

# The Roles of Effort Expectancy, Attitude, and Service Quality in Mobile Payment Users Continuance Intention

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## ABSTRACT

This study aimed to reveal whether Effort Expectancy, Attitude, and Service Quality have certain roles in the Continuance Intention of Mobile Payment Users. This study was conducted because during a pandemic like this, mobile payment applications have increased. Therefore, researcher want to know whether mobile payment users have a Continuance Intention to use mobile payment. The IS Success Model is used in this research. The data for this study was collected by a questionnaire, which is a survey method. The respondents in this study were 217 users of Mobile Payment who were recruited using a convenience sampling technique and analyzed using SPSS. The findings of this study revealed that users' attitudes and service quality had a favorable and significant impact on their intent to continue using mobile payments, while effort expectancy does not have a positive effect on continuance intention.

**Keywords:** Effort Expectancy, Attitude, Service Quality, Continuance Intention, Mobile Payment.

## 1. INTRODUCTION

The development of human civilization is inseparable from the field of communication and information. The sophistication of communication and information technology that we are experiencing today is the result of an evolution that continues [1]. At this time, technology has developed along with the times where most people have used technology for various needs. One of the technological developments that greatly affects society is the use of the internet. The internet has various benefits including selling and making money, as a means of connectivity and creativity as well as banking, payment, and as a means for shopping. In addition to the use of the internet, the existence of smartphone technology also greatly affects people's lives. The role of the smartphone itself makes it easy for us to do various things such as communicating, exchanging photos and videos, and making online payment transactions [2]. Internet and smartphone technology that is increasingly advanced makes people's activities easier, including in terms of transactions. One way to make transactions online is by using mobile payments. Mobile payment is also known as mobile money transfer and mobile wallet. Mobile payment generally refers to payment services operated under financial banking regulations and carried out via mobile devices [3]. This type of mobile payment is used for goods and services by carrying out transactions, where a person's gadget must be accompanied by NFC technology so that they can make transactions via smartphones. According to [3] transactions using mobile payments have been implemented in developing countries as a means to expand financial services for the community. Mobile

payment comes with an open-platform concept. This means can be used on a variety of different platforms, both offline and online, and also be used on several other platforms and applications. This open-platform concept allows mobile payments to be connected to various forms of payment instruments, such as online balances, debit and credit cards, and vouchers. In addition, mobile payments have been utilized by various sectors, namely education, public services, social services, to street vendors [4].

In this pandemic situation, digital transactions are increasing rapidly, especially with government policies, namely maintaining distance, staying at home, to large-scale social restrictions. After the enactment of the policy, public activities such as going to banks and ATMs were hampered. Therefore, mobile payment application users have increased by 50% from January to mid-May [5]. Apart from that, mobile payment also won an award as the best mobile application. The award is in line with the mission to support the government's efforts to drive the economy and accelerate digital transformation in various sectors. For this effort, this open-platform Indonesian digital wallet was recognized as the best mobile payment application from the 2020 Seluler Award [6].

With the increase in users and the awards achieved, it shows that mobile payment users are increasing and will create a continuance intention to use mobile payment. According to [7], continuance intention is described as the user's intention to continue using a technology. Previous research has recognized that effort expectancy, attitude, and service quality are important factors in influencing users' continuance intention to continue using mobile payments [7].

However, according to research undertaken by [8] and [9], studies on continuance intention are on the rise, although the majority of these studies have concentrated on industrialized countries, with only a few studies exploring continuance intention in developing countries [10]. Therefore, researchers will research in developing countries, namely Indonesia, especially in Jakarta.

Based on the explanation above, the researcher was interested to observe the phenomenon by selecting the title "The roles of Effort Expectancy, Attitude, and Service Quality in Mobile Payment Users Continuance Intention". This study was expected to provide clarity on the role of Effort Expectancy, Attitude, and Service Quality in mobile payment user's Continuance Intention. In addition, this study was expected to be useful for companies engaged in the field of mobile payment systems, as information related to user responses through Effort Expectancy, Attitude and Service Quality to Continuance Intention to users of mobile payment in Jakarta, so that it can be used as reference material.

## **2. LITERATURE REVIEW**

This study is based on the IS Success Model. The IS Success Model views continuance intention as a beneficial impact on the use of information systems, said Pravenaa & Thomas [11] and Weng *et al.* [12]. When a user perceives a superior service quality (quality of service), it is very likely that they continue to use the information system [7]. Service quality also as a customer assessment of the superiority or superiority of a product. In addition, many studies conducted in the past have shown that there is a beneficial impact of attitude on continuance intention as well as on use of IS (information systems) and acceptance, said Pravenaa & Thomas [11] and Weng *et al.* [12].

