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The Perceived Ease of Use of Mobile Payment Systems toward Consumer's Purchasing Interest

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A B S T R A C T

The aim from this research is to know how far the mobile payment system which applied in many conditions and by many people nowadays can affect the consumer's purchasing interest. The purpose of this research is to inform that most of the people right now tend to change their lifestyle into millenium lifestyle which used many mobile payment systems in order to deal with everything they want in their living activities. The research methodology used is descriptive quantitative research and simple linear regression analysis. The data obtained from those management students especially the class of 2018 and 2019 which includes several tests, Validity Test, Reliability Test, Normality Test, Multicollinearity Test, Heteroscedasticity Test, Simple Linear Regression Test, Hypothesis Test (partially t test and simultanous F test) and Determination Coefficient Test (adjusted r^2).

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INTRODUCTION

A mobile payment is a money payment made for a product or service through a portable electronic device such as a tablet or cell phone. Mobile payment technology can also be used to send money to friends or family members, such as with the applications OVO, Go Pay, and Dana. The rapid development of cellular phone usage in Indonesian society now provides opportunities for wider use of mobile payments. However, the use of conventional mobile payment technology that is currently hampered by the use of mobile phone devices with a very diverse technology, ranging from low-end cellular phone devices that still use monochromatic screens and limited features to services for making phone calls and sending short messages , to cellular phones with very complete technology resembling a computer.

The increasing number of cell phone users requires technological innovation that is able to facilitate users in carrying out their activities, including trade transactions that are increasingly widespread. New solutions are now being developed in the function of changing the way transactions are done to support business activities. This new solution involves mobile technology as a means for transactions. This phone will be positioned as a tool that works to replace physical money or credit cards. As a result, mobile phones can now be used for buying and selling transactions, both micropayment and macropayment. The involvement of mobile phones in this field is known as mobile payment. Some important attributes underlying mobile payment include the actors involved, the characterization of mobile payments, the mobile payment scenario and the operations involved in mobile payment (David McKitterick and Jim Dowling, 2003). Mobile Payment is the payment of goods or services using mobile devices such as mobile phones or PDAs that have NFC capability. There are many types of goods and services that can be purchased with mobile payment for example: music, videos, ringtones, online games, books, magazines, tickets, etc. There are 4 main models of Mobile Payments :

1. Premium SMS Based Transactional Payments is a bill payment request via sms to a certain number / code and the bill will be deducted from the telephone credit. For example: purchase ringtones, wallpapers, music, etc.
2. Direct Mobile Billing is a mode of payment for transactions made using a mobile account, where the mobile account has a PIN and One Time Password.
3. Mobile Web Payments (WAP) is a bill payment request using WAP (Wireless Application Protocol) on a mobile phone and the bill is charged to telephone billing (Direct Operator Billing). The use of a simple mobile payment can use a Credit Card / Credit Card.
4. Contactless NFC (Near Field Communication) is a payment pattern using a mobile device that has an NFC (Near Field Communication) application where bills will be deducted from prepaid cards, or billed to telephone billing, or bank accounts directly.
5. Online Payment (Mobile Payment) is the understanding of online payment is not yet basic, but if a red thread is drawn, it can be said that online payment uses facilities provided by epayment service providers (Go-Pay, DANA, and OVO) to transact or process the sale and purchase of goods. In the case of Go-

Pay it is certainly understandable, when we place an order for example Go-Food, we don't need to pay using physical money as usual, we can use Go-Pay to make transactions.

When shopping at *Bukalapak* that actually uses DANA, as an alternative to payment, we don't need to bother making payments at Alfamart or Indomaret for example. Likewise with OVO in collaboration with *Tokopedia*, more or less shadows like that. With the convenience provided, of course the next few years, this competition will continue and who is the strongest and best of these three services, which can reach all elements of society to use payments with this model. DANA is quite easy to use or in other words very user friendly. Before having an ID we are required to register using our telephone number. Usually this phone number is used as a security standard or often referred to as two ways of authentication, where we will get a certain code to be able to access to our DANA account. DANA offers an account upgrade that can save money in a digital DANA wallet of up to Rp 10 millions, all services are the same, which is Rp 10 millions.

Basically, the system provided by OVO is almost the same as DANA, used like paying for transactions through this application, of course, in stores that are already registered as OVO merchants, can also buy internet data packages, pay electricity, internet bills, etc. After activating or upgrading an OVO account, by verifying identity cards etc, customers can transfer to other OVO users, or even to a bank account. Go-pay is also one of the choices of cashless service providers to be reckoned with. Because Go-pay is a service provided by Go-jek. Go-jek has a very large user base, judging by the number of downloaded applications on the Google Play Store alone, we can see as many as 2 million have downloaded this application. Whereas Go-pay also has the advantage that all Gojek services such as GoFood, Go Ride, Go Send, etc. Can use Go-pay as a payment tool.

