



The Intention to Use Mobile Payment during the Covid-19 Pandemic: The Mediating Role of Attitude

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Abstract

The Covid-19 pandemic requires individuals to maintain physical distance and this has affected buying and selling transactions where previously the majority used the cash payment system to switch to digital payments or mobile payments to maintain distance and reduce physical contact. This study aims to examine the effect of perceived usefulness and perceived ease of use on the intention to use mobile payment in Malang of Indonesia. This study also investigates the mediating role of attitude in explaining this relationship. The population in this study are individuals who adopted mobile payment services in Malang of East Java in Indonesia. The analytical tool used is Structural Equation Modeling (SEM). The findings of this research showed that perceived usefulness and perceived ease of use had a direct effect on attitudes, perceived usefulness, while perceived ease of use and attitudes also had a direct effect on the intention to use mobile payment. In addition, attitudes can mediate perceived usefulness and perceived ease of use on the intention of using mobile payments during the Covid-19 pandemic.

Abstrak

Pandemi Covid-19 memungkinkan individu untuk menjaga jarak fisik dan mobile payment adalah solusi yang bagus untuk ekonomi dan transaksi bisnis. Penelitian ini bertujuan untuk menguji pengaruh perceived usefulness dan perceived ease of use terhadap niat menggunakan mobile payment di Malang Indonesia. Studi ini juga menyelidiki peran mediasi sikap dalam menjelaskan hubungan ini. Populasi dalam penelitian ini adalah individu yang menggunakan layanan mobile payment di Malang Jawa Timur Indonesia. Alat analisis yang digunakan adalah Structural Equation Modeling (SEM). Temuan penelitian ini menunjukkan bahwa perceived usefulness dan perceived ease of use berpengaruh langsung terhadap sikap, perceived usefulness, sedangkan perceived ease of use dan sikap juga berpengaruh langsung terhadap niat menggunakan mobile payment. Selain itu, sikap dapat memediasi perceived usefulness dan perceived ease of use terhadap niat menggunakan mobile payment selama pandemi Covid-19.

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INTRODUCTION

The outbreak of the Covid-19 pandemic has forced economic behavior by adopting technology. Mobile payment (m-payment) has emerged several years ago, and it has become more prevalent in Indonesia, primarily during the Covid-19 pandemic (Sunarjo et al., 2021). M-payment is a means of payment in transactions using electronic devices or smartphones (Al-Saedi et al., 2020). M-payment services are more often used because they are more practical and efficient, as well as have many attractive promos, i.e., discounts and cashback (Ariyanto, 2018). The rise of cases due to covid-19 makes individuals implement health protocols, one of which is to keep our distance. With the use of m-payment for financial transactions, sellers and buyers do not need to touch and can still maintain a safe distance (Tamara et al., 2021).

The rise of m-payment is supported by technological developments. Almost all sectors of life use technology, including the financial sector (Suryono et al., 2020). Financial service innovation that has been influenced by technological developments and is currently a hot topic of discussion is a financial technology (fintech) (Leong & Sung, 2018). The fintech industry is growing rapidly (Li & Xu, 2021). This is indicated by the increasing number of startups in the fintech field. Fintech offers various types of financial services, including peer-to-peer (P2P) lending (loans), crowdfunding, payment gateways, and investment management. Among fintech products, m-payment is the most outstanding during the Covid-19 pandemic due to its contactless characteristics that can contribute to diminish physical contact (Zhao & Baca, 2021).

Concerning Indonesia, payment players are divided into three categories. First, from the telecommunications provider, several products are used by communities and youth, i.e., Dompetku, T-Cash, FlexiCash, and Tunai by XL, while for the category of banking companies, some products that are often used, including Mandiri e-Cash, Mobile Accounts, Mega Virtual, BBM Money, Sakuku by BCA. In addition, from startups, several products are well known, such as Go-Pay, OVO, Dana, Doku, PayPro, and PayAccess. In a survey released by Sharing Vision in December 2020, GoPay was declared the most widely used digital wallet service by communities in Indonesia, followed by OVO, Shopeepay, and DANA. This indicates that the penetration of using m-payment has risen among youth in Indonesia.

