E-QIEN Jurnal Ekonomi dan bisnis
Jurnal Ekonomi dan Bisnis, Vol. 11 No. 3 November 2022
P - ISSN : 2503-4413
E - ISSN : 2654-5837, Hal 923 – 931

THE ANALYSIS OF DIGITAL PAYMENT USAGE INTENTION FROM TPB AND TAM PERSPECTIVE

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Article Info

Article History :
Received 16 Nov - 2022
Accepted 25 Nov - 2022
Available Online
30 Nov – 2022

Abstract

This research has the purpose to analyze the factors that cause digital payment usage intention, the factors that being used in this research is security, perceived usefulness, perceived ease of use, trust, subjective norms, and attitude then find out the impact of the security toward usage intention, perceived usefulness toward usage intention, perceived ease of use toward usage intention, trust toward usage intention, subjective norms toward usage intention, attitude toward usage intention, and the simultaneous impact from all of the variables toward usage intention The methodology that use in this study is quantitative approach hence it will use the questionnaire as media to gathering the primary data. This study used 300 sample data of Indonesia citizen for being analysis using validity and reliability test, multiple regression analysis, T-test and F-test the result is: security, perceived usefulness, perceived ease of use, trust, subjective norms and attitude give significant impact to the digital payment usage intention. However, perceived usefulness did not give significant impact toward digital payment usage intention (it give very low impact on digital payment usage intention). The result from multiple regression analysis R^2 shows the result 0.481 which mean all of the factors that choose to analyze in this research influence as big as 48.2% toward usage intention.

Keyword :
Digital Payment usage intention, TAM, TPB, perceived ease of use, perceived usefulness, security, trust, attitude, subjective norms.

1. INTRODUCTION

At first, people made transactions using paper money as a means of payment. However, now has moved innovation with sophisticated technology that replaces paper money into a check sheet to become electronic money, in other words, e-money. With this present era, everything can be done easily, one of them is by using digital money. Only by opening and scanning mobile phones, various transactions can be done easily and quickly. Financial authorities such as Bank Indonesia also encourage the use of cashless transactions (Fransdullah, 2016). “Based on Bank Indonesia (BI) data, there is 38 digital wallet (e-wallet) with official licenses. price and App Annie's research mentioned Gojek as a digital wallet with the largest monthly active users in Indonesia since the fourth quarter of 2017. For information, Gojek digital wallet user data is the number of monthly active users of Go-Pay and other services from the Gojek application. The next is Ovo has succeeded in winning four consecutive quarters. Previously, Ovo had competed with LinkAja for the second position. In the second quarter of 2019, LinkAja's position was successfully shifted with newcomers, called Dana and occupies the third position. LinkAja must also go down to fourth. Jenius tended to stay in fifth place

even though in the third quarter of 2018 it had risen to fourth. iPrice Group collaborates with the Annie App. The cornerstone of the analysis of the most popular digital wallet application research uses monthly active users that are updated regularly (Jayani, 2019)".

This paper analyzes the causative factors that digital payment usage intention in Indonesia why people keep using it. The business has an important role to brings changes and improvement in an economic country, especially in the field of technology. Nowadays many sophisticated technologies are developing rapidly, one of which is digital payment. Anyone can make transaction payments with an electronic wallet, OVO, Go-Pay, and many more.

2. METHODOLOGY

Research is made as systematic as possible by applying the structure of papers that have been arranged carefully and thoroughly. One structure in this paper is to take quantitative research samples. Thus, quantitative research is applied in this study. Qualitative research is a way to obtain knowledge information using data in the form of numbers to facilitate supervision. Quantitative methods also have their characteristics, types and have their procedures.

Quantitative research is a research strategy that has been used by many researchers, this is because quantitative research gives researchers the ability to obtain facts not hypothetical result in purpose to demonstrate the study. "Quantitative research is a method that can be adjusted to the structured, numerical, and statistic data collections and this data can be used for analyzing the data to inherit the research result. To be able to get a better result while using quantitative research, the data should be analyzed well" (Wahidmurni, 2017).

There are total eight variables that used in this research; Security, Perceived Usefulness, Perceived Ease of Use, Trust, Subjective Norms, and Attitude for the independent variables and Usage Intention for the dependent variables. For better explanation, see the table 2.1 below.

