

AN EMPIRICAL EXAMINATION OF CHARACTERISTICS OF MOBILE PAYMENT USERS IN INDONESIA

GUNAWAN WANG¹, NADIA MIRANDA PUTRI², ARIO CHRISTIANTO³,
DANNY HUTAMA W⁴.

¹²³⁴Information Systems Management Department, BINUS Graduate Program – Master of Information Systems Management, Bina Nusantara University, Jakarta, Indonesia 11480

E-mail: ¹gawang@binus.edu, ²nadia.putri004@binus.ac.id, ³ario.christianto@binus.ac.id, ⁴danny.wong@binus.ac.id

ABSTRACT

The current use of mobile devices is a necessity for almost all people, especially in Indonesia. A total of more than 100 million mobile phones have been used by the Indonesian people and approximately 150 million cellular cards have been registered in Indonesia. This is an opportunity for entrepreneurs in the technology field to take advantage of this business opportunity to create applications that use mobile devices such as banking applications. In Indonesia, banking applications have existed since 2007 and continue to grow until now with almost the same features. After testing the questionnaire, it was found that innovativeness, reachability, compatibility, convenience affect perceived usefulness and perceived ease of use towards the intention of use

Keywords: *Mobile Payment, System Characteristics, Individual Differences, Mobile Payment Users*

1. INTRODUCTION

Mobile payment attracts global attention from all sides of banking and the economy as an alternative payment that has been traditionally done, such as using cash, checks and debit / credit cards[1]. Mobile payment is part of the product resulting from the development of mobile technology that offers specific solutions specifically for the banking sector[2].

The use of mobile payment in Indonesia has been developed since 2007, during which the telecommunications company Telkom launched T-Cash as its mobile payment product. The development of mobile payment does not stop there, in the following years various companies, both telecommunications companies, and startups, innovate by issuing their respective payment brands.

Currently there are 246.29 million bank accounts in Indonesia [3] and until February 2018 as many as 290 million cellular cards have been successfully registered [4]. It can be interpreted from the data that there are more cellular card users than account holders in Indonesia. This also encourages the development of mobile payment in Indonesia because basically mobile payment usage does not require users to be registered as customers in a bank. That is why mobile money can be

divided into two, namely transactions with mobile banking and mobile payment.

Some differences between mobile payment and mobile banking, namely mobile banking is a financial transaction carried out through a mobile device against a bank account, while mobile payment is carried out using a mobile device without requiring a bank account[5].

Mobile payment service providers in Indonesia consist of telecommunications companies, IT startups[6]. Mobile payment service products that are developing in Indonesia are T-Cash, Dompotku, XL Tunai, CIMB Rekening Ponsel, BBM Money, Mandiri e-cash, Uangku, Sakuku, GoPay, and OVO. This service began to be present in Indonesia since 2007 starting from the birth of T-Cash from Telkomsel, continuing until 2017 the Lippo Group's OVO was born in 2017. A study shows that the use of mobile payment services in Indonesia is as follows; GoPay and T-Cash (10 million users), PayPro (7 million users), OVO (6.5 million users), Mandiri eCash (5.5 million users), XL Tunai (1.9 million users), and Sakuku (1 million users)[7]. All types of mobile payments have the same function in making transactions, but the reality shown by the data above shows that each type of mobile payment has a different level of usage. Of course there are differentiating factors that cause different usage rates.

This study aims to determine the characteristics of mobile payment users in Indonesia today. Of course the preference is to use and choose certain products rather than other products with the same purpose and function to use have different motivations from each individual. It is expected that this research can provide an overview to companies to provide mobile payment services that are in accordance with the characteristics of the target users so that they can be useful and useful on the market.

2. RESEARCH DESIGN

Similar research has been carried out by Kim et al[8] in which the study analyzed the effect of mobile payment characteristics and user centric factors on the use of mobile payments based on user characteristics.

To analyze the adoption of behavioral of mobile payment users, Kim et al used a research model consisting of two user-centric factors (personal innovativeness and mobile payment knowledge) and four characteristics of the mobile payment system (mobility, reachability, compatibility, and convenience). The study also categorizes user samples as early adopter and late adopter according to the results of testing.

The same testing model applied in writing this journal, is expected to get the perspective of mobile payment users in Indonesia, especially in the areas of Jakarta, Bogor, Depok, Tangerang, and Bekasi.

