

## UNDERSTANDING THE CONTINUANCE OF ELECTRONIC PAYMENTS USAGE AFTER COVID-19: A SURVEY IN INDONESIA

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**Abstract**— During the ongoing pandemic with elevated COVID-19 cases, efforts to minimize direct physical contact for virus prevention have been heightened. Consequently, there has been a strong emphasis on adopting non-cash transactions, particularly electronic payments. As the Indonesian government revoked the social restriction policy on December 30, 2022, people gradually resumed normal activities such as work, school, and shopping. The question arises whether the widespread adoption of electronic payments will persist after COVID-19. To understand this and the factors influencing the sustained use of electronic payments, this study utilized the UTAUT, Trust, and Perceived Security as the research model. The findings indicate that all 920 survey participants maintain their electronic payment usage after COVID-19. Through PLS-SEM analysis, key factors contributing to the sustained use of electronic payment after COVID-19 include the intention to use electronic payments, user trust, performance expectations, facilitating conditions, and perceived security. Additional variables proposed in this research, user trust and perceived security, are proven to have an influence on users' intentions to continue using electronic payments.

**Keywords:** continuance, e-payments, perceived security, trust, UTAUT

**Intisari**— Selama pandemi dan kasus COVID-19 masih tinggi, sosialisasi untuk menghindari sentuhan langsung (physical touch) agar dapat terhindar dari paparan virus COVID-19 terus digencarkan. Penggunaan pembayaran nontunai menggunakan pembayaran elektronik juga sangat dianjurkan. Seiring berjalannya waktu, kasus positif COVID-19 mulai mereda dan pemerintah mencabut aturan pembatasan kegiatan. Orang-orang mulai melakukan aktivitas sehari-harinya, seperti bekerja, sekolah, dan belanja secara normal seperti sebelum adanya COVID-19. Dengan kondisi tersebut, apakah penggunaan pembayaran elektronik tetap semasif pada saat kasus COVID-19 memuncak atau kembali normal seperti sebelum adanya pandemi COVID-19. Penelitian ini bertujuan untuk mengetahui bagaimana keberlanjutan penggunaan pembayaran elektronik tersebut, menggunakan model UTAUT yang dikombinasikan dengan Trust dan Perceived Security yang kemudian dianalisis menggunakan analisis deskriptif dan analisis PLS-SEM. Hasil penelitian menunjukkan bahwa seluruh responden, yang merupakan pengguna pembayaran elektronik, masih terus melanjutkan penggunaannya setelah pandemi COVID-19 berlalu. Faktor-faktor yang mendorong para pengguna mempertahankan penggunaannya tersebut adalah niat untuk menggunakan pembayaran elektronik, harapan kinerja, kondisi yang memfasilitasi, kepercayaan pengguna, dan keamanan yang



*dirasakan pengguna. Variabel tambahan yang diusulkan pada penelitian ini yaitu kepercayaan pengguna dan keamanan terbukti memiliki pengaruh pada niat pengguna untuk melanjutkan penggunaan pembayaran elektronik.*

**Kata Kunci:** *kelanjutan, pembayaran elektronik, persepsi keamanan, kepercayaan, UTAUT.*

## INTRODUCTION

The COVID-19 virus rapidly spread in December 2019 and has been transmitted to all corners of the world. Due to its massive spread, the World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020 [1]. WHO also suggested the social distancing rules that limit people's activities and interactions to prevent the high risk of the COVID-19 [1]. People were persistently reminded to avoid direct contact or physical touch to avoid exposure to the COVID-19 virus. People were asked to reduce the use of cash payments in shopping, which had a significant chance of accelerating the spread of the COVID-19 virus [2]. Therefore, the use of non-cash payments using electronic payments or digital payments is strongly encouraged [3], [4].

Electronic payments (e-payments) or digital payments refer to all payments using digital devices, such as mobile payments (m-payments), mobile wallets, cryptocurrencies, and electronic money (e-money) [5]. In Indonesia, electronic money's transaction value and circulation rapidly increased during the peak of the COVID-19 pandemic. A report from [indonesiabaik.id](http://indonesiabaik.id) states that in 2020, Indonesia's total value of electronic money transactions was 204.9 trillion, up 41.16% from 2019 [6]. Furthermore, data from Bank Indonesia also shows that in March 2020, electronic money transactions increased by 40.67% to 15.9 trillion from March 2019 (yoy/year on year) [7]. In 2020, electronic money circulating in Indonesia reached 433 million units, increasing to 773 million units in 2022 [7]. Overall, the COVID-19 pandemic has increased the amount of electronic money circulating in Indonesia by 62.2% since 2019.