THEORETICAL REVIEW

The understanding of Mobile Payment is a payment mechanism made through the internet to make purchases of goods and services by customers (Turban, King, Lee, Warkentin, & Viehland, 2002). The other understanding of Mobile Payment is a payment model that can facilitate and provide comfort for its users in making payment transactions. Users only need to transact online by utilizing the internet, without having to come all the way to meet with sellers (Teoh, Chong, Lin, & Chua, 2013). According to Davis, the defining of ease of use as a level where someone believes that technology can be easily understood and easily used (Davis, 1989). According to Davis, there are several ease indicators (Ahmad & Pambudi, 2014) such as :

1. Easy to learn
2. Understandable
3. Easy to get the system to do what user want to do
4. Doesn’t require a lot of mental effort
5. Flexibel

The ease of use is one of the factors in the success of electronic payment solutions. Convenience of use can attract users' interest in e-payment services (Sahut & Galuszewska, 2004). In addition, one of the challenges in developing e-money is competitive challenges. This competitive factor is influenced by the number of other institutions that also become electronic money issuers. When viewed from the user's side, the challenge faced by electronic money issuers is user preference in choosing certain electronic money products (Sahut & Galuszewska, 2004). The Ease of Use of Mobile Payment System is defined as an individual's belief that if they use a particular system it will be free from effort (Mathieson, 1991). So if someone believes that a technology is easy to use then that person will use it. So this convenience variable gives an indication that a system is made not to complicate the user, but rather a system created with the aim of providing convenience for the wearer. Thus, someone who uses a particular system will work easier when compared to someone who works manually.

The Ease of Use of Mobile Payment System is also defined as the extent to which a person believes that using a technology will be free from effort (Mustakini, 2009). From this definition it can be seen that the Ease of Use is also a belief about the decision making process. If someone feels confident that the information system is easy to use then he will use it. On the other hand, if someone feels sure that the information system is not easy to use then he will not use it. On the other hand, Interest is something that is personal and related to attitude, individuals who are interested in an object will have the strength or drive to perform a series of behaviors to approach or obtain the object. Buying interest is a desire to buy a product or service due to both external and internal influences which previously had an evaluation of the product or service to be purchased, whereas Julianti, Nuridja and Meitriana stated that buying interest was something related to consumers' plans to buy certain products and how many product units are needed in a certain period (Andrian, 2019).

Another definition of purchasing interest according to Durianto is the desire to have a product, which will arise if a consumer has been affected by the quality and quality of a product, information about the product, such as price, how to buy and weaknesses and advantages of the product compared to other brands (Andrian, 2019). The purchasing interest can be identified by those indicators, such as (Ferdinand, 2016) :

1. Transactional interest, that is a person's tendency to buy products.
2. Refrential interest, which is a person's tendency to refer products to other people.
3. Preferential interest, which is an interest that describes the behavior of someone who has a major preference for the product. This preference can only be replaced if something happens with the preference product.
4. Asking for exploratory, this minan describes the behavior of someone who is always looking for information about the product he is interested in and is looking for information to support the positive qualities of the product.