This study discusses how the characteristics of the Indonesian people towards the use of electronic money and how people in Indonesia view the use of electronic money which is gaining popularity today in Indonesia. Another reason why this study was conducted was to look at the intentions of the Indonesian people towards the use of mobile payments, considering that at this time the government was very aggressively promoting the use of non-cash payments.

The research written is a study using a framework based on the theory of acceptance model, the mobile payment system, the characteristics of the mobile payment system, and individual differences.

2.1. Theory Acceptance Model (TAM)

A number of studies related to public acceptance of technology have proven that TAM is the right model to describe the factors that

determine society's acceptance of technology since 1988. Since then TAM has evolved into a model that can predict human attitudes towards technology acceptance or rejection[9]. TAM is the first model and the most influential model for research related to how information technology can be accepted in a condition and / or place. TAM intends to examine what factors can foster the desire of people or users to use a new technology. TAM consists of two dependent variables that support the user's desire to use technology namely perceived usefulness (PU) and perceived ease of use (PEU). Perceived usefulness is defined as the level of individuals who believe that using technology can improve performance. Perceived ease of use is defined as the level of how individuals believe that using this new technology does not require a large effort[8].

Perceived Usefulness and Perceived Ease of Use are constructions proposed to form the intention to use new technology in TAM[10]. The prerequisite for consumers to consider the use or trial of any product or service is that new products must be useful and easy to use for consumers to intend to use the product[11]. According to TAM, Perceived Usefulness (PU) is defined as "the extent to which a person believes that using a particular system will improve his job performance" and Perceived Ease of Use (PEOU) is defined as "the extent to which a person believes that using a particular system will be free from business. Both constructs influence one's attitude towards the system of use, which affects a person's behavioral intention to use the system, which in turn, determines the actual use of the system Underlines the importance of perceived usefulness criteria and perceived ease of use for receiving cellular payments [12][13][14].

2.2. Mobile payment

Mobile payment is an alternative method of payment of goods, services, and others. This technology is used through mobile devices such as smartphones. Its use is quite easy, just by entering the transaction value and then confirming the payment made by entering a PIN or fingerprint scan[15].

A research conducted resulted in the concept of mobile payment as one of the payment methods that uses mobile devices, namely using mobile phones, smartphones, and being able to carry out transactions securely through cellular networks and

through other wireless technologies such as (NFC, Bluetooth, RFID, etc.) [16].

Other studies also say that it is almost similar to the research conducted by Ghezzi et al. that mobile payment is a method of payment of any transactions made using mobile devices safely and through cellular networks and / or wireless networks.

2.3. Individual differences theory

Individual differences theory has been used to measure the level of individual acceptance of technology. Not only one but several studies have shown that differences in motivation of each individual affect the way of looking at and wanting to use technology.

This theory has been explained by many researchers that the differences in each individual affect their way of determining the use of something [17]. The supporting factors for individual differences can be measured by various factors. Factors that are considered suitable with this research are factors of innovation and user knowledge of technology.

Innovative factors are factors that state that innovative individuals tend to try many new things as experiences in their lives [18]. While the factor of knowledge of technology is the user who already understands the technology he uses starting from systems, software, and hardware [18].

The research model used in this study is a combination of two theories, namely model acceptance theory (TAM) and individual difference theory. This model is a research model conducted by [15] which is used for empirical research on the use of mobile payments for individuals. Individual Difference and system character are the two main constructs that have been recognized in previous studies. Individual Difference is considered as the most significant variable for IS success in the theoretical model proposed by Zmud (1979) [15]. In addition to task and technology characteristics, individual differences such as computer experience and self-efficacy also affect technology compatibility, which in turn determines individual performance and actual utilization [19].

2.4. Mobile payment system characteristics

As an emerging service, mobile payment has not received widespread adoption among users. As such, researchers have been paying attention to the behavior of mobile payment users and are trying to

identify factors that influence user adoption of mobile payments. Most research focuses on early adoption and TAM is often used as a theoretical foundation. Schierz et al. [2], noted that Perceived Risk, Perceived Usefulness, Perceived Ease of Use and Mobility affect user attitudes, which in turn affects the intention to use mobile payments. [8] argue that individual differences and system characteristics affect the intention to use mobile payment through Perceived Usefulness and Perceived Ease of Use. Individual Difference includes innovativeness and knowledge about mobile payments, while system characteristics include Mobility, Reachability, Compability, Convinience.