With the massive use of e-payments during the COVID-19 pandemic, people's behaviour and habits related to payments have changed significantly from traditional payments in cash to non-cash payments through e-payments [2], [8], [9]. However, as time passed, WHO ended the emergency status of COVID-19. In Indonesia, the government has revoked the social restriction policy since December 30, 2022 [10]. People then began to carry out various daily activities such as work, school, and shopping, like before the arrival of COVID-19. Without the urge to avoid direct contact anymore, will the habits related to the use of e-payments remain permanent?

E-payments facilitate the e-commerce or e-business providers and customers with easy payment access [2]. With e-payments, everyone can make a fast delivery payment [9] with fewer cheat activities [11]. During the COVID-19 pandemic, the existence of e-payments ensured the continuity of business and commerce [2]. In short, e-payments have a massive impact on the growth of the digital economy, which is part of the whole economic system of a country [12]. Due to its importance, many studies related to e-payments were conducted. Many studies specifically investigated the adoption of e-payments and the inclination of e-payments use due to COVID-19 as conducted by [3][4][8][12]–[17]. However, studies explaining the continuity of the adoption or the inclination in the post-pandemic era are still limited. This study aims to understand the continued use of e-payments following COVID-19. This study also seeks to identify the factors that encourage Indonesians to continue using e-payments even after the pandemic.

Understanding the continuance of technology adoption after a major disruption like COVID-19 is important for several reasons. It can provide insights into the post-adoption behaviors of users and help businesses promote the sustainable development of technology services [18]. Several studies specifically focus on the continuance of technology adoption after COVID-19. The studies conducted by [19][20][21] investigated university students' intentions and motivating factors for continuing to use online learning after the COVID-19 pandemic. The research findings motivate the curriculum and online learning platform design to improve the quality and effectiveness of e-learning platforms in the future. Other studies compared the usage of mobile health apps before and after COVID-19 [22] and identified factors that encourage users to continue using digital health information [23], supporting public health reformation through electronic health in China. Research on the long-term adoption and use of digital payment methods following the pandemic is also necessary. The findings will provide direction for the development and promotion of electronic payment platforms in the post-pandemic era.

One theory that frequently used by researchers to explain the factors that influence users in using electronic payments is UTAUT (Unified Theory of Acceptance and Use of Technology), such as research [3][4][9][18][19].



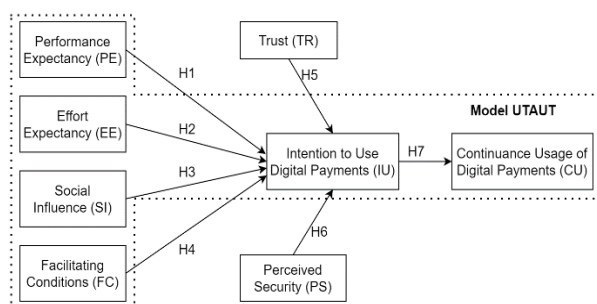
The UTAUT model not only explains user intentions but also subsequent individual behaviour. The UTAUT model has been proven valid in various countries and cultures and has good flexibility so that the UTAUT model can pair with additional constructs that are appropriate and specific to the research objectives [24].

However, the UTAUT model tends to focus on the attributes of the technology. Therefore, the model does not explain users' viewpoints about the technology, such as trust and perceived security. Trust is a crucial issue in e-payments because of many privacy threats today [5]. Then, the increasingly widespread distribution of e-payments not only provides various benefits for users but also raises concerns about security risks. Security becomes related and relevant to e-payments because users are required to submit their personal information when accessing them [3]. With the robustness of the UTAUT model and considering the importance of trust and perceived security, in this study we propose the combination of Trust and Perceived Security variables into the UTAUT model.

