	Not Sig.
Exploring consumer adoption of proximity mobile payments Slade et al. (2014)	M-Payment / UTAUT2	244 respondents in England / Regression	Performane Expectancy, Social Influence, Habit, Trust, Perceived Risk	Effort Expectancy, Facilitating Conditions, Price Value, Hedonic Motivation
Extending the understanding of mobile banking adoption: When UTAUT meets TTF and ITM Oliveira et al. (2014)	M-Payment / UTAUT + ITM	194 respondents in Portugal / CB-SEM	Performance Expectancy, Trust	Effort Expectancy, Social Influence, Firm Reputation
Influencing Factors on Tend to Use Mobile Banking in Refah Bank Saadi and Khoshtinat (2015)	M-Banking / UTAUT	276 respondents in Iran / CB-SEM	Effort Expectancy, Subjective Norms	Performance Expectancy, Awareness
Driver of mobile payment acceptance: The impact of network externalities Qasim and Abu-shanab (2015)	M-Payment / UTAUT	253 respondents in Jordan / CB-SEM	Performance Expectancy, Social Influence, Trust, Network Externalities	Effort Expectancy
Modelling Consumer's Adoption Intentions of Remote Mobile Payments in the United Kingdom: Extending UTAUT with Innovativeness, Risk, and Trust Slade et al. (2015)	M-Payment / UTAUT	268 respondents in England / CB-SEM	Perfomance Expectancy, Social Influence,, Innovativeness, Perceived Risk	Trust
Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators Baptista and Oliveira (2015)	M-Payment / UTAUT2 + CUL	252 respondents in Mozambique / PLS-SEM	Performance Expectancy, Hedonic Motivation, Habitt	Effort Expectancy, Social Influence, Facilitating Conditions, Price Value
Acceptance of Mobile Banking Framework in Pakistan Afshan and Sharif (2015)	M-Banking / UTAUT + TTF + ITM	151 respondents in Pakistan / CB-SEM	Facilitating Conditions, Technology Task Fit, Initial Trust	Performance Expectancy, Effort Expectancy, Social

Title Author (Pub. Year)	Object / Base Model	Sample / Location / Method	Relationship toward BI	
			Sig	Not Sig.
				Influence,
Enjoyment and Social Influence: predicting mobile payment adoption Koenig-Lewis et al. (2015)	M-Payment / UTAUT2	316 respondents in France / CB-SEM	Perceived Usefulness, Knowledge, Perceived Enjoyment, Social Influence, Perceived Risk	Perceived Ease of Use
The effects of convenience and speed in m-payment Teo et al. (2015)	M-Payment / UTAUT	194 respondents in Malaysia / PLS-SEM	Effort Expectancy, Facilitating Conditions	Social Influence, Performance Expectancy
Consumer acceptance of mobile banking services in bangladesh Nisha et al. (2015)	M-Banking / UTAUT	1000 respondents in Bangladesh / CB-SEM	Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Self-Efficacy	Perceived Credibility, Perceived Financial Cost,
Intention of adoption of mobile payment: An analysis in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT) Abrahão et al (2016)	M-Payment / UTAUT	605 respondents in Brazil / PLS-SEM	Peformance Expectancy, Effort Expectancy, Sosical Influence, Perceived Risk	Perceived Cost
The Influence of Cultural Dimensions and Website Quality on m-banking Services Adoption in Bangladesh: Applying the UTAUT2 Model using PLS Mahfuz et al. (2016)	M-Banking / UTAUT2	220 respondents in Bangladesh / PLS-SEM	Peformance Expectancy, Facilitating Conditions, Price Value, Power Distance	Effort Expectancy, Masculinity, Website Quality, Uncertainty,
Mobile Payment : Understanding the determinants of customer adoption and intention to	M-Payment / UTAUT2 + DOI	217 respondents in Portugal / PLS-SEM	Performance Expectancy Social Influence Perceived	Facilitating Conditions, Hedonic Motivation,