2.5. Research Hypothesis

1. Innovativeness

H1: User innovation has a positive effect on the perceived ease of use of mobile payment systems.

Personal innovation in the information technology domain has implications for theory and practice. From a practical point of view, personal innovativeness helps identify individuals who tend to adopt information technology innovation than others. The individual can then function as the main change agent and opinion leader to facilitate further diffusion of new technology [20]. Agarwal and Prasad (1998) argue that individuals with higher personal innovativeness are expected to adopt previous innovations. They believe that to predict individual behavior towards an innovation, this construction must be conceptualized as a specific domain as opposed to other factors [21]. Previous findings about the influence of Personal Innovativeness are contradictory. For example, [22] in their study of cellular service acceptance, finding Personal innovation as a significant predictor of both Perceived Usefulness and Perceived Ease of Use factors. The same is reported by [23] in the case of an NFC-enabled cellular credit card. In the study of the continuation of intentions towards mobile commerce, [21] found the Personal Innovativeness as a significant antecedent of statistics from Perceived Ease of Use. The same is reported in the case of NFC cellular payments [24] [14] (Free et al., 2013) [25].

H2: Knowledge of users regarding mobile payment system services has a positive effect on the perception of the use of mobile payment systems.

The OS Ladder and OCA have analyzed the factors that influence the adoption of M-Payment. This analysis shows that socio-technical factors can be considered as enablers or inhibitors. It was found

that M-Payment adoption can result in benefits from increased speed and convenience through contactless payments. Inhibitors can cover the level of perceived risk, namely the risks associated with security, privacy, personal data and transactions[26].

2. Mobility

H3a: System mobility has a positive effect on perceived ease of use of M-Payment System.

H3b: System mobility has a positive effect on the perceived usefulness of M-Payment System.

While the progress of mobile devices is changing rapidly, important similarities remain the same as priority: portability, mobility, and flexibility[27]. Durability is an important component of mobile technology because of its profitability and associated mobility. The electronics industry has long invested in energy-saving technology by working to develop low-power CPUs, disk storage and display screens[15]. Technological advances and increased computer processing power mean that one mobile device such as a smartphone and PDA phone is increasingly able to perform high-level performance in many or all of these functions. Features of cellular technology that can make them very appropriate to provide individual level support to consumers[28]. It should be noted that this previous study found that mobility revealed a direct and positive impact on Perceived Usefulness and Perceived Ease of Use. Similar results were confirmed when assessing the study conducted by Liébana-Cabanillas et al. (2015a) and nfcde Luna et al. (2016)[25].

3.Reachability

H4a: Reachability of the system has a positive effect on perceived ease of use of M-Payment System.

H4b: Reachability of the system has a positive effect on the perceived usefulness of M-Payment System.

The use of a mobile system allows users to always be connected to service providers. In their daily life, this means that the existing mobile system must be able to be used in many areas, including areas that are said to be not / rarely reached by mobile payment facilities.

In addition to the affordability of the area of technology use, another thing that is also a consideration is the ability of the mobile payment system to be able to limit the number of accesses entered into one account[29].

4.Compatibility

H5a: Compatibility system has a positive effect on perceived ease of use of M-Payment System.

H5b: Compatibility system has a positive effect on the perceived usefulness of M-Payment System.

Perceived compatibility and perceived usefulness are related to two different stages in the adoption process; then the relationship between these two variables is suggested. The consistency of the habits and beliefs of potential users with the technology that will be adopted seems to be in accordance with the belief that this technology might be more useful for users who adopt technology than other technologies that may not suit their lifestyle. Significant influence of Compatibility perceived in both, Perceived Usefulness and Perceived Ease of Use has been confirmed by several studies of m-payment adoption [1], [23]. In addition, a significant relationship between Compatibility perceived and Perceived Usefulness was confirmed by Hernandez García et al. (2011), Liébana-Cabanillas et al. (2015a), Ramos de Luna et al. (2016), Schierz et al. (2010) and Wu and Wang (2005) while a significant relationship between perceived Compatibility and Perceived Ease of Use was confirmed by Ozturk et al. (2016). On the other hand, in the study of factors influencing the intention to use mobile payment, Kim et al. (2010) found no significant evidence of the effect of perceived compatibility in Perceived Usefulness and Perceived Ease of Use

5.Convenience

H6a. Convenience will have a positive effect on the perceived ease of use of m-payment system.