Table 1 Operational Definition

Variable	Indicator	Questionnaire	Source
Security (X1)	*Secur1*	I believe my personal information on mobile payment is safe.	(Joshi D. C., 2019), (Choi-MengLeong, 2019), (Fong, 2016), (Ezlika, 2018), (Richard Glavee-Geo, 2017), (Sindhu Singh, 2018).
	Secur2	I'm sure my m-payment transaction information is more privacy.	
	Secur3	I feel comfortable when using m-payment.	
	Secur4	Transactions using m-payment are safe because they use a password or secret PIN.	
Perceived Usefulness (X2)	*PU1*	Digital payments greatly streamline my time when making payment transactions.	
	PU2	For me, payment with digital money is not difficult to use	
	PU3	For me, digital payments are easy and simple to use as a means for payment.	
	PU4	I think the mobile payment is profitable.	
	PU5	I think mobile payments has so many advantages.	
Perceived Ease of Use (X3)	*PEOU1*	I believe that mobile payment is easy to use.	
	PEOU2	It is easy to learn how to do the transaction using the mobile wallet application.	
	PEOU3	I can learn how to perform a transaction using the mobile wallet application easily.	
	PEOU4	Using mobile payment does not need a large effort.	
Trust (X4)	*Trust1*	I believe the digital wallet has an accurate security system.	
	Trust2	I use mobile payments because the developer company can be trusted.	

Variable	Indicator	Questionnaire	Source
	Trust3	My trustworthiness in mobile payments is very large.	
	Trust4	I believe digital payment make my transaction profitable.	
Subjective Norms (X5)	*SN1*	The reason I am using mobile payment is because of my friend's recommendation.	
	SN2	I use a digital wallet because it is recommended by my closest person.	
	SN3	My community circle is mobile payment users so I have to use it too.	
	SN4	I can accept mobile payment as my payment transaction method.	
Attitude (X6)	*ATT1*	I think using mobile banking will make it easier for me to pay at any time.	
	ATT2	I like to try new mobile payment applications and use its feature.	
	ATT3	I think using a mobile payment is a good thing for me.	
	ATT4	I can understand the instructions provided by mobile payment easily.	
	ATT5	I like to use mobile payment because it is profitable.	
Digital Payment Usage Intention (Y)	*UI1*	I intend to use mobile payments when shopping at the mall.	
	UI2	I intend to use my mobile payment point to rebuy items.	
	UI3	I would like to make a transaction with mobile payment in the next few months.	
	UI4	I will often use mobile payment in the future.	

Source: Adjusted by researcher, 2020

The survey give result that the questionnaire respondent is dominate by male respondent 52.7% or equal to 158 respondents and the rest 47.3% is female respondents as big as 142 respondents. The respondents age is dominate by Gen Z that is 17 until 25 years old as big as 76.7% or 230 respondents. The rest is Gen Y 17% or 51 respondents, Gen X 4.7% or 14 respondents, and 1.7% is elderly (Baby boomers) with 5 total respondents.

The expenses from the respondents is 12% from less than 1.000.000 rupiah, 36.7% respondents expense around 1.000.000 until 2.000.000 rupiah, 35.3% respondents expense around 2.000.000 and 5.000.000 and last greater than 5.000.000 expenses as big as 16% from total respondents. The respondent income less than 1.000.000 is 10.3%, 29.7% for income around 1.000.000 until 2.000.000 rupiah, respondents with income around 3.000.000 until 5.000.000 is 36.7% and respondents with income greater that 5.000.000 rupiah is 23.3%. The more detail, table 2 will show the data of the respondents.

Table 2 Respondents Profile

	Total	Percentage (%)
Gender		
Male	158	52.7%
Female	142	47.3%
Age		
17 – 25 Years Old (Gen Z)	230	76.7%
26 – 39 Years Old (Gen Y)	51	17%
40 – 45 Years Old (Gen X)	14	4.7%
>55 Years Old (Baby Boomers)	5	1.7%
Expense *(in IDR)*		
< 1.000.000	36	12%
1.000.000 – 2.000.000	110	36.7%
3.000.000 – 5.000.000	106	35.3%
> 5.000.000	48	16%
Income *(in IDR)*		
< 1.000.000	31	10.3%
1.000.000 – 2.000.000	89	29.7%
3.000.000 – 5.000.000	110	36.7%
> 5.000.000	70	23.3%

3. RESULT AND DISCUSSION

The analysis is held using SPSS 25. The result of validity and reliability is shown by SPSS from Rcount value. To prove the research statement is valid or not. The validity test is conducted in this research using Rtable value 0.361 that already counted before. The requirement of the research hypothesis to be considered as valid is Rcount is greater than Rtable means Rcount value should be greater than 0.361. This research has 30 statements with detail Independent variables is security with 4 statements, Perceived Usefulness with 5 statements, Perceived Ease of Use with 4 statements, Trust with 4 statements, Subjective Norms with 4 statements, Attitude with 5 statements and the dependent variable is Usage Intention with 4 statements. The result of this test will be described in the table of validity test below.