Title Author (Pub. Year)	Object / Base Model	Sample / Location / Method	Relationship toward BI	
			Sig	Not Sig.
recommend the technology Oliveira et al. (2016)			Technology Security, Compatibility, Personal Innovativeness	Price Value, Effort Expectancy
The Influence of Website Quality on M-banking Services Adoption in Bangladesh: applying the UTAUT2 model using PLS Abdullah et al. (2016)	M-Payment / UTAUT2	115 respondents in Bangladesh	Effort Expectancy, Social Influence	Facilitating Conditions, Habit, Hedonic Motivation, Performance Expectancy, Price Value

2.2. Conceptual Framework and Hypothesis

2.2.1. Theoretical Foundation of Adoption Models

Unified Theory of Acceptance and Use of Technology (UTAUT) is a technology acceptance model formulated by Venkantesh et al. (2003) in a research named "User acceptance of information technology : Toward Unified View". The UTAUT model can be used to understand user intentions to use an information system and usage behavior of individuals. This model was developed from empirical study based on constructs from eight technology adoption model : theory of reasoned theory (TRA), TAM, TAM2, TPB, DTPB, combined TAM and TPB (C-TAM-TPB), IDT, motivational model (MM), Model of PC utilization. The study found that UTAUT have four key constructs that representing essentials elements from eight models : (1) performance expectancy, (2) effort expectancy, (3) social influence, and (4) facilitating conditions. Also there are four moderating variables : (1) gender (2) age, (3) experience, and (4) voluntariness of use which considered to moderate the impact

of four key constructs in UTAUT on usage intention and behaviour.

Venkantesh et al. (2012) continue their research named "Consumer Acceptance and use of information technology : Extending the Unified Theory of Acceptance and Use of Technology" proposed new model named UTAUT2 that incorporated three new constructs to UTAUT : (1) hedonic motivation (2) price value (3) habit. Voluntariness to use was removed from the model leaving only age, gender, and experience as moderating variables. Therefore, This study choose UTAUT2 as main theoretical model to develop hypothesis.

2.2.2. Hypothesis Development

The aim of this study is to develop consumer adoption model of behavioral intention toward mobile wallet in Indonesia. Thus, the use behavioral were not observed.

A. Performance Expectancy

Performance expectancy is defined as *the degree which a person the degree which a person believes that using a particular system would enhance his / her job performance* (Venkantesh et al., 2003). Venkantesh et al. (2003) also argues that it is the most influental determinant on behavioral intention for UTAUT model. In mobile wallet, mobile payment, and mobile banking context, the performance expectancy is mostly assosiated with the speed of the transaction which can make transaction more eficient, more convenience, and faster. Many previous studies in many countries in

Europe or Afrika such as Brazil, China, Portugal, Spain, England, Mozambique and Tanzania showed that performance expectancy have significant relationship toward behavioral intention (Zhou et al., 2010, Tossy, 2012, Slade et al., 2014; Baptista and Oliveira, 2015; Qasim and Abu-shanab, 2015; Slade et al, 2015; Abrahão et al., 2016, Mahfuz et al., 2016, Oliveira et al., 2016). In Contrast, Results from some studies in mobile banking and mobile payment showed that no significant relationship were found between performance expectancy and behavioral intention (Akturan and Tehan, 2012; Chong et al, 2012; Phontanukitithaworn et al, 2015; Teo et al., 2015; Afshan & Sharif, 2015; Arahita and Hatammimi, 2015; Abdullah et al, 2016). Most of these studies were conducted in developing countries such as Malaysia, Thailand, Pakistan, and Indonesia. In addition, some of those studies were also focused in youth people (Chong et al, 2012; Akturan and Tehan, 2012; Teo et al., 2015). Thus,

H1 : Behavioral Intention is not significantly affected by Performance Expectancy.

B. Effort Expectancy

Effort expectancy is *defined as the degree to which a person using a system would be free of effort* (Davis, 1989; Davis et al., 1989; Venkantesh et al., 2003). In previous studies, Many studies showed that the more the consumers believes that the less the effort to learn and use mobile technologies such as mobile payment and mobile banking, the stronger their intention to use it (Teo et al., 2015; Abdullah et al., 2016, Abrahão et al., 2016). Moreover, Effort Expectancy also represent complexity.