### **2.1. Effort Expectancy**

Kang [13] defined effort expectancy as ease of use of technology. When complexity decreases, users tend to increase. Users tend to prefer technology driven by simplicity with maximized efficiency. According to Alalwan [14], effort expectancy is an individual's desire to accept a new system that is anticipated not only by how much the system is positively rewarded, but also by how easy it is to use. Hutabarat *et al.* [15] have defined effort expectancy as the level of comfort associated with the usage of consumer technology.

According to the researchers above, it can be concluded that effort expectancy is the level of ease experienced by users in using technology and does not experience difficulties when using it.

### **2.2. Attitude**

Kotler and Armstrong [16] defined attitude as an overall individual feeling that is relatively consistent with an object or idea. Besides, Gilani [17] stated that attitude is an

evaluation of a person's perception of a product or service. Attitude is relatively more enduring and can surpass all previous experiences. Moreover, Oscar and Keni [18] tell that attitude is a customer's assessment of the services provided in obtaining a product that is the advantage of the company.

It can be concluded from several researchers that attitude is the feeling of an individual that reflects an assessment of a product or service.

### **2.3. Service Quality**

There are several definitions of service quality. Cheng [19] defines it as a measure of how well a certain level of service fulfils customer expectations, with high service quality implying that the service achieves those expectations. Furthermore, according to Mansour *et al.* [20], service quality is an individual's judgment of how well the system accomplishes the activities required for the user's job.

Furthermore, according to Lu *et al.* [21], service quality is defined as the gap between customers' expectations for service and their perceptions of actual performance. Extending this definition, service quality is an overall assessment of a service's performance in comparison to the customer's expectations of what that performance should be.

According to the researchers, it can be concluded that service quality is how good the service quality is expected by customers from a particular service.

### **2.4. Continuance Intention**

The intention of a user to continue utilizing a technology is known as continuance intention [7]. Continuance intention, according to Lu [22], is a mental state that represents an individual's decision to repeat his current activity and is similar to repurchase in a commercial environment. Furthermore, according to Chang [23], continuance intention is the willingness of individuals to utilize information systems in the future and to suggest them to others. It can be concluded that the continuance intention is the user's behavior towards a technology that will affect the continuance intention to use the technology and recommend it to others.

### **2.5. Effort Expectancy and Continuance Intention**

There are several studies that study the relationship between effort expectancy and continuance intention, one of which is Bellaaj *et al.* [24]. This research was conducted in Saudi Arabia in the field of e-learning. The results showed that business expectations had a positive and significant effect on continuance intention. Based on Kang research [13], this research was conducted in the United States. This research is in the field of mobile apps, the result of this study is that effort expectancy positively and significantly affects continuance intention.

**2.6. Attitude and Continuance Intention**

According to Praveena and Thomas [11], attitude is a variable that mediates between perceived usefulness, perceived ease of use, and perceived enjoyment of continuance intention, which means that all antecedents lead to the formation of a strong attitude that leads to continuance intention, and the result is that attitude has a positive and significant effect on continuance intention. Besides that, research conducted by Alhassan et al. [25] in the field of mobile payment services in Ghana resulted that attitude has a positive and significant effect on continuance intention. Therefore, users will have a continuance intention if their attitude towards it is positive.

**2.7. Service Quality and Continuance Intention**

There are several studies that study the relationship between service quality and continuance intention, one of which is Yang et al. [26]. This research was conducted in China in the field of online courses. The result of this research is that service quality is positively and significantly related to continuance intention. In the study conducted by Raman & Ashish [7], service quality acts as one of the important requirements for users to build a long-term relationship with service providers and has a direct influence on the continuance intention that users will experience.

**2.8. The Relationship Among Effort Expectancy, Attitude, Service Quality, and Continuance Intention**

In the study conducted by Raman and Aashish [7], effort expectancy, attitude, and service quality positively and significantly affect continuance intention.