Compared to other countries, the penetration of m-payment in Indonesia is relatively low. A preliminary survey by Shea (2019) noted that the use of m-payment in Indonesia posits the third-ranking based on convenience reasons. This is reasonable due to m-payment in Indonesia is still relatively new, and there is no integrated payment system for all purposes, i.e., parking, and toll. There are still many users who question the security of m-payment in conducting mobile payment transactions. Venkatesh and Davis (2000) remarked that most of the previous research showed that attitude had a significant positive impact on individual behavioral intention. The intention in use by potential consumers depends on consumer attitudes. Consumer attitudes toward the intention to use mobile payment services must have a significant positive relationship (Park et al., 2019).

In addition, study Setyawati (2020) revealed that the perceived usefulness and perceived ease of use influences the attitude towards using, the attitude towards using influences the behavioral intention to use, the perceived usefulness influences the behavioral intention to use, the perceived ease of use influence on behavioral intention to use, the variable perceived usefulness and perceived ease of use influence the attitude towards using, the variable perceived usefulness and perceived ease of use affect the behavioral intention to use. Furthermore, Masitoh and Huddin (2021) showed perceived usefulness and ease of use had a significant influence on attitudes towards mobile payments. The study of Masitoh and Huddin (2021) also found that attitudes have a significant influence on intention to use mobile payments.

Dealing with this matter, the study on this theme is also escalating. Several previous studies have shown that perceived usefulness and perceived ease of use are important elements of acceptance of a technology (Andavara et al., 2021; Ibrahim et al., 2022; Venkatesh & Bala, 2008; Davis, 1989; Venkatesh & Davis, 2000). However, few studies have examined these two factors in the context of m-payments in Indonesia. Therefore, this study aims to examine the effect of perceived usefulness and perceived ease of use on attitudes and their impact on intention in using mobile

payment services. This current study will contribute to the literature on fintech, which has been a concern among the Indonesian government. In addition, this study is conducted in Malang because the Bank Indonesia Malang Representative Office recorded a 20 percent increase in the use of mobile payments during the pandemic.

This present paper is outlined below. Section 1 provides information about the existing issues of m-payment in Indonesia and relevant previous studies to show the connectivity between variables. Section 2 informs the methodology used in this study. Section 3 deals with the results and findings of the study. Section 4 covers the conclusion, limitations, and suggestions.

METHOD

Research Design, Population, and Sampling

This research was conducted with a quantitative approach using primary data obtained by using a survey method on the network through the dissemination of field information in the google form format. The population in this study is customers who use mobile payment services. In this study, the sampling technique used was purposive sampling, namely the determination of the sampling technique with certain considerations. Particular considerations in this study are that respondents who are asked to fill out a questionnaire have criteria as mobile payment users and located in Malang. Ghazali (2005) suggested a sample size of 5-10 times based on the number of statements used if the analysis is carried out using structural equation modeling (SEM).

Measurement and Data Analysis

Structural Equation Modeling (SEM) is a statistical technique that tests a series of relatively complex relationships simultaneously. Mediation test shows the relationship between exogenous and endogenous variables through intervening or mediating variables (Baron & Kenney, 1986). To find out whether a variable can act as a mediating variable, a test will be carried out. The number of indicators in this study is 19 indicators, so the minimum number of samples is 95, and the maximum is 190. The number of samples that can be processed is 190 samples. This study was conducted in March-September 2022. The questionnaire was distributed in May and July 2022. To measure the variables to be studied through respondents' responses, a Likert scale was used.

Table 1. Variable Measurement

Variable	Indicator	Source
Perceived usefulness	Work more quickly	Alalwan et al. (2016)
	Job performance	
	Increase productivity	
	Effectiveness	
	Make job easier	
Perceived ease of use	Useful	Alalwan et al. (2016)
	Easy to learn	
	Understandable	
	Flexible	
	Controllable	
Attitude	Ease of use	Bashir & Madhavaiah (2015)
	Acceptance attitude	
	Rejection attitude	
Intention	Fun experience	Shankar & Datta (2018)
	Behavioral intention	
	Transactional intention	
	Referential intention	
	Preferential intention	

Source: Data Processed, 2022

RESULTS AND DISCUSSION

The presentation of the research results begins with the profile of the respondents, namely 190 mobile payment users in Malang City, East Java of Indonesia. Respondent profiles are disclosed in Table 2. From the table, it can be known that the majority of respondents in this research were female participants, with a percentage of 54.7 percent. In addition, the respondents were individuals in the age range of 17-22 years. Lastly, most respondents were having an educational level of senior high school with a percentage of 64.2 percent.