Low adoption of variety mobile payment system including mobile wallet may occur due to high complexity (Laukkanen and Lauronen, 2005). However, Since mobile technologies have become more common place these days and people have acquired more knowledge of using smart phones and new applications, there will be less concern about the complexity of the new systems. Abundant researches have supported this statement (Zhou et al., 2010; Tossy, 2012; Slade et al., 2014; Oliveira et al., 2014; Afshan and Sharif, 2015; Qasim and Abu-shanab, 2015; Mahfuz et al., 2016; Oliveira et al., 2016). Hence,

H1 : Behavioral Intention is not significantly affected by Effort Expectancy.

C. Facilitating Conditions

Facilitating Conditions is *the objective factors in the environment that observers agree make an easy act to do including the provision of computer support* **(**Venkantesh et al., 2003**;** Thompson et al, 1991). By ensuring all facilities are ready to be used, technologies can be utilized without worrying its availability in various places. (Park et al., 2007; Tang et al., 2014). Facilitation conditions is also embodies compatibility which the degree to which an innovation is perceived as being consistent with existing values, needs, and experiences of potential adopter (Moore and Benbasat 1991; Rogers, 2003). Previous study also showed that Facilitating Conditions is a key determinant of mobile technologies adoption (Unyolo, 2012; Yu, 2012; Yang et al., 2012; Afshan and Sharif, 2015; Mahfuz et al., 2015, Nisha et al., 2015; Teo et al., 2015). In Contrast, Prior studies also found that Facilitating

conditions insignificantly affect behavioral intention to adopt either mobile payment or mobile banking (Tossy, 2012; Slade et al., 2014; Oliveira et al., 2015, Baptista and Oliveira, 2015, Abdullah et al, 2016); Therefore,

H3: *Behavioral Intention is significantly affected by Faciliating Conditions.*

D. Social Influence

Social Influence is *the person perception that most people who are important to him/her think he/she should or should not perform the behaviour in question* (Venkantesh et al., 2003; Fishbein & Azjen, 1975). In deciding to buy something such as smartphones or adopting new technologies, most people tend to seek recomendation from others, especially families and close friends. (Peng et al., 2011; Yang et al., 2012). Morover, nowadays consumers can also easily search for informations in the internet. In many situations, Individual can also decide to use a new technology not because it will be helpful for him/her but simply because the image created from using the technology. Many previous studies showed that Social Influence significantly affect behavioral intention. (Al-Somalli et al, 2009; Zhou et al., 2010; Tossy, 2012; Yu, 2012; Bidar et al., 2014; Slade et al., 2014; Nisha et al., 2015; Slade et al., 2015; Qasim and Abu-shanab, 2015; Abdullah et al., 2016; Abrahão et al., 2016; Koenig-Lewis et al, 2016). In contrast Shin (2009), Oliveira et al. (2014), Afshan and Sharif (2015), Teo et al. (2015), Baptista and Oliveira (2015) found the opposite. Considering the buying behaviour for consumers in Indonesia (APJII & UI, 2015), Thus,

H4: Behavioral Intention is significantly affected by Social Influence.

E. Price Value

Price Value is *the consumers' cognitive tradeoff between the perceived benefits of the applications and the monetary cost for using them* (Dodds et al., 1991). If the advantages are greater than cost of using particular technology, it will impact significantly on use intention (Venkantesh et al., 2013). In mobile payment and mobile banking context, a transaction cost often charged excluded from initial transaction amount as well as in mobile wallet. For example, in order to obtain cheaper price in some merchants, consumers also is charged with transaction fee when they cash-in before. If consumers believe that the discount is more valuable than what they sacrificed. Numerous study also found that price value have important role on consumer's willingness to use mobile technology (Alkhunizan and Love, 2012; Chong et al., 2012; Unyolo, 2012; Yu, 2012, Yang et al., 2012; Tang et al., 2014; Mahfuz et al., 2016) while others found the opposite (Awwad and Ghadi, 2010; Slade et al., 2014; Baptista and Oliveira, 2015; Abdullah et al., 2016; Oliveira et al, 2016) Therefore,

H5: Behavioral Intention is significantly affected by Price Value.