H6b. Convenience will have a positive effect on the perceived usefulness of m-payment system.

Convenience is a very important factor for mobile payment functions (Teo et al., 2015). Emotional value is a utility that comes from the feeling or affective state produced by cellular services. For example, hedonic motivation is an important determinant of technology acceptance and use [30] because consumers pursue fantasy, feeling, and pleasure through their hedonic consumption [31], which can be facilitated by using a smartphone to do purchase[32]. Finally, social values derive from enhanced social self-concepts [33] [34]. In previous studies it was also concluded that the Mobile payment method allows users to complete their payments in transactions that are safer, faster, and more convenient at any time and anywhere that

is in the same context as Perceived Usefulness and Perceived Ease of Use [35][34].

6. Perceived Ease of Use

H7a: Perceived ease of use in using technology has a positive effect on the perceived usefulness of M-Payment System.

H7b: Perceived the ease of use in using technology has a positive effect on the intention of use of M-Payment System.

This factor is one of the supporting factors for TAM. This factor clearly explains that the easy use of applications or systems by users can increase the desire of users to use the technology.

7. Perceived Usefulness

H8: User usefulness towards technology has a positive effect on the M-Payment System's intention of use.

Perceived usefulness is a TAM factor that can determine how much the user wants to use technology.

3. METHODOLOGY

3.1 Research Method

Based on our search results, we can create a measurement tool to measure results and the value of a variable goes through several indicators such as the table below.

Table 1. Variable measurements

Variables	Indicators	References
Perceived Usefulness	Necessary	[36], [8], [15].
	Makes life easier	
	Quick	
	Usefull	
Perceived Ease of Use	Easy to use	[15], [8], [37]
	Understandable	
	Flexible	
Intention to use	Continous usage	[37], [38], [39]
	preferences	
	Customer Attitude	
Mobility	Connected in any location and through wireless network	[40] [41]
	Facilitating interactions	[40]
Reachability	Ability to access services ubiquitously	[41]
	Connected anywhere anytime	[29]
	Choice to limit particular people or times	
	Device to use mobile payment is support the feature	
Innovativeness	curiosity	[25]
	Application interest	[42]
	Technology adoption	[18]

Variables	Indicators	References
M-Payment knowledge	Understand technology to ease the activity	[8]
	Understand how to use the feature	
	Understand the feature's goals of use	
Convenience	Time utilities	[8] [43]
	Access to device	
	Place utilites	
	Application complexity	
Compatibility	compatible	[44], [38], [39]
	Work style	
	Life style	

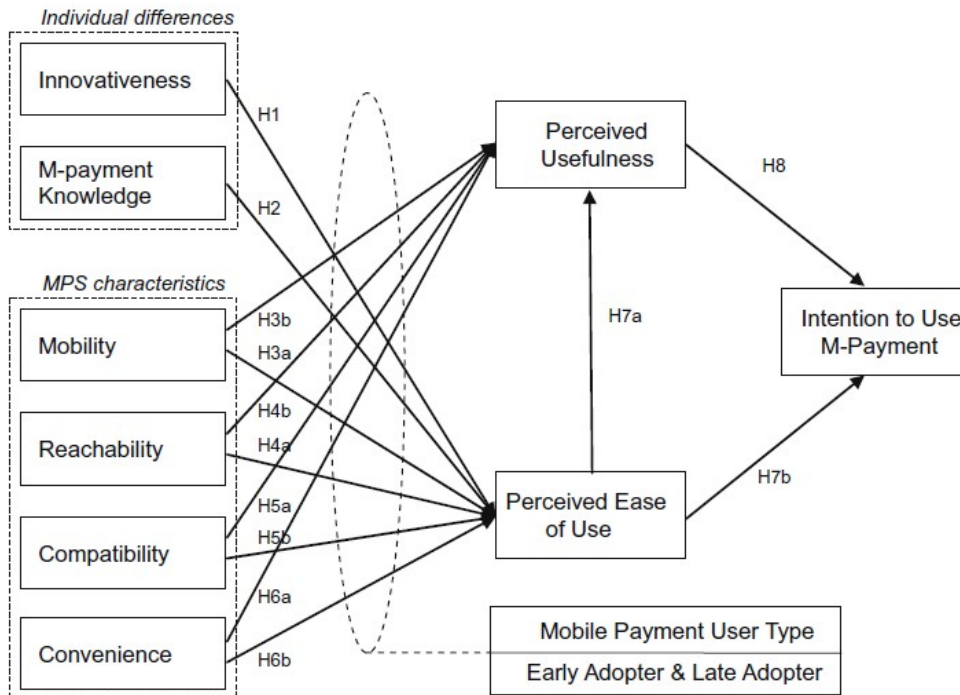


Fig. 1. Research Model [8]

