

AN EMPIRICAL STUDY ON USER'S CONTINUOUS USAGE INTENTION OF MOBILE PAYMENT SERVICES AMONG GENERATION Z IN BANDUNG CITY

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Abstract. *This research aims to see the factors influencing the user's continuous usage intention of mobile payment services among generation Z in Bandung City, coming from UTAUT as research foundation. This research also adds literature on perceived risk and hedonic motivation. The research model has a sample of 479 correspondent using mobile payment services and considered as generation Z who lives in Bandung City. The result shows that performance expectancy, hedonic motivation, and social influence have a significant positive impact on consumer's continuous usage intention of mobile payment services among generation Z in Bandung City. Meanwhile, effort expectancy and perceived risk do not have a considerable effect.*

Keywords: *Continuous Usage Intention; UTAUT; Perceived Risk; Hedonic Motivation; Mobile Payment Services*

INTRODUCTION

The increase in internet services and mobile phone users has transformed the traditional payment industry with more focus on involving technology in the business model. There has been some rapid development from financial institutions, telecommunication operator, and merchants to increase the mobile-cellular service using the internet and mobile-cellular use (Humbani & Wiese, 2017). Fintech or financial technology is the term used to explain the combination of financial services which bring new kind of financial services and technology such as mobile phone and internet of things (IoT) (Kim et al., 2015). The service comes in the form of the ability of users to make commercial transactions through mobile phones (Kim et al., 2009). Currently, emerging markets make up to one-third of the total global non-cash transaction and by 2021 is expected to account for half of the worldwide trade. Asia is expected as the leader in growth as it will have growth at 28.8% CAGR from 2016 to 2021. E-wallet transactions in 2016 are approximated to be about 41.8 billion or 8.6% from global non-cash transactions (BNP Paribas, 2018).

Some research has stated that successful new IT development heavily relies on continuous usage rather than early adoption (Lim & Ting, 2014). Continuous usage intention is one of the most vital parts for the mobile payment application to be successful. Continuous usage is considered to be more important than initial use intention since the cost of retaining existing customers is five times cheaper than the cost of gaining new customer (Ko et al., 2008) and the long-term value gain through loyal customers (Li et al., 2006). Continuous usage has been proven to be a significant factor in determining social marketplace application success (Dron, 2007). Given the predicted rise of financial technology services such as mobile payment, there is still some lack of research regarding continuous usage in the mobile payment system. This study aims to investigate the user's continuous usage intention of mobile payment services in Indonesia. The object of this study is Indonesia's mobile payment providers since it has the highest user penetration among another payment method (Agusta & Hutabarat, 2018). The author will take the correspondent from generation Z since generation Z is expected to be the primary driver of mobile payment in Indonesia (Khan et al., 2016). The author wants to find what factor has the most prominent significance in determining continuous usage intention. The author hopes the study able to help decision maker and regulation to be able to know what factors can have an impact on the use of mobile payment in Indonesia.

LITERATURE REVIEW

This research is using several related kinds of literature in this section

Mobile Payment

Mobile payment has seen growing use in Indonesia as the emerging of mobile and electronic services. Unlike its traditional counterpart, mobile payment able to create transactions through mobile devices without the limitations of time and location (Chandra et al., 2010). Mobile payment can be used in amount regarding purchasing tickets, transport fares, electronic materials, as far as paying bills and invoices (A.Au & Kauffman, 2008). The term of mobile payment is considered new and easily misunderstood. Mobile devices are used as a medium for the financial transaction (Iman, 2018).

Generation Z

People are called the same generation because as the individuals, born in the same historical age, same life period, and influence from technology and experience (Pécsi Tudományegyetem, 2013). Generation Z, who born between 1995-2010 (Oblinger & Oblinger, 2015), is a generation that familiar with turbulence. These characteristics of Generation Z make them unique and different in term of consumption behaviour. While Generation Z still relies on purchase in-store, online purchase is gaining some attraction among Generation Z. They believe that shopping through online able to eliminate friction since it is more convenient, ready to find a better deal, see multiple brands at once, and faster than going to physical stores. Most of that online transaction is made through smartphone (Google, 2017).

UTAUT

UTAUT is the extension to TAM and proposed by Venkatesh et al. (2003). UTAUT was developed using the existing eight theories regarding technology adoption model: TRA, TAM, the motivational model, TPB, The PC utilization model, IDR, SCT, and the integrated model of technology acceptance and planned behaviour (Min et al., 2008). Through the research, it was found that there four factors able to influence user adoption and usage of information technology. These factors are performance expectancy, effort expectancy, social influence, and facilitating condition (Venkatesh et al., 2003).