## MATERIALS AND METHODS

### A. Research Model and Hypotheses

Research model used in this study is presented in Figure. 1. The UTAUT variables used in this study are Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), Behavioral Intention to Use Digital Payments (IU), and Continuance Usage of Digital Payments (CU). Moreover, we propose two additional variables to the model, which are Trust (TR) and Perceived Security (PS), by presuming they will influence the Behavioral Intention to Use Digital Payments (IU). Previous research on mobile wallets conducted by [25] also included perceived security and trust in its research model because almost all respondents thought that their identities and personal information were stored on their smartphones, making them afraid of the safety of mobile wallets and the possibility of hacking.



Source: (Research Results, 2024)

Figure. 1 Research Model

Performance Expectancy is a measure of an individual's belief that utilizing a system can improve performance and provide benefits to their work [26]. Within this study, Performance Expectancy refers to the extent to which individuals' beliefs consider e-payments to provide more benefits and improve their performance in terms of payment. If individuals feel that e-payments offer benefits and advantages, it is likely increase the user's intention to continue using e-payments instead of traditional cash payments. This statement is in line with research [3], [4], [9]. Therefore, this research formulates the following hypothesis:

**H1:** Performance Expectancy has a positive effect on the Intention to Use Digital Payments

Effort Expectancy is described as a level of ease of using a system [26]. In this study, Effort Expectancy refers to users' perception of the ease of using e-payment. Previous research conducted by [27], [28] showed that Effort Expectancy positively affects Behavioral Intention. So, when users perceive a system as easy to use, the desire to use the system will increase [29]. Accordingly, this study proposes the following hypothesis:

**H2:** Effort Expectancy has a positive effect on the Intention to Use Digital Payments

Social Influence is described as a measure of an individual feeling that people around are influential in convincing him to use a new system[26]. In this study, Social Influence refers to users' beliefs about using e-payments after being persuaded by their closest friends or family. Research conducted by [3], [30] suggests that Social Influence positively influences Behavioral Intention. Thus, this research formulates the following hypothesis:

**H3:** Social Influence has a positive effect on the Intention to Use Digital Payments

Facilitating Conditions evaluate an individual's perception of whether their technical or organizational infrastructure assists them in utilizing a system effectively [26]. Within the context of this research, Facilitating Conditions are described as the user's beliefs that the available technological infrastructure and resources are capable to support and enhance the usage of e-payments. Based on research [3], [9], [29], Facilitating Conditions positively affect Behavioral Intention. Therefore, this research formulates the following hypothesis:

**H4:** Facilitating Conditions have a positive effect on the Intention to Use Digital Payments

Trust is a multidimensional construct that consists of social concepts. Trust in the context of information systems is defined as the user's beliefs

and expectations of a system that can influence behavioural intention to use a system [31]. Trust is an additional variable that's closely related to e-payments. The massive growth of e-payments makes financial risk pay more attention [25]. This financial risk can act as a barrier or even a hindrance in adopting e-payments [25]. Therefore, user confidence regarding the low financial risk that they will experience is necessary. Based on research [4], [25], [28], [32], Trust positively influences Behavioral Intention. Hence, the hypothesis formulated in this research is as follows:

**H5:** Trust has a positive effect on the Intention to Use Digital Payments

In this study, Perceived Security refers to how users subjectively perceive the safety of using electronic payment methods [25]. It plays a crucial role in the adoption of electronic payments, as supported by several studies [4], [29], which suggest that a positive perception of security influences users' behavioral intentions. Consequently, this study proposes the following hypothesis:

**H6:** Perceived Security has a positive effect on the Intention to Use Digital Payments

The UTAUT model suggests that Behavioral Intention positively influencing the actual use or behavior of a user towards a system. Studies [3], [25], [29] further support this idea, demonstrating that Behavioral Intention indeed fosters a positive influence on Use Behavior or Actual Use. Therefore, this research formulates the following hypothesis:

**H7:** Intention to Use Digital Payments has a positive effect on the actual Continuance Usage of Digital Payments

#### B. Data Collection and Sampling Method

The research data was obtained by circulating a questionnaire using a Google Form through social media channels such as WhatsApp, Twitter, and Instagram from February 10 to March 13, 2023. Participation in the survey was limited to people who used any e-payment product from March 2020 to June 2022 (peak of COVID-19 pandemic in Indonesia). We used several questions regarding that constraint to filter the eligible respondents. Before being distributed, the questionnaire was tested for legibility by 30 respondents.