The analysis was carried out by conducting a survey in the form of a questionnaire to 100 people living in Jakarta, Bogor, Depok, Tangerang, and Bekasi areas. The criteria of the community that become the sample with the age range between 17-50 years where this age is the productive age of the community in Indonesia from students to office workers.

For the data collection method we used a questionnaire using the 1-5 response scale. Questionnaires were distributed to the JABODETABEK region in August 2018. We target this questionnaire to the users of this m-payment themselves in JABODETABEK to get enough data to be processed and valid with limited time. We chose respondents who were

accustomed to using the m-payment facility because we wanted to know why they used m-payment and what types of m-payments they often used in transactions and what was the reason they used the brand. This questionnaire is sent through Google forms, forums and social media. There were 100 respondents who were collected in several brand m-payments. Table 2 shows the results of the respondent's data as a customer from the m-payment that we present, namely Grab Pay / GO-PAY, OVO, T-Cash, Etc.

Table 2. Description of the respondents based on E-Marketplace

Brand M-Payment	Valid Respondents	Percentage
BCA M-Banking	9	9%
Grab Pay/GO-PAY	74	74%
OVO	12	12%
Others	5	5%

You can see the data from table 2 shows that Grab Pay / GO-PAY is a brand m-payment that is often used by customers in Jabodetabek today. On the other hand, OVO is actually a new player in this field, but its customers can compete with customers from BCA. While others still choose other brands that play in this sector. But the superiority of Grab Pay / GO-PAY can also be influenced by the widespread use of GO-JEK, and GRAB as well as the routine of advertising in the mass media. Overall, the data from respondents can be categorized into 9 categories, namely gender, age, education, domicile, occupation, income, experience, brand used, frequency of use.

Table 3. Distribution of Age

Description	Valid Respondents	Percentage
18 – 25 years old	66	66%
25 – 35 years old	25	25%
35- 40 years old	2	2%
≥40 years old	7	7%
TOTAL	100	100%

Can be seen from the data in table 6, the respondents used the m-payment services can be said often enough that in 1 month they can use this

Table 4. Distribution of Gender

Description	Valid Respondents	Percentage
Male	41	41%
Female	59	59%
TOTAL	100	100%

Data from table 4 can show that both male and female are equally active in using this m-payment. From these results, of course they are respondents who can be understood and can use this m-payment technology properly.

Table 5. Distribution of Education

Description	Valid Respondents	Percentage
High Schools	18	18%
Diploma	7	7%
Bachelor	67	67%
Master	8	8%
TOTAL	100	100%

The data shown in table 5 shows that the undergraduate level is the most active in using this m-payment, because at the undergraduate level they are people who have sufficient knowledge and always keep up with the changing times. This was followed by users from the High School level where at their age the level of curiosity about something new and sophisticated was quite high.

Table 6. Usage per month (Period August 2018).

Description	Valid Respondents	Percentage
1 -3 times	32	32%
4 - 10 times	17	17%
11 - 20 times	35	35%
≥20 times	16	16%
TOTAL	100	100%

Table 7. Usage per month based on province

Description	Valid Respondents	Percentage
Jakarta	30	30%
Bogor	3	3%
Depok	0	0%
Tangerang	44	44%
Bekasi	23	23%
TOTAL	100	100%

service up to 11-20 times or even more than 20 times in one month. And the most respondents, those who live in the city of Tangerang, can be

seen in table 7 which uses the m-payment and then followed by users from Jakarta and Bekasi. They - they are users who use the service quite often

Table 8. Distribution of Occupation

Description	Valid Respondents	Percentage
Freelance	7	41%
Housewife	1	1%
Employee	64	64%
Student	22	22%
Entrepreneurs	6	6%
TOTAL	100	100%

Table 8 shows that these m-payment users are mostly from users who work as employees, this is understandable because employees are a real work every day. This use is also supported because some of them are Gojek users, and Grab is sure to save time, their pengabayaran process uses m-payment.