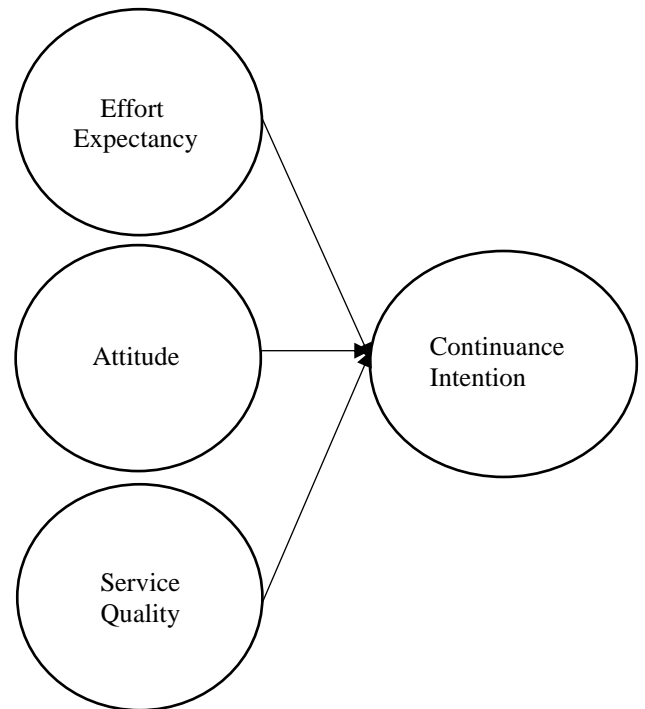
**3. PREVIOUS RESEARCH**

In several previous research, there are previous studies that examine related variables, Raman & Aashish [7] examined the relationship between effort expectancy, attitude, and service quality with continuance intention.

The strong influence of effort expectancy on continuance intention, according to Raman & Aashish [7], reveals that users favor effortlessness when using mobile payment systems. The various advantages of mobile payment systems, such as ease of access, simplicity of learning, and convenience of usage, are the primary motivators for consumers to continue using them [7]. The positive influence of attitude on continuation intention is similar to the findings of Deng et al. [27], who found that a pleased user is more likely to have a favorable attitude and use the product again. Users expect their mobile payment systems to be dependable, responsive, secure, and tailored, since service quality has emerged as a key indicator of continued intention [7].

**4. RESEARCH MODEL**

The relationship between effort expectancy, attitude, service quality, and continuance intention was investigated in this study. The research model explains the relationship between each construct as follows: (Figure 1). The collected data were analyzed by first determining the relationship between effort expectancy and continuance intention, then determining the relationship between attitude and continuance intention, and finally determining the influence of service quality on continuance intention.



**Figure 1.** Research Model

This study concerns on how effort expectancy, attitude, and service quality can affect the mobile payment user's continuance intention. All variables were measured from the perspective of users. Below are the hypotheses tested in this study.

- H<sub>1</sub>** : Effort Expectancy has a positive and significant effect on Continuance Intention of mobile payment users.
- H<sub>2</sub>** : Attitude has a positive and significant effect on Continuance Intention of mobile payment users.
- H<sub>3</sub>** : Service Quality has a positive and significant effect on Continuance Intention of mobile payment users.

**5. RESEARCH METHOD**

The convenience sampling method was utilized in this research. The Google Form was used to deliver the questionnaire to respondents. This study had a sample size of 225 respondents, however only 217 of them could be processed properly.

About the respondents' demography, 29.5% was male, and the remaining 70.5% was female. Respondents between the age of 18-22 y/o was 139 persons (64,1%). The variables' operationalization to measure Effort Expectancy used 3 indicators. To measure attitude used 4 indicators. To measure Service Quality used 5 indicators and to measure Continuance Intention used 3 indicators. All the indicators of variables adapted from Raman & Aashish [7] and using 5-point Likert scale.

**6. RESULTS AND DISCUSSIONS**

The significant value of 0.0000 indicates that the sampling size was sufficient to undertake the factor analysis, according to the findings of the KMO and Bartlet tests.

**Table 1** Validity and Reliability Test

Variable	Indicator	Validity	Reliability
		1	Cronbach's Alpha
Effort Expectancy	EE <sub>1</sub>	0.650	0.692
	EE <sub>2</sub>	0.593	
	EE <sub>3</sub>	0.654	
Attitude	A <sub>1</sub>	0.729	0.775
	A <sub>2</sub>	0.695	
	A <sub>3</sub>	0.691	
	A <sub>4</sub>	0.715	
Service Quality	SQ <sub>1</sub>	0.689	0.813
	SQ <sub>2</sub>	0.676	
	SQ <sub>3</sub>	0.692	
	SQ <sub>4</sub>	0.637	
	SQ <sub>5</sub>	0.683	
Continuance Intention	CI <sub>1</sub>	0.717	0.813
	CI <sub>2</sub>	0.748	
	CI <sub>3</sub>	0.772	

The result of the classical assumption test can be seen in Table 2 and Table 3 as follow. Meanwhile, the results of Normality Test can be seen in P-Plot diagram and that of