This research focuses on figuring out what factors are significantly influence the mobile payment continuous usage intention among generation Z in Bandung. The model adopted in this research will be based on a model from Gao et al. (2018) in their study regarding continuous usage intention of QR code payment services in China. This research will also add two additional variables, such as perceived risk (Gao et al., 2018) and hedonic motivation from Venkatesh et al. (2012).

Performance expectancy is the degree of individual believes when using the technology will help him or her to gain some performance. Effort Expectancy is the degree of ease associated with the use of the system. Social influence is defined as the degree to which consumers' essential people such as family and friend perception toward specific technology can affect consumers to use the system (Venkatesh et al., 2003). Meanwhile, Previous literature believes that risk theory is a significant determinant of behaviour intention (Shin, 2009; Anderson and Schwager, 2004). Studies have shown that risk is considered a substantial concern in using mobile payment services (Thakur and Srivastava, 2014; Cocosila and Trabelsi, 2016). Hedonic Motivation can be defined as pleasure or fun coming from the use of specific technology and proven to have a significant role in determining technology acceptance and use (Brown & Venkatesh, 2005)

METHODOLOGY

Measurement Development

The research model includes five independent variables, and one dependent variable, each of the variables are measured with multiple items. The research uses UTAUT variables such as performance expectancy, effort expectancy, and social influence (Venkatesh et al., 2003). Apart from those variables, this research also includes several variables adapted from different research, such as perceived risk (Gao et al., 2018) and hedonic motivation (Brown & Venkatesh, 2005). Question items were first translated into Bahasa; then it runs reliability and validity test to ensure the consistency. Each piece was measured with a Likert 7-point scale, whose answer choices range from "strongly disagree" (1) to "strongly agree" (7)

Samples

Data were collected from Bandung City respondent through social media and instant massaging apps. The research can gain 492 respondent. After some screening on our respondent and removing questions that had too many missing values, the search came up with 479 valid respondents.

Research Hypotheses

Bellow is the research hypotheses for this study:

Theory 1: Performance Expectancy has a significant positive impact on continuous usage intention to use mobile payment services among generation Z in Bandung City.

Hypothesis 2: Effort Expectancy has a significant positive impact on continuous usage intention to use mobile payment services among generation Z in Bandung City.

Hypothesis 3: Social influence has a significant positive impact on continuous usage intention to use mobile payment services among generation Z in Bandung City.

Hypothesis 4: Perceived Risk has a significant negative impact on continuous usage intention to use mobile payment services among generation Z in Bandung City.

Hypothesis 5: Hedonic Motivation has a significant positive impact on continuous usage intention to use mobile payment services among generation Z in Bandung City.

Based on the model of UTAUT and several other latent variables, our conceptual study framework can be seen below;

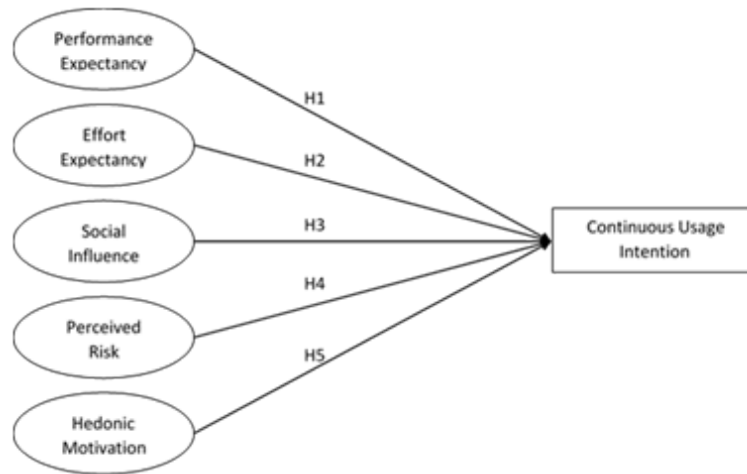


Figure 1. Conceptual Framework

FINDINGS AND ARGUMENT

First, the research conducted reliability and validities test. A Cronbach's Alpha score of 0.6 is marked as an acceptable reliability coefficient (Sekaran, 2006). The result shows all the constructs in the research model able to gain Cronbach's Alpha above 0.6. Furthermore, correlation analysis is included to see the validity of each item in the questionnaire and see their correlation with the respective variables. The result found that all the questions in the survey have a significant relationship with their separate variables. This research also conducts further outer model analysis and inner model analysis.