F. Hedonic Motivation

Hedonic Motivation *is defined as fun or pleasure derived from using a technology* (Brown et al., 2005). In organizational context, information system is viewed as task-oriented system which utilititarian factor is the main focus (van der

Heijden, 2004; Thong et al., 2006). In consumer context, Consumer not only consider utilitarian factor but also the enjoyment of using particualer technology. In mobile payment context, For example, the feeling produced when consumer tap their mobile phones in a Point Of Sale scanner is different than use traditional method such as cash, debit, and credit card. User interface and user experience plays an important role to create pleasure and have been showed in some studies (Tang et al., 2014; Yang et al., 2014; Baptista and Oliveira, 2015) while others found the opposite of their results (Slade et al.,2014, Oliveira et al., 2016, Abdullah et al., 2016). Therefore,

H5: Behavioral Intention is significantly affected by Hedonic Motivation.

G. Habit

Habit refers to *the degree to which people tend to act automatically due to learning and previous experiences in the usage of technology* (Limayem et al., 2007; Venkatesh et al., 2012). It includes the instant activation and automaticity perspective, of which two perspectives were resisted to one another (Venkatesh et al., 2012). Habit were added by Venkantesh et al. (2013) into originial UTAUT model (Venkantesh et al., 2003) and were found that habit is one of strongest determinant in technology adoption. Some studies that using UTAUT2 (Zhong et al., 2013; Slade et al., 2014; Baptista and Oliveira., 2015) also have been conducted and supported Venkantesh et al. (2012) finding.. In contrary, Abdullah et al. (2016) found otherwise. Hence,

H7: Behavioral Intention is significantly affected by Habit

H. Trust

Trust refers *to a belief that a particular technological solution is secure and trustworthy or not* (Dahlberg et al, 2003). Shin (2009) found that trust is significantly affect the consumer's likelihood to adopt mobile wallet. Abundant previous studies in different countries also reveals trust is a key determinant that influence customer's intention to adopt mobile services such as mobile payment and mobile banking (Liu et al., 2009; Zhou and Lu, 2011; Chong et al., 2012; Tossy 2012; Unyolo, 2012; Shah et al., 2013; Vaithilingam, 2013; Duane et al., 2014; Slade et al., 2014; Oliveira et al., 2014; Khasawneh, 2015; Slade et al., 2015; Phontanukitithaworn et al., 2015; Xin et al., 2015; Qasim and Abu-shanab, 2015). None of previous studies that showed insignificant relationship between trust and behavioral intention were found. Thus,

H8: Behavioral Intention is significantly affected by Trust.

I. Trialability

Trialability is defined as *the degree to which a techno-relationshop innovation may be experimented with on a limited basis* (Rogers, 2003). Potential adopter think they will be more comfortable with the technology if they can try it in trial basis. In mobile banking and mobile payment context, EY (2014) found that most consumers want free trial of services. In previous study, Kafsh (2015) found that trialability is influence the perceived usefulness and lead to higher behavioral intention to use. Awwad and Ghadi (2010) and Kappor and Dwivedi (2015) have also found the direct positive relationship between trialability and behavioral intention. In contrast,

insignificant relationship have also been found in some studies (Al Jabri and Sohail, 2012; Chong et al., 2012). Through experiment with the technologies can change the perception of user into greater understanding of usefulness and ease to use of mobile wallet and give some idea about how consumers can get benefit from it. A trial can also erase negative perception toward mobile wallet related to trust, privacy concert and security measures. Therefore,

H9: Behavioral Intention is significantly affected by Trialability.