Table 3 Validity Test Results

Variable	Statements Code	Rtable	Rcount	Condition
Security	Secur1	.361	.653	VALID
	Secur2	.361	.590	VALID
	Secur3	.361	.632	VALID
	Secur4	.361	.655	VALID
Perceived Usefulness	PU1	.361	.621	VALID
	PU2	.361	.612	VALID
	PU3	.361	.559	VALID
	PU4	.361	.581	VALID
	PU5	.361	.686	VALID
Perceived Ease of Use	PEOU1	.361	.678	VALID
	PEOU2	.361	.710	VALID
	PEOU3	.361	.648	VALID
	PEOU4	.361	.636	VALID
Trust	Trst1	.361	.733	VALID
	Trst2	.361	.659	VALID
	Trst3	.361	.711	VALID
	Trst4	.361	.725	VALID
Subjective Norms	SN1	.361	.825	VALID
	SN2	.361	.822	VALID
	SN3	.361	.696	VALID
	SN4	.361	.530	VALID
Attitude	Att1	.361	.562	VALID
	Att2	.361	.684	VALID
	Att3	.361	.571	VALID
	Att4	.361	.640	VALID
	Att5	.361	.665	VALID
Usage Intention	UI1	.361	.745	VALID
	UI2	.361	.640	VALID
	UI3	.361	.700	VALID
	UI4	.361	.707	VALID

Sources: Analysis from SPSS 25

Reliability test is a test that uses to show the reliability rate of each variable. Cronbach's Alpha is used to become a measurement of an analysis value. The reliability test can be stated as reliable if the calculation results value is greater than 0.5. This test will be used to analyze 30 statements. The table below shows the results from the reliability test of 30 statements.

Table 4 Reliability Test Result

No	Variable	Items	N	Count	Categorization
1	Security	4	30	.583	Low
2	Perceived Usefulness	5	30	.629	Low
3	Perceived Ease of Use	4	30	.790	High
4	Trust	4	30	.815	Magnificent
5	Subjective Norms	4	30	.848	Magnificent
6	Attitude	5	30	.665	Magnificent
7	Usage Intention	4	30	.840	Magnificent

Sources: Analysis from SPSS 25

Table 5 Multiple Regression Analysis Results (Coefficients)

Sources: Analysis from SPSS 25

Model		Unstandardized Coefficient		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.065	1.085		1.904	.058
	SecurSUM	.285	.062	.253	4.594	.000
	PUSUM	.018	.055	.019	.322	.740
	PEOUSUM	.142	.060	.132	2.379	.018
	TrstSUM	.193	.059	.199	3.257	.001
	SNSUM	.178	.040	.234	4.452	.000
	AttSUM	.061	.059	.068	1.034	.302

The table above shows the result of multiple regression analysis. Through this result, the researcher can construct the Multiple Regression Model as shown below.

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6$$

$$Y = 2.065 + 0.285X_1 + 0.018X_2 + 0.142X_3 + 0.193X_4 + 0.178X_5 + 0.061X_6$$

The explanation of this model will be listed in the following section. The explanation below is done using the assumption of all independent variable don't have dynamic value (fixed).

1. X1 variable is Security toward Usage Intention as Y variable: B1 is 0.285 and show the positive value means that every security value increase then it will contribute to increasing the digital payment usage intention around 28.5%.
2. X2 variable is Perceived Usefulness toward usage intention as Y variable: B2 is 0.018 and show the positive value means that every PU increases then it will contribute to increasing the digital payment usage intention around 1.8%.
3. X3 variable is Perceived Ease of Use toward usage intention as Y variable: B3 is 0.142 and show the positive value means that every PEOU increases then it will contribute to increasing the digital payment usage intention around 14.2%.
4. X4 variable is Trust toward usage intention as Y variable: B4 is 0.193 and show the positive value means that every trust value increasing then it will contribute to increasing the digital payment usage intention around 19.3%.
5. X5 variable is Subjective Norms toward usage intention as Y variable: B5 is 0.178 and show the positive value means that every SN value increasing then it will contribute to increasing the digital payment usage intention around 17.8%.