Table 2. Profile Respondent

Individual characteristics	Number	%
Gender		
Male	86	45.3
Female	104	54.7
Age		
17 – 22 years	102	53.7
23 – 40 years	76	40
Above 40 years	12	6.3
Educational level		
Senior high school	122	64.2
Bachelor degree (S1)	40	21.1
Master (S2)	28	14.7

Source: Data Processed, 2022

Validity and Reliability

The questionnaire as an instrument must meet the main requirements, namely valid and reliable, which can be seen in Table 3. From the table, it can be said that all research instrument items are valid and reliable because they have met the validity testing criteria, namely the Pearson product-moment correlation index value (r) 0.3, and the reliability test criteria are Cronbach's Alpha value 0.6.

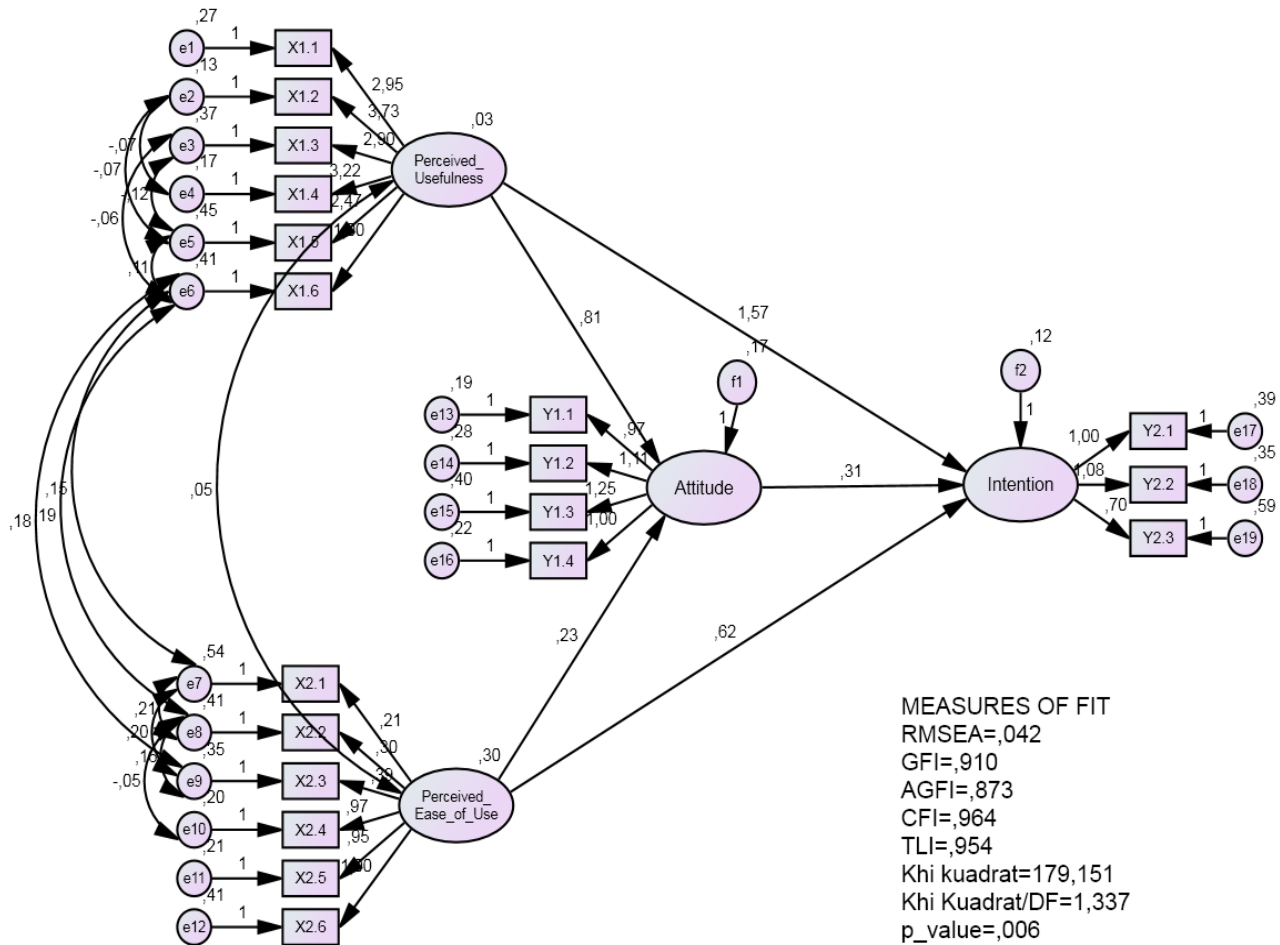
Table 3. Instrument Validity and Reliability Test Results