Table 9. Distribution of User experience

Description	Valid Respondents	Percentage
≤1 years	25	32%
1 – 2 years	38	38%
2 - 3 years	17	17%
≥3 years	20	16%
TOTAL	100	100%

The data in table 9 shows that most of these m-payment users have used this service for 1-2 years. This is only natural because from the data we get those who use this service the most are new scholars who have jobs. But we can also conclude that these users include users who are very responsive to the times.

Table 10. Distribution of Expenditure per month outside installment luxury goods

results. That is with the calculation method (CR> 0.75)

Description	Valid Respondents	Percentage
≤ 1.000.000	14	14%
1.000.000 - 3.000.000	15	15%
3.000.000 - 5.000.000	30	30%
5.000.000 - 10.000.000	28	28%
≥10.000.000	13	13%
TOTAL	100	100%

Can be seen from table 10, many users of this m-payment earn at Rp. 3,000,000 - Rp. 5,000,000 per month. This data can be supported by many young and new users. And the standard UMR salary in Indonesia is in the range of Rp. 3,000,000 - Rp. 5,000,000 per month. This is one factor why many users have an income of Rp. 3,000,000 - Rp. 5,000,000 per month using this service.

4. FINDINGS AND DISCUSSION

4.1 Validity and Realibility Test

Descriptive statistics are used for sample demographic analysis. Test of validity and reliability is measured using CR to assess internal consistency of data measurement. Structural Equation Modeling (SEM) was applied using the SmartPLS software package to test the hypothesis (SEM) of the proposed research model. SEM is useful for evaluating casual relationships between variables and compatibility of research models. From the data we have obtained, we have been using statistical software, SmartPLS. Tests carried out are validity and reliability simultaneously, the value of the variables that we have can have valid

Table 11. Validity and reliability Test

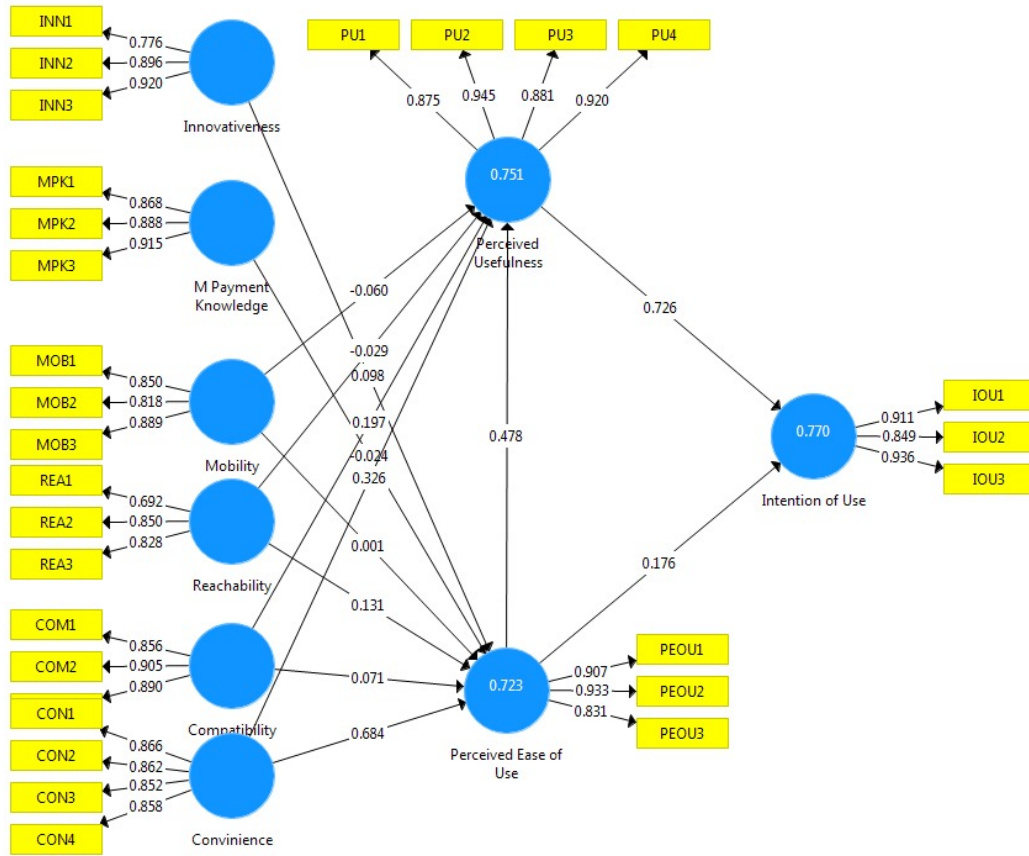
Variable	Code	Loading factor	CR	Cronbach's alpha	Status
Innovativeness	INN1	0.776	0.900	0.837	Valid
	INN2	0.896			
	INN3	0.920			
M-Payment Knowledge	MPK1	0.868	0.920	0.870	Valid
	MPK2	0.888			
	MPK3	0.915			
Mobility	MOB1	0.850	0.814	0.810	Valid
	MOB2	0.818			
	MOB3	0.889			
Reachability	REA1	0.692	0.835	0.708	Valid
	REA2	0.850			
	REA3	0.828			
Compatibility	COM1	0.856	0.915	0.860	Valid
	COM2	0.905			
	COM3	0.890			
Convenience	CON1	0.866	0.919	0.882	Valid
	CON2	0.862			
	CON3	0.852			
	CON4	0.858			
Perceived usefulness	PU1	0.875	0.948	0.926	Valid
	PU2	0.945			
	PU3	0.881			
	PU4	0.920			
Perceived Ease of Use	PEOU1	0.907	0.921	0.870	Valid
	PEOU2	0.933			
	PEOU3	0.831			
Intention to use	IOU1	0.911	0.927	0.881	Valid
	IOU2	0.849			
	IOI3	0.936			