The questionnaire was divided into two sections. The first section contained questions about respondents' characteristics, including questions regarding the frequency of using e-payments during and after COVID-19. The second part contained 31 items of questions regarding the level of agreement of the respondents related to the

research variables. Questions in the second part were represented on a 5-point Likert scale. Regarding the sampling method, this study employed a non-probability sampling known as convenience sampling. The minimum sample size was determined using the Lemeshow formula as follows:

$$n = \frac{z^2 p(1-p)}{d^2} \quad (1)$$

where

n = number of samples

z = standard normal value (z-score) for deviation  $\alpha$

p = population proportion (%)

d = alpha/level of precision

This study used  $\alpha$  of 5% so that the z(0.025) was 1.96 and the proportion value is 0.5 because the proportion in the population is unknown [33]. Thus, the minimum required sample size for this study was 385.

#### C. Analysis Method

The analysis method used in this research encompassed descriptive analysis and PLS-SEM (Partial Least Squares-Structural Equation Model). Descriptive analysis was used to explore the demographic data of respondents and the behavioral use of e-payments after COVID-19. Additionally, PLS-SEM was applied to identify the factors influencing users' continued adoption of e-payments in the post-COVID-19 period. PLS-SEM was selected for its robustness; it can handle non-normally distributed data, small sample sizes, and complex constructs or models with numerous indicators [34]. Importantly, PLS-SEM demonstrates greater parameter estimation efficiency compared to CB-SEM (Covariance Based-SEM), as indicated by its statistical power [34]. The PLS-SEM analysis in this study was conducted using SmartPLS 3.0.

## RESULTS AND DISCUSSION

#### A. Respondent Characteristics

Based on the questionnaire results, 1106 respondents were collected from various provinces in Indonesia. After further examination, 186 data from the 1106 respondent data were invalid, incomplete, or not included in the eligible sample. Subsequently, 920 valid data were further analyzed. This number has met the minimum samples previously explained in the research method.

The majority of respondents in this study lived in Java Island, comprising approximately 72.39% of the sample. Furthermore, 77.07% of

respondents identified as female, while 22.93% identified as male. Among the age groups, 77.83% fell between 21 and 30 years old. Most respondents attained their highest level of education at Senior High School (51.96%) and Diploma 4/Bachelor (39.35%). In addition, 65.43% of respondents were college students, and 20.54% were workers/employees. More detailed information on respondent characteristics is available in Table I.

**Table 1. Respondent Characteristics**

Respondent Characteristics	Indicators	N	%
Resident Island	Sumatera	123	13.37
	Kalimantan	52	5.65
	Java	666	72.39
	Bali and Nusa Tenggara	38	4.13
	Sulawesi	3	0.33
	Maluku and Papua	211	22.93
Gender	Male	709	77.07
	Female	197	21.41
Age	< 21	716	77.83
	21 - 30	5	0.54
	31 - 40	2	0.22
	41 - 50	2	0.22
Education	Elementary School	21	2.28
	Junior High School	478	51.96
	Senior High School	52	5.65
	Diploma 1/Diploma 3	362	39.35
	Diploma 4/Bachelor	5	0.54
	Magister	21	2.28
	Student	602	65.43
Occupation	College Student	189	20.54
	Employee	21	2.28
	Businessman	6	0.65
	Housewife	42	4.57
	Freelancer	39	4.24
	Unemployed	96	10.43
	Go-Pay	35	3.80
	OVO	238	25.87
	Shopee Pay	103	11.20
	DANA	340	36.96
Electronic Payment mostly used	<i>M-Banking (Mobile Banking)</i>	8	0.87
	Flip	89	9.67
	QRIS	8	0.87
	E-money (TapCash, Brizzi, Flazz BCA, dll)	3	0.33
First time using Electronic Payments	LinkAja	590	64.13
	Before COVID-19 Pandemic	330	35.87
User's Knowledge of Electronic Payments	During COVID-19 Pandemic	3	0.33
	Poor	81	8.80
	Moderate	550	59.78
	Good	246	26.74
	Very Good	40	4.35
	Excellent		

Source: (Research Result, 2024)

### B. Research Model Evaluation

The first stage of evaluating the research model was assessing the suitability of each

indicator and its construct by assessing convergent validity, followed by assessing the reliability of each construct. On the initial run, the outer loading for all indicators except for the FC4 was more than 0.7. The FC4 indicator was below the 0.7 threshold with a value of 0.592, so we considered removing this indicator by comparing the impact of removal to the AVE values. On the next run without FC4, the AVE and composite reliability values for the Facilitating Conditions latent variable increased, as seen in Table II. So, we removed the FC4 indicator from the model, and three indicators were left to measure the Facilitating Conditions latent variable.