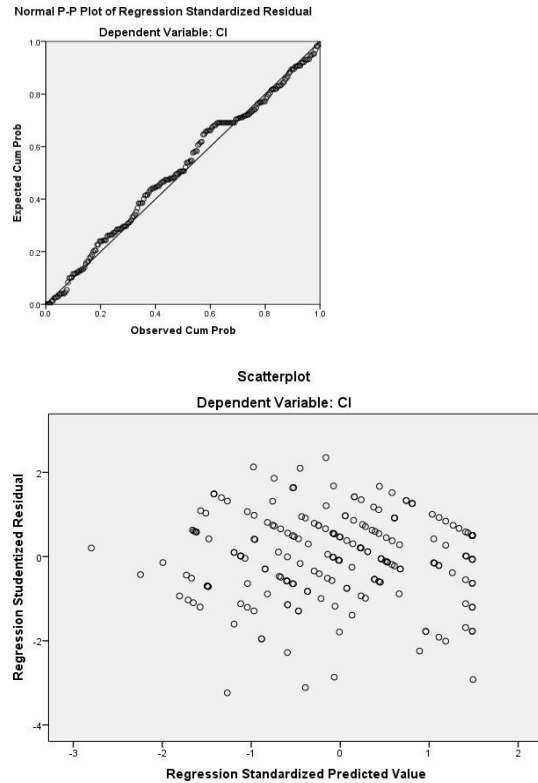
**Table 2** Test of Multicollinearity and Multiple Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.401	.364		-1.100	.273		
EE	-.017	.100	-.010	-0.170	.865	.635	1.575
A	.792	.080	.626	9.882	.000	.519	1.929
SQ	.246	.089	.175	2.776	.006	.520	1.923

Based on the SPSS test results, the multiple regression equation could be formed as follow:  $CI = -0,401 - 0,017 EE + 0,792 A + 0,246 SQ$ .

Several tests were used to undertake data analysis, including multiple regression analysis, the F-Test, and the Coefficient of Determination test (R<sup>2</sup>). The F-statistics value is 89.442, with a significance value of 0.000. The third hypothesis, that

Heteroscedasticity test can be seen in the Scatter Plot Diagram in Figure 2.



**Figure 2** Test of Normality and Heteroscedasticity

The data appears to be normal in the above image, and there is no evidence of heteroscedasticity. Furthermore, because there is no association between each independent variable, the multicollinearity test determined that there is no multicollinearity. The tolerance value in the table below is > 0.10, and the VIF value is less than 10.

Effort Expectancy, Attitude, and Service Quality have positive and significant effects on Mobile Payment Users' Continuance Intention, might be accepted.

**Table 3 F-Test**

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	93.685	3	31.228	89.442	.000
Residual	74.384	213	0.349		
Total	168.070	216			

a. Dependent Variable: CI  
b. Predictors: (Constant), EE, A, SQ

The Coefficient of Determination (CD) test is used to determine how much the independent variables (X) contribute to the dependent variable (Y). The Adjusted R-Square value is 0.551, indicating that the independent variables in this study (Effort Expectancy, Attitude, and Service Quality) can explain 55.1% of the dependent variable (Continuance Intention), whereas additional variables not addressed in this study can explain 44.3 percent.

**Table 4 Coefficient of Determination**

Model	R Square	Adjusted R Square	Std. Error of the Estimate
1	.557	.551	0.59095

a. Predictors: (Constant), EE, A, SQ  
b. Dependent Variable: CI

**7. CONCLUSIONS AND IMPLICATIONS**

The majority of the 217 people that took part in the survey were women. Students made up the majority of those who responded.

The normality test, heteroscedasticity test, and multicollinearity test are examples of classical assumption tests that have been performed. The data used was normal, with no heteroscedasticity or multicollinearity effects, according to the test results.

The t-test of the effort expectancy variable (X<sub>1</sub>) has a negative effect on continuance intention (Y) on users of mobile payment in Jakarta. This can be seen from the significance value of effort expectancy (X<sub>1</sub>) of 0.865 > 0.05, which means that H<sub>1</sub> is not accepted. These results are in line with research conducted by Hutabarat et al. [15] which states that effort expectancy does not have a positive effect on continuance intention. Users still experience difficulties or do not feel easy when using the Fund's mobile payment, therefore the continuance intention of its users is also decreasing.

The results of the t-test of the attitude variable (X<sub>2</sub>) proved to have a positive effect on continuance intention (Y) on users of mobile payment in Jakarta. This can be seen from the significance value of attitude (X<sub>2</sub>) of 0.000 < 0.05, which means that H<sub>2</sub> is accepted. These results are in line with research conducted by Khayer & Bao [28] which states that attitude has a significant influence on continuance intention. The better the user's attitude towards mobile payment, the

higher the continuance intention that will be experienced by the user to continue using mobile payment.

The t-test of the service quality variable (X<sub>3</sub>) revealed that it had a favorable effect on users of mobile payment in Jakarta's continuance intention (Y). The significant value of service quality (X<sub>3</sub>) of 0.006 < 0.05, which suggests H<sub>3</sub> is accepted, demonstrates this. These findings are consistent with Yang et al [26], who found that service quality has a significant impact on customer retention intentions.

The better the service quality of mobile payment, the higher the user's continued intention to continue using mobile payment.

The contribution of this research for the academic community is to enrich references to similar studies and provide input on the role of effort expectancy, attitude, and service quality on continuance intention of mobile payment users.

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