CR ≥ 0.70

4.2 Hypotesis Test

Based on table 4 above the value of each variable innovativeness, M-Payment Knowledge, mobility, reachability, compatibility, compatibility, convenience, perceived usefulness, perceived ease of use, intention of use has a CR value that exceeds from 0.70 then data from our findings can said to be valid and reliable. Moreover, the CR value of each variable has more value than Cronbach's alpha. If all online data for each variable and indicator are valid, this test can proceed to the next step, namely hypothesis testing. The analytical method used to test the hypothesis is the analysis of structural equation modeling (SEM) variables Innovativeness to perceived usefulness (H1), M-payment knowledge to perceived usefulness (H2), Mobility to perceived ease of use (H3a), Mobility to perceived usefulness (H3b), Reachability to perceived ease of use (H4a), Reachability to

perceived usefulness (H4b), Compatibility to perceived ease of use (H5a), Compatibility to perceived usefulness (H5b), Convenience to perceived ease of use (H6a), Convenience to perceived usefulness (H6b), Perceived ease of use to perceived usefulness (H7a), Perceived ease of use to use (H7b), Perceived usefulness to intention of use (H8). The conclusion of this test is support or not support the value of certain variables on other variables. This test is carried out using a comparison method of the value of p value calculated by formula (1 - P) which will be compared with the value of 0.75 / 0.85 as the representative of the population of the respondents. With the provision if the p value is <0.75 / 0.85, then the variable can be said not to support, and if p value> 0.75 / 0.85 then the variable can be said as a variable that supports and has an influence on the variable in question.



Note : $P < 0.863$, $t > 1.489$

Fig 2. Model Variable Results

Table 12. p value test for hypothesis

H	Standard deviation	T Statistics	P Values
H1	0,055	1,765	0,078
H2	0,089	0,275	0,784
H3a	0,089	0,014	0,989
H3b	0,099	0,608	0,543
H4a	0,079	1,667	0,096
H4b	0,063	0,451	0,652
H5a	0,097	0,728	0,467
H5b	0,132	1,488	0,137
H6a	0,125	5,477	0,0000
H6b	0,155	2,102	0,036
H7a	0,139	3,454	0,001
H7b	0,108	1,623	0,105
H8	0,094	7,689	0,0000