**Table 2. Comparison of AVE and Composite Reliability before and after FC4 was removed**

Latent Variable	Before Removed		After Removed	
	AVE	Composite Reliability	AVE	Composite Reliability
FC	0.587	0.848	0.706	0.878

Source: (Research Result, 2024)

The values of the outer loadings, AVE, Composite Reliability, and Cronbach's Alpha of the model can be seen in Table III. Each indicator's outer loading surpasses the threshold value of 0.7, indicating that all indicators effectively measure their respective latent variables. Moreover, the AVE value of all constructs surpass 0.5, suggesting that each latent variable in this research can explain more than 50% of the variance for each indicator [34]. Additionally, both the Composite Reliability and Cronbach's Alpha values for all constructs surpass the thresholds of 0.6 and 0.7, respectively, indicating strong consistency across all constructs. Thus, the convergent validity of each indicator and its construct is fulfilled. The reliability of each construct has also met the requirement.

**Table 3. Outer Loadings, AVE, Composite Reliability, and Cronbach's Alpha Values**

Latent Variable	Indicators	Out. Loadings	AVE	Comp. Reliability	Cronbach's Alpha
PE	PE1	0.746	0.589	0.851	0.771
	PE2	0.731			
	PE3	0.800			
	PE4	0.789			
EE	EE1	0.836	0.683	0.896	0.845
	EE2	0.841			
	EE3	0.853			
	EE4	0.774			
SI	SI1	0.801	0.636	0.875	0.814
	SI2	0.825			
	SI3	0.786			
	SI4	0.778			
FC	FC1	0.801	0.706	0.878	0.793
	FC2	0.866			
	FC3	0.853			
TR	TR1	0.788	0.692	0.918	0.888



Latent Variable	Indicators	Out. Loadings	AVE	Comp. Reliability	Cronbach's Alpha
PS	TR2	0.836	0.781	0.914	0.860
	TR3	0.885			
	TR4	0.867			
	TR5	0.778			
	PS1	0.864			
IU	PS2	0.909	0.787	0.917	0.864
	PS3	0.877			
	IU1	0.854			
CU	IU2	0.909	0.707	0.905	0.859
	IU3	0.897			
	CU1	0.860			
	CU2	0.719			
	CU3	0.895			
	CU4	0.878			

Source: (Research Result, 2024)

In the second stage, we assessed the discriminant validity of each construct using the Fornell-Larcker criterion, by comparing the square root of AVE values of constructs with their correlations to other constructs [34]. As depicted in Table IV, the square root of AVE for each construct surpasses its correlation with other constructs, indicating the distinctiveness of each construct from the others [34]. This results confirm that the model satisfies discriminant validity requirements.

Table 4. Fornell-Larcker Criterion

	PE	EE	SI	FC	TR	PS	IU	CU
P	0.767							
E	0.691	0.827						
S	0.359	0.275	0.798					
F	0.499	0.588	0.230	0.840				
T	0.552	0.539	0.421	0.477	0.832			
P	0.380	0.375	0.407	0.282	0.652	0.884		
I	0.534	0.484	0.334	0.465	0.582	0.457	0.887	
C	0.550	0.508	0.329	0.424	0.486	0.372	0.686	0.841
U								

Source: (Research Result, 2024)

In the last stage, following the assessment of validity and reliability, it is essential to analyze the collinearity among each group of predictor latent variables in the structural model section. This is important because significant collinearity among predictor latent variables could introduce bias to the path coefficient [34]. The collinearity was evaluated by looking at the VIF value of each set of predictor latent variables. VIF values of all constructs in this research were below 5. It means there is no collinearity in each subsection of the structural model.