J. Awareness

Awareness refers *to individual consumer's interest and curiousity* (Endsley & Garland, 2000)**.** Failure to adopt technologies could happen simply because of a lack of awareness (Rogers, 2003). Kafsh (2015) found that awareness is a key pillar in mobile wallet adoption among individuals. Similar result were also found by Al-Sommali et al. (2009) and Mohammadi (2015). If the awareness toward mobile wallet is low, so individual may assume that mobile that mobile wallet is useless. In other word, the mobile wallet actually provide variety of features and offers good value for consumers but because the low awareness, those features and values is not seen. Wang and Li (2011) in Taiwan, Shah et al. (2013) in Pakistan, and Arahita and Hatammimi (2015) in Indonesia have found the significant direct relationship between awareness and behavioral intention. Communicating the brand to consumer so that consumer is aware of the brand is essential since the adoption or rejection toward innovation begins when consumer become aware toward it (Rogers and

Shoemaker, 1971; Howard & Moore, 1982). Low awareness could make actual values and features. In addition, Saadi and Khostinat (2015) argues that awareness only significant for consumer who know nothing about the brand or the technologies, Hence, Saadi and Khostinat (2015) showed insignificant relationship in their study. Thus,

H10: Behavioral Intention is significantly affected by Awareness.

K. Network externalities

Network externalities refers to *the value of a technology is increased when more users is begin to use the technology* (Haruvy and Prasad 1998; Van Hove, 2001). It is important to achieve critical mass which is the point where diffusion of innovation becomes self sustaining (Rogers, 2003). The number of merchants in the network as well as the numbers of users seems become prerequisite for most consumer's to adopt mobile services (Dahlberg and Mallat 2002; Mallat, 2007; Au & Kauffman 2008). In previous study, Ewe et al. (2014) found that network externalities is significantly affect intention to use of mobile payment acceptance. Same results also derived from Qasim and Abu-Sanab (2015) study. In other word, If more merchants accept mobile wallet services will affect significantly to the willingness of consumers to adopt them. Moreover, the more consumers adopt the mobile wallet the more merchants joined in the network, as they see opportunities in the market. Hence,

H11: Behavioral Intention is significantly affected by Network Externalities.

2.2.3. Research Model

Based on hypothesis development, the research model of this study can be seen at figure 2.1 below. There were eleven constructs pointed at Behaviroal intention including Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Price Value, Hedonic Motivation, Habit, Trust, Network Expectancy, Awareness, and Trialability.

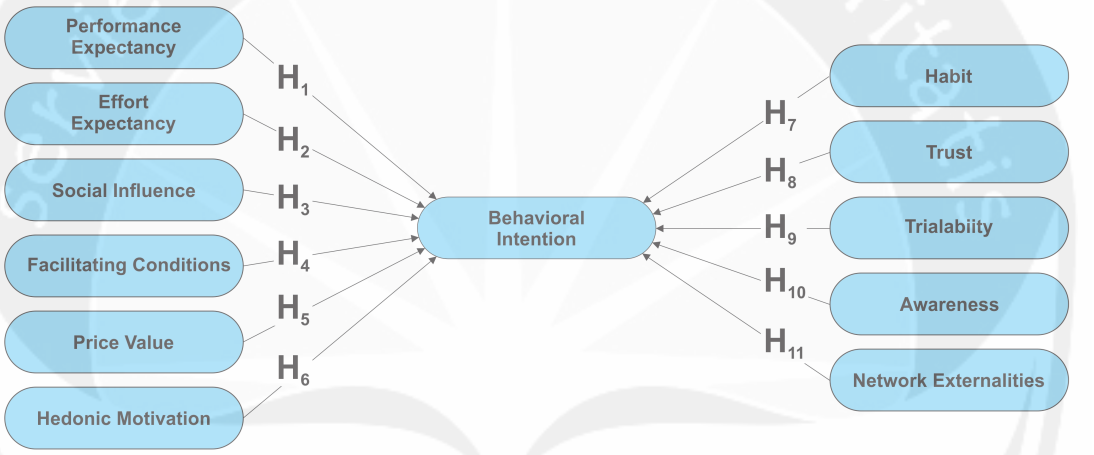

Figure 2.1. Research Model Proposed