The researchers tested the model using partial least squares structural equation model (PLS-SEM). The model used in this research could explain 55% regarding consumer's continuous usage intention among generation Z in Bandung City. Table 1. Further showed that only performance expectancy, social influence, and hedonic motivation have a significant impact on continuous usage intention. Meanwhile, effort expectancy and perceived risk do not have a significant effect on continuous usage intention.

Table 1. Hypothesis Testing Result

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Effort Expectancy -> Continuous Usage Intention	0.071	0.069	0.039	1.613	0.107
Hedonistic Motivation -> Continuous Usage Intention	0.360	0.361	0.052	7.028	0.000
Perceived Risk -> Continuous Usage Intention	-0.049	-0.053	0.040	1.436	0.152
Performance Expectancy -> Continuous Usage Intention	0.363	0.363	0.055	6.665	0.000
Social Influence -> Continuous Usage Intention	0.086	0.087	0.037	2.389	0.017

Regarding performance expectancy, it has a significant positive impact on continuous usage intention with a P-value below 0.05, which is 0.00 and T-Statistics value greater than 1.96, which is 6.67. This finding is consistent with previous from Gao et al. (2018) about continuous usage intention of mobile payment and Madan & Yadav (2016) about mobile payment adoption. The finding indicates that the more user finds the ability of mobile payment services to be useful in daily life, provide numerous variety and speed in the transaction, convenience to use over cash, the more they will continue to use mobile payment services.

Meanwhile, for effort expectancy, it has a positively insignificant impact on continuous usage intention with P-value above 0.05, which is 0.107 and T-Statistics value below 1.96, which is 1.613. This finding is consistent with previous from Miadinovic & Xiang (2016) about behavioural intention to use mobile shopping, Madan & Yadav (2016) about mobile payment adoption, Hongxia et al. (2011) about mobile payment acceptance. Might relate to the behaviour of Generation Z, whom many considered to be tech-savvy, leading toward the ability to learn new technology with ease.

In term of Social influence, it has a significant positive impact on continuous usage intention with a P-value below 0.05, which is 0.02 and T-Statistics value greater than 1.96, which is 2.39. This finding is consistent with previous from Gao et al. (2018) about continuous usage intention of mobile payment, Macedo (2017) about acceptance and use of information technology, and Madan & Yadav (2016) about mobile payment adoption. The finding indicates that the more user finds the influence of others in using mobile payment services, how mobile payment can create a competent look for its user, and believing that using mobile payment is aligned with the current trend, the more they will continue to use mobile payment services.

Perceived risk has a negatively insignificant impact on continuous usage intention with P-value above 0.05, which is 0.15, and T-Statistics value below 1.96, which is 1.44. This finding is also consistent with the previous study from Gao et al. (2018) about continuous usage intention of mobile payment in China. This finding might relate to how Generation Z see mobile payment as an already safe instrument and regulated, leading toward little or even zero perceived risk.

Hedonic Motivation has a positively insignificant impact on continuous usage intention. Hedonic Motivation has a P-value of below 0.05, which is 0.00, and T-Statistics value greater than 1.96, which is 7.03. This finding is consistent with the previous result from Miadinovic & Xiang (2016) about behavioural intention to use mobile shopping. The finding indicates that the more user finds the mobile payment services to be fun, enjoyable, and entertaining, the more they will continue to use mobile payment services.

CONCLUSIONS

This research finds that performance expectancy, hedonic motivation, and social influence have a significant positive impact on continuous usage intention to use mobile payment services among generation Z in Bandung City. Meanwhile, effort expectancy and perceived risk do not have a significant effect on continuous usage intention to use mobile payment services among generation Z in Bandung City. The research model was tested with 479 correspondent of mobile payment services in Bandung City.

Mobile payment operator can use these findings. The operator can directly know what factors have the most significant influence on mobile payment continuous usage intention and can further focus their R&D on improving those factors which will lead to better efficiency in spending since most mobile payment operators are start-ups and tend to test their application and burn money from research.

This study also has limitations. First, the correspondents of this study were mainly university students who were born in 1998. This sample might not be fully representative of the entire population in Bandung City. Secondly, apart from factors shown in the structural model, many other factors could affect consumer's continuous usage intention of mobile payment services. Finally, the data gathered in this research might be proven to be too small and make the findings limited.

There exist several improvements for future research. First, due to the lack of resource and time, this study is only limited in Bandung City, future research can expand furthermore to the national scope of Indonesia. Second, future research can focus on the simultaneous adoption of mobile payment in different groups. Last but not least, future research with better resource and time can empirically verify the research model.

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