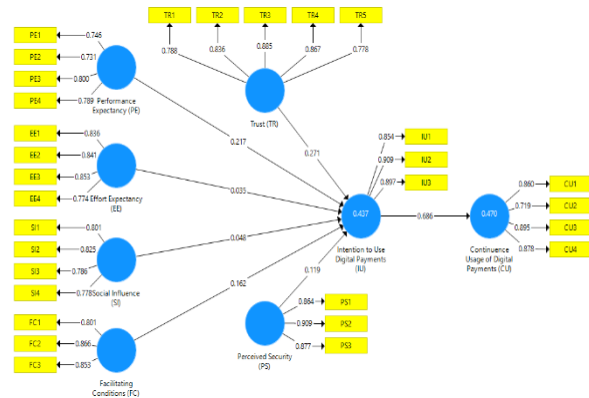
C. Hypothesis Testing

Hypothesis testing involves examining the path coefficient values, t-values, and p-values to ascertain the factors influencing the continued usage of electronic payments. The results obtained that H1, H4, H5, H6, and H7 are accepted, while H2 and H3 are rejected. Detailed results of hypothesis testing are available in Table V and Figure 2.

Table 5. Summary of significant test (hypothesis test)

Hypothesis	Path Coefficient	t-value	p-value	Results
PE → IU	0.217	5.464	0.000	Accepted
EE → IU	0.035	0.820	0.412	Rejected
SI → IU	0.048	1.575	0.115	Rejected
FC → IU	0.162	4.522	0.000	Accepted
TR → IU	0.271	5.873	0.000	Accepted
PS → IU	0.119	3.285	0.001	Accepted
IU → CU	0.686	31.026	0.000	Accepted

Source: (Research Result, 2024)



Source: (Research Result, 2024)

Figure 1. Path Model

The next step is to see the exogenous latent variable's capacity to explain its endogenous latent variable through assessing the coefficient of determination (R<sup>2</sup>). Based on Table VI, the exogenous latent variables Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Trust, and Perceived Security can explain the endogenous latent variable Intention to Use Digital Payments of 43.7%. Then the exogenous latent variable Intention to Use Digital Payments itself can explain the endogenous latent variable Continuance Usage of Digital Payments of 47%.

Table 6. R<sup>2</sup> and Q<sup>2</sup> values

Variabel Laten Endogen	R <sup>2</sup>	Q <sup>2</sup>
Intention to Use Digital Payments (IU)	0.437	0.338
Continuance Usage of Digital Payments (CU)	0.470	0.330

Source: (Research Result, 2024)



As also seen in Table VI, the  $Q^2$  values for both endogenous latent variables are more than 0, which means that the exogenous variable has an excellent predictive relevance to the endogenous variable and the exogenous variable has a good observation value.

#### D. Continuance Usage of Electronic Payments

Based on the survey results, 100% of participants (920 people) stated that they continued or were still using e-payments until now, specifically after the COVID-19 and no more social restriction policy. Thus, although people have started to carry out their activities generally as before the COVID-19 pandemic, e-payment usage has not been abandoned. On the other hand, e-payments are still continually used. 26.63% or 245 respondents admitted that their frequency of using e-payments had decreased after the pandemic. However, for the other three-quarters of respondents, the frequency of e-payment use tends to be the same and even manages to increase after the pandemic passes.

Of 920 respondents, 64.13%, or 590 respondents, had used electronic payments since before the COVID-19 pandemic. On the other hand, about 35.87%, or 330 respondents, had just started using electronic payments since the COVID-19 pandemic occurred in Indonesia. Those data show that most of the respondents in this study were old users of e-payment and did not adopt e-payment for pandemic reasons. However, the 330 respondents indicated that the adoption of electronic payments due to the pandemic was not temporary or abandoned when the pandemic ended.

Regarding electronic payment products, it turns out that as many as 36.96% of respondents use m-banking the most. The second most widely used e-payment product is ShopeePay, an e-payment integrated with the Shopee marketplace platform with many users in Indonesia. When asked about knowledge and familiarity with e-payment, half of the respondents, 59.78%, admitted to having good knowledge about e-payment. It is quite possible, considering 70.33% of respondents had used e-payments for over three years.

#### E. Continuance Factors of Electronic Payments Usage

Based on the results of hypotheses testing, the continuance of e-payment usage after COVID-19 as it is today is mainly determined by the intention of users (Intention to Use Digital Payments). This result aligns with studies [9]. This result indicates that user intentions can increase the actual or real use of electronic payments [30]. Thus, a strong

intention to use e-payments with encouragement from several related factors can increase the sustainability of the actual use of e-payments.