6. X6 variable is Attitude toward usage intention as Y variable. B6 is 0.061 and show the positive value means that every Att value increasing then it will contribute to increasing the digital payment usage intention around 6.1%.
7. Y variable is Usage intention: the constant value is 2.065 and shows the positive value means that even when all of the independent variables is 0, the digital payment usage intention still increasing because of getting affected by other external variables outside the research variable.

A hypothesis test is held to show the evidence regarding the researcher's hypothesis or assumption that use to become the temporary answer to this topic. The hypothesis test is divided into three test section, that is T-test, F-test and Coefficient of Determination (R^2).

The T-test is used to give evidence about the researcher's hypothesis by showing the direct influences between independent variables in connection with the dependent variable. The t value can be interpreted as two types, first is when the t-value is greater than the margin of error (0.05) means that Ha is approve and Ho is rejected and the second is when the t-value is lower than 0.05 as the margin of error value means that Ha is rejected and Ho is approved. After being tested using SPSS, the result is showing in the section below.

Table 6 T-test result

Model		Unstandardized Coefficient		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.065	1.085		1.904	.058
	SecurSUM	.285	.062	.253	4.594	.000
	PUSUM	.018	.055	.019	.322	.740
	PEOUSUM	.142	.060	.132	2.379	.018
	TrstSUM	.193	.059	.199	3.257	.001
	SNSUM	.178	.040	.234	4.452	.000
	AttSUM	.061	.059	.068	1.034	.302

Sources: Analysis from SPSS 25

Security	Accepted
Perceived Usefulness	Rejected
Perceived Ease of Use	Accepted
Trust	Accepted
Subjective Norms	Accepted
Attitude	Rejected

F-test is same as T-test but instead, it uses to show the direct influence between independent variables in connection with the dependent variable, F-test is used to show the simultaneous influences of all independent variable in connection with dependent variables. The difference is in F-test use all of independent variables value and merge it. The value after performing F-test using SPSS as a tool should be lower than 0.05.

Table 7 F-test result

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	487.939	6	81.323	47.301	.000[b]
	Residual	503.741	293	1.719		
	Total	991.680	299			

Sources: Analysis from SPSS 25

From the table above, it shows the result of the F-test analysis. The level of significant is 0.05 and significant value is 0.000 means that the significant value is lower than 0.05. According to the theory of F-test if the significant value is lower than the level of significant (0.05) means that it fulfilled the requirement of F-test. Next, the F_{count} value should be greater than F_{table} value. Using df_1 and df_2 from the table above the value of F_{table} is 2.12. F_{count} is 47.301 and it is greater than F_{table} 2.12. Therefore, the result is the H_{o7} is rejected and H_{a7} is accepted, and there is simultaneous influence between all independent variables and digital payment usage intention as the dependent variable.

Coefficient of determination is a measurement to show the influence rate between the dependent variable and independent variables. R^2 is shownn in percentages number format. Using the SPSS to calculate the coefficient of determination value, that is in the model summary part. The model summary table with R^2 value is shown below.

Table 8 Coefficient of Determination (R^2) result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Durbin-Watson
1	.701[a]	.492	.482	1.311	.492	47.301	1.831

Sources: Analysis from SPSS 25

According to the table above, it shows that the value of adjusted R^2 is 0.492 or can be interpreted as 48.2% of all independent variables that consist of security, perceived usefulness, perceived ease of use, trust, subjective norms, and attitude influence dependent variable that is usage intention. The rest 51.8% is influenced by other external variables which are not part of the independent variable in this research.

4. Conclusions

Referred to the chapter 4 from the analysis that has been done, the researcher summarized the results and state that there is a connection between Security, Perceived Ease of Use, Trust, Subjective Norms, Attitude as independent variables toward Usage Intention as the dependent variable. Each of the variables give impact on increasing the value of usage intention as security 28,5%, Perceived Usefulness 1.8%, Perceived Ease of Use 14,2%, Trust 19,3%, subjective norms 17,8%, and attitude 6,1%. Even though Perceived Usefulness did not give the significant influence of Usage Intention, however, PU still gives low influences toward usage intention. All independent variable simultaneous influence or give impact toward digital payment by 48.2% and the rest is influence by the other variables that not mentioned in this research.

The variable that gives significant influence on usage intention and has big contribute in increase the usage intention can be references for digital payment provider to take care of. The other external factor outside this research still needed to be research in the future. Therefore, for the next research the variable that has significant value can be used but the other need to be change to another possible variables.

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