Variable	Item	Correlation		Coefficient	
		r	status	alpha	status
Perceived usefulness	X1.1	0.828	Valid	0.860	Reliable
	X1.2	0.785	Valid		
	X1.3	0.698	Valid		
	X1.4	0.843	Valid		
	X1.5	0.750	Valid		
	X1.6	0.701	Valid		
Perceived ease of use	X2.1	0.469	Valid	0.746	Reliable
	X2.2	0.553	Valid		
	X2.3	0.764	Valid		
	X2.4	0.784	Valid		
	X2.5	0.788	Valid		
	X2.6	0.674	Valid		
Attitude	Y1.1	0.847	Valid	0.852	Reliable
	Y1.2	0.803	Valid		
	Y1.3	0.861	Valid		
	Y1.4	0.824	Valid		
Intention	Y2.1	0.862	Valid	0.812	Reliable
	Y2.2	0.874	Valid		
	Y2.3	0.823	Valid		

Source: Data Processed, 2022

Goodness of Fit

The theoretical model in the conceptual framework of the study is said to be fit if it is supported by empirical data. The results of the goodness of fit overall model test, in accordance with the results of the SEM analysis, to determine whether the hypothetical model is supported by empirical data, are given in Figure 1.



Source: Data Processed, 2022

Figure 1. Outer Model

The results of the analysis related to the model's feasibility index are presented in Table 4.

Table 4. Goodness of Fit Overall

Criteria	Cut-off Value	Model	Information
Chi Square	small ≤ 67.50481	179.151	Moderate
p-value	≥ 0.05	0.006	Moderate
CMIN/DF	≤ 2.00	1.337	Good
GFI	≥ 0.90	0.910	Good
AGFI	≥ 0.90	0.873	Moderate
TLI	≥ 0.95	0.954	Good
CFI	≥ 0.95	0.964	Good
RMSEA	≤ 0.08	0.042	Good

Source: Data Processed, 2022

Based on Table 3, the results of the Goodness of Fit Overall test can be concluded that the model in this study is suitable and feasible to use because of the eight criteria to determine the Goodness of Fit Overall, five criteria have met the cut-off value, and only three criteria have not met

the cut-off value. The chi-squared value, which is above the cut-off value, then the p-value, whose value is below the cut-off value, and AGFI, whose value is also below the cut-off value. With a model that is considered feasible based on the Goodness of Fit Overall test criteria, it can be continued for further interpretation and discussion.

Hypothesis Testing

Testing this hypothesis is used to prove the direct effect of perceived usefulness and perceived ease of use on intention in using mobile payments and the indirect effect of perceived usefulness and perceived ease of use on attitudes-mediated intention in using mobile payments. The results of hypothesis testing are presented in Table 4.

Table 4. Results of Regression Weight Analysis (Direct Effect)

Correlation		Path Analysis	C.R.	p-value	Information
<i>Perceived usefulness</i>	→ <i>Intention</i>	0.362	2.735	0.006	Significant
<i>Perceived ease of use</i>	→ <i>Intention</i>	0.491	4.618	0.000	Significant

Source: Data Processed, 2022

The effect of perceived usefulness on intention produces a CR value of 2.735 with a p-value of 0.006. This is because the p-value is greater than statistical significance at = 5%, so the hypothesis that perceived usefulness directly has a significant effect on interest is acceptable, this result indicates that the more benefits that are felt when using mobile payments, the more interest in using mobile payments also getting higher. Likewise, *perceived ease of use* of mobile payments also increases interest in using mobile payments, this is indicated by a p-value that is greater than statistically significant at = 5%, which is 0.000. Indirect effect testing is used from several results of direct influence testing. Completely the results of the direct influence test are presented in Table 5.