The user intention (IU) is most significantly influenced by the user's trust in the platform or e-payment product, which is actually an additional variable proposed in this research, not an original variable from the UTAUT model. User intention is also significantly influenced by Perceived Security. These results are similar to those in [4], [25]. In general, e-payment transactions are accessed via digital devices such as smartphones or tablets. It makes users more aware of and concerned about data and transaction security [25]. When users feel confident that all data and transactions made with e-payments are safe from security issues, such as data theft, nominal fraud, and other problems, users will have a strong desire and intention to do transactions via e-payments.

The other factor that influences user intention is the Performance Expectancy. That Performance Expectancy positively influences the Intention to Use Digital Payments is in line with studies [4], [5], [32], [35]. If the user has a strong belief in the usefulness of technology in his life, then the user will intend to use or adopt the technology [5]. The benefits of e-payments that help improve user performance in terms of payment can increase user intentions to use them [17], [36]. Facilitating Conditions also positively affect the Intention to Use Digital Payments, as also stated in [3], [9]. It indicates that the conditions of certain facilities like integrated systems, internet connections, infrastructure, or devices for accessing e-payments can affect the willingness and intention of users to use them [3].

In contrast, the ease of electronic payments (Effort Expectancy) and social influence from friends, family, or colleagues (Social Influence) were not proven to affect user intention to use e-payments after the pandemic. In the studies of [9], [32], Effort Expectancy also has no significant effect on the Intention to Use Digital Payments. With the COVID-19 pandemic, e-payment users have become more aware of the security of e-payments and how the platform can protect their data and transactions [4]. Therefore, the ease of use of electronic payments is considered less able to determine the user's decision and intention to use it [4]. Respondents' answers to the Effort Expectancy question items also show that almost all respondents found it easy and did not experience any difficulties using e-payments. So, ease or effort is no longer a determining factor in the continued use of e-payments after the pandemic.



Besides Effort Expectancy, Social Influence does not significantly affect the Intention to Use Digital Payments. Naturally, the decision or intention to use e-payments from users is based on their own trust and encouragement. Because finance is a private and personal matter, self-determination and willingness are the main drivers for an individual to use e-payments. So, the opinions and input of others have not been considered very meaningful in determining a person's intention to use electronic payments [37]. On the Social Influence question items, the majority of respondents answered disagree/strongly disagree that the closest people, such as family, friends, and colleagues, influence the behavior of respondents in using e-payments.

#### F. Implications

Based on the results of this research, several things need to be considered in the development of e-payment platforms in the future to maintain the continuance of e-payment usage. As user intention to continually use e-payments is mainly influenced by user's trust toward the e-payment platform, e-payment service providers must ensure their platform is secure, and user transactions and personal information are confidential to gain user trust to continue using e-payments. [4], [17]. Besides user's trust, Performance Expectancy, or user's expectation in the usefulness of e-payments, also significantly influences user intention to use e-payments continually. Therefore, e-payment service providers must provide complete payment features to maximize benefits to users.

Besides the practical implication, this research also contributes theoretical implication by proving that the UTAUT model can also explain the behavior and intentions of a user in the post-acceptance context.

#### CONCLUSION

According to this study, the use of e-payments remains the same after COVID-19 and there is no more social restriction policy. Although people have started to carry out their activities like before the COVID-19 pandemic, e-payment usage has not been abandoned. However, the frequency of use was decreased by some respondents. E-payment usage in Indonesia post-COVID-19 is predominantly driven by user intention, specifically for 47%. Among the determinants of user intention, trust emerges as the primary factor, which is actually an additional variable proposed in this research, not an original variable from the UTAUT model. Furthermore, factors such as Performance

Expectancy, Facilitating Conditions, and Perceived Security also exert significant influence on user intention toward e-payments.

Of the seven hypotheses proposed in this study, two hypotheses cannot be proven. Specifically, there is insufficient evidence to suggest a positive relationship between Effort Expectancy and the Intention to Use Digital Payments and a positive impact of Social Influence towards the Intention to Use Digital Payments. Future investigations could delve deeper into understanding the effect of Effort Expectancy and Social Influence on post-acceptance behavior related to e-payments. Further research is also needed to capture respondents who better represent all characteristics of the Indonesian population, considering that most of the respondents in this study only came from Java island.

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