Table 13. Hypothesis Result

Hypothesis	Results
H1: Innovativeness affect perceived usefulness	Supported
H2: M-payment knowledge affect perceived usefulness	Not Supported
H3a: Mobility affect perceived ease of use	Not Supported
H3b: Mobility affect perceived usefulness	Not Supported
H4a: Reachability affect perceived ease of use	Supported
H4b: Reachability affect perceived usefulness	Not Supported
H5a: Compatibility affect perceived ease of use	Not Supported
H5b: Compatibility affect perceived usefulness	Supported
H6a: Convenience affect perceived ease of use	Supported
H6b: Convenience affect perceived usefulness	Supported
H7a: Perceived ease affect use to perceived usefulness	Supported
H7b: Perceived ease of use affect intention of use	Supported
H8: Perceived usefulness affect intention of use	Supported

Note : $P < 0.863$, $t > 1.489$ 4.1. Validity and Realibility Test

4.3 Discussion

In this study, the authors used TAM as a research model. From the use of this theory, it is hoped that it can unravel what kind of user category has the desire to use mobile payment technology in the Indonesian community. Based on the findings obtained after distributing questionnaires related to the use of mobile payments for people in Indonesia, especially in the Jabotabek area, this research also categorizes users from mobile payments. Research conducted shows that user innovativeness greatly influences perceived ease of use of mobile payments. This is consistent with research conducted by [8] that innovative users tend to feel that the use of mobile payments is easy. This study also proves that reachability affects perceived ease of use of mobile payment users. In addition, it was also found that the system compatibility does not affect perceived ease of use but affects perceived usefulness. This is different from the results of the study [8] whose research results state that compatibility indicators do not have a good effect on perceived ease of use or perceived usefulness. It was also proven that the convenience felt by users when using mobile payment technology turned out to affect perceived usefulness and perceived ease of use of mobile payments. Another finding was that mobile payment knowledge had no effect on perceived ease of use. Besides that mobility does not have an effect on perceived usefulness and also on perceived ease of use. While reachability does not affect perceived usefulness and compatibility it does not affect the perceived ease of use. Overall,

perceived usefulness is influenced by compatibility, convenience, and perceived ease of use.

The challenge in conducting this test is the attitude of the community that is difficult to participate in filling out the questionnaire. Most of them have no interest in filling out surveys and some claim that they have not used electronic money on the grounds that there is no need or no need for electronic money.

The results of this study show that both perceived usefulness and perceived ease of use significantly affect the intention of mobile payment use. Of all the variables tested, it is evident that perceived ease of use of mobile payment has a very significant effect on perceived usefulness. This proves that with the easier use of mobile payments, users will increasingly feel the usefulness of the mobile payment facility. Based on the results of this study, perceived usefulness has a positive influence on the intention of use. Mobile payment in the future must be easy to use and not complex so that it increases the intention of use from its users.

5. CONCLUSION

The main objective of this study is to find the factors that are the reason why users use the mobile payment facility. This study uses TAM modeling which consists of six external factors (innovativeness, mobile payment knowledge, mobility, reachability, compatibility, and convenience), two independent variables

(perceived ease of use and perceived usefulness), and one independent variable (intention of use) . Having a little uniqueness from other research that has been done in Indonesia, this time the study uses a research model not only related to information systems but combines with the characteristics of technology usage by users. Research that combines TAM and the characteristics of these users is not the first to be done, before this research has been tested by (Kim et al., 2010). The study conducted this time wanted to know how influential the combination of TAM and characteristic models would be if tested to mobile payment users in the Indonesian region, namely the Jabotabek area.

The results of the analysis stated that perceived ease of use and perceived usefulness significantly affected the intention of use. Whereas perceived usefulness is significantly supported by compatibility, convenience, and perceived ease of use. For variables perceived ease of use is significantly supported by convenience, innovativeness, and reachability factors. The things that have been explained in the previous paragraph have shown that in order to achieve the success of the mobile payment provider in attracting users to use their products, the product must be easy to use so that the user will feel that the mobile payment product is useful and can deliver positive value to the user resulting in intention of use from the user to the mobile payment product.

5.1 Limitation and further studies

The limitations on the work of this journal are the test samples taken in Indonesia with the sample areas of Jakarta, Bogor, Depok, Tangerang, and Bekasi. Tests are not carried out in other areas other than those specified. Tests were carried out on 100 randomly selected people ranging in age from 17-50 years and domiciled in the area previously mentioned.

For the next type of research, it should be done in the wider area of users of electronic money so that it can capture the characteristics of real users of electronic money in the area under study.

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