Table 5. Indirect Effect Hypothesis Testing Results

Correlation		Direct Impact	Indirect Impact Through Attitude	Total Impact
Attitude	← Perceived_usefulness	0.281	-	-
Attitude	← Perceived_ease of use	0.272	-	-
Intention	← Attitude	0.205	-	-
Intention	← Perceived_usefulness	0.362	0.281 x 0.205 = 0.058	0.420
Intention	← Perceived_ease of use	0.491	0.272 x 0.205 = 0.056	0.547

Source: Data Processed, 2022

Based on Table 5, it can be explained that the indirect effect of perceived usefulness on interest in using mobile payments through attitudes has a total coefficient value of 0.420, and this value is greater than the direct effect of perceived usefulness on interest in using mobile payments, which is 0.362. These results indicate that the attitude variable can mediate the effect of perceived usefulness on interest in using mobile payments. The results of testing the indirect effect of perceived ease of use on interest in using mobile payments through attitudes have a total coefficient value of 0.547, which is greater than the direct effect of perceived ease of use on interest in using mobile payments, which is 0.491. These results indicate that the attitude variable can mediate the effect of perceived ease of use on interest in using mobile payments.

Discussion

The first finding indicates that perceived usefulness significantly influences the intention to use mobile payment. Perceived usefulness explains that potential users consider new technology useful for job performance and can obtain benefits in the future (Venkatesh & Davis, 2000). In this case, consumers are only willing to accept innovation if the innovation provides a unique advantage compared to existing solutions. This provides great benefits because purchases and payments can be

made practically, easily, quickly and whenever needed. This is beneficial to improve user attitudes toward mobile payment services. In addition, perceived usefulness can shape attitudes. The results support several previous studies. For instance, Mun et al. (2017); Chen and Li (2017), which found that the benefits provided by mobile payments will be useful and support individual activities. Hence, they tend to show a positive attitude toward mobile payments. This is also proven by several previous studies that found that the perception of usefulness positively affects a person's attitude toward technology (Prastiawan et al., 2021; Chawla & Joshi, 2019).

In addition, the second finding shows that perceived ease of use significantly affects the intention to use mobile payment. Perception of ease of use refers to the level of potential users who consider the new technology easy to use (Venkatesh & Davis, 2000). Users believe that the benefits of mobile payment services are easy to use, for example, they can use mobile payment system applications without the guidance of others, a user interface that is not confusing, easy to operate, and simple transaction procedures (Bezovski, 2016). In addition, perceived ease of use can explain positive attitudes toward using m-payment. Aslam et al. (2017) remarked that the perception of the ease of using mobile payment can build a positive attitude toward technology because they feel that the use of technology is not already and not confusing. In addition, Shanmugam et al. (2014) also prove that the perception of ease of use has a positive effect on a person's attitude toward technology. In that way, the results of previous research are in line with the results of this research which found the influence of perception of ease of use on individual attitudes towards technology, especially mobile payments (Gunawan et al., 2019).

The attitude to use has a positive and significant effect on the intention to use mobile payment. A person's intention in using a technology is determined by their attitude towards the technology (Venkatesh & Davis, 2000). Thus, a person's intention to use mobile payment is triggered by their positive attitude towards the payment system. Thus, the hypothesis that the researcher has developed is proven. The test results prove that attitudes are able to mediate the effect of perceived usefulness on interest in using mobile payments during the Covid-19 pandemic. The benefits that users get when using mobile payments have a significant influence on interest in using them. Mobile payment users feel many benefits when using mobile payments, especially during the Covid-19 pandemic (Zhao & Bacao, 2021). Due to the pandemic period that caused many changes in habits, including changes in the payment system which now uses a cashless system to reduce the spread of the virus, mobile payment has become one of the most widely used options for transactions.

CONCLUSIONS AND SUGGESTION

This study investigates the connectivity between perceived usefulness and perceived ease of use and intention to use mobile payment (m-payment), as well as investigate the role of attitude. The findings indicate that perceived usefulness and perceived ease of use are important factors in forming the intention to use mobile payments, while the attitude of the user forms the intention to use. This study also confirmed the role of attitude in mediating perceived usefulness and perceived ease of use, and intention to use mobile payment. When m-payment users feel the benefits of using mobile payment, they will take the attitude to use it in their financial transactions. Likewise, when users feel the ease when using mobile payments, users will also be more interested in using mobile payments in their financial transaction activities. M-payment users during the Covid-19 pandemic have increased due to lifestyle shifts due to the Covid-19 pandemic. Further increase user interest in using mobile payments in their financial transactions, mobile payment providers can display a system that is even easier to use for millennials and the general public. In addition, how providers can further develop features in mobile payments so that they provide more benefits. It is because using mobile payments helps facilitate financial transactions, which will also affect the economy in general. This study has a limitation in the geographical matters so that further researchers can involve study areas and potential variables affecting intention to use m-payment, such as security or government rules.

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