Thinking Framework

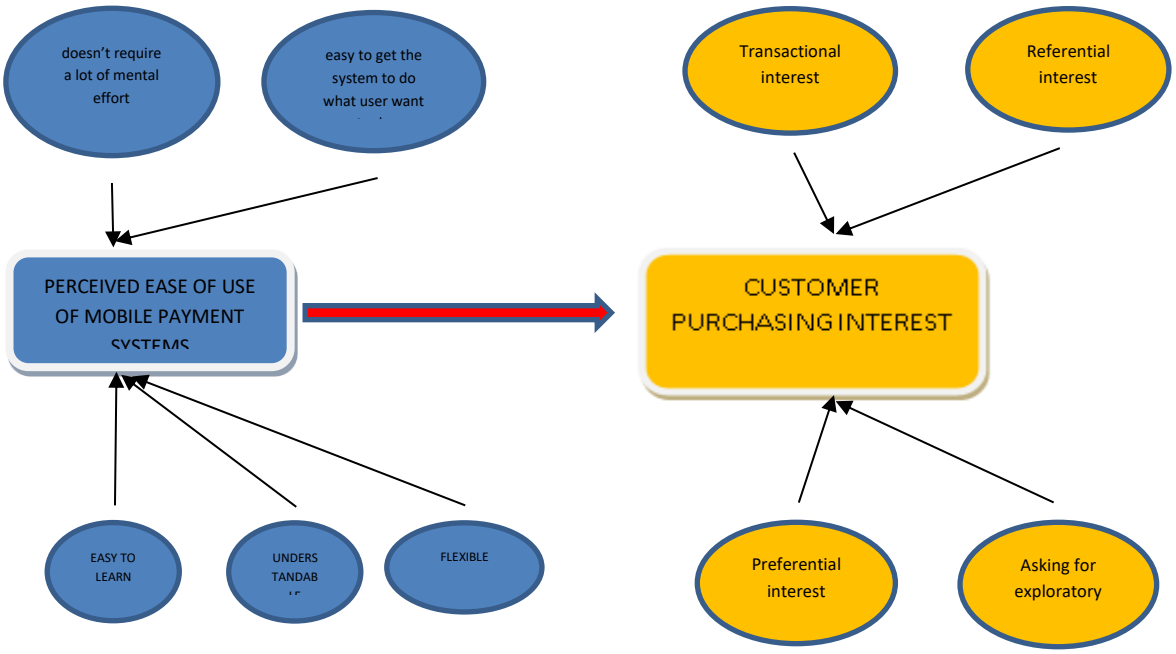

Figure 1. Conceptual Framework

METHODOLOGY

Research Type

This type of research is quantitative descriptive survey and simple linear regression analysis, which is an assessment that aims to get a real condition of how perceived ease of use of mobile payment systems can influence customer's purchasing interest and relates it to existing theories and uses questionnaires as a data collection tool.

Research Location

This research was conducted at Faculty of Economy Universitas Bhayangkara Jakarta Raya Campus 2 in Bekasi and the object of research are the Management students, Faculty of Economy Universitas Bhayangkara Jakarta Raya Campus 2 in Bekasi Class 2018 and 2019. The reason the author chose the location of this research in Management Department Faculty of Economy Universitas Bhayangkara Jakarta Raya Campus 2 in Bekasi is because the author wanted to know how far the students' purchasing interest can be increased by the perceived ease of use of mobile payment systems, such as the using of OVO, Go-pay and Dana.

Data, Population and Sample

In this study the data obtained were derived from the total population of Management students, Faculty of Economy Universitas Bhayangkara Jakarta Raya Class 2018 and 2019 and is about 244 people. The sample used by researchers is as many as 100 people with consideration according to the Slovin formula of the total population (Sugiyono, 2007). Data collection techniques used

by researchers in this study were distributed some questionnaires to Management students, Faculty of Economy Universitas Bhayangkara Jakarta Raya Campus 2 in Bekasi Class 2018 and 2019 directly. Then the data are processed with SPSS software version 22, with several tests such as Validity Test, Reliability Test, Normality Test (Kolmogorov-Smirnov Test), Multicollinearity Test, Heteroscedasticity Test, Simple Linear Regression Test, Hypothesis Test (partial t Test and simultaneous F Test) and the Determination Coefficient Test (adjusted r^2).

RESULTS AND DISCUSSIONS

Validity Test

Validity Test is used to measure the level of validity of a questionnaire. Validity Test is done using the correlation analysis method. The conclusions from the results of all indicators show significant results (0.000 < 0.05), and also r count > r table, so it can be concluded that each indicator i**s Valid.**

Table 1. Validity Test of Perceived Ease of Use and Customer's Purchasing Interest

		Perceived_Ease_Of Use_Of_Mobile_ Payment_Systems	**Consumers_ Purchasing_ Interest**
Perceived_Ease_Of_Use_Of_Mobile_Payment_Systems	Pearson Correlation	1	0.620**
	Sig. (2-Tailed)		0.000
	N	100	100
Costumer's_Purchasing_Interest	Pearson Correlation	0.620**	1
	Sig. (2-Tailed)	0.000	
	N	100	100

Table 2. Questionnaire's Indicators Validity Table with n = 100, df = 100 – 2 = 98, so r table is 0.1966

Variable	**R Count**	**R Table**	**Result**
Perceived_Ease_Of_Use_ Of_Mobile_Payment_Systems	0.620	0.1966	Valid
Costumer's_Purchasing_Interest	0.620	0.1966	Valid

Reliability Test

This test is conducted to determine the level of consistency of the results of the responses/answers of the respondents. The table below shows the reliability test results of the Perceived Ease of Use of Mobile Payment Systems on Customer's Purchasing Interest. The results of this reliability test explain the Cronbach's Alpha value > 0.70, so it can be concluded that the measurement tool is Reliable.

Table 3. Reliability Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.765	0.766	2

Normality Test (Kolmogorov-Smirnov Test)

Normality Test aims to test whether in the regression model, the interference or residual variables have a normal distribution or not. The results show that the significance value of the variable asymptotes (2 directions) from Perceived Ease of Use of Mobile Payment Systems (0.003) and Customer's Purchasing Interest (0.008) are < α = 0.05, so these variables are not Normal distributed and has a significant effect.

Table 4. Normality Test

		Perceived_Ease_of_Use_of_Mobile_Payment_Systems	Consumers_Purchasing_Interest
N		100	100
Normal Parameters[a,b]	Mean	34.08	32.52
	Std.deviation	3.521	3.427
Most Extreme Differences	Absolute	0.113	0.106
	Positive	0.093	0.078
	Negative	-0.113	-0.106
Test Statistic		0.113	0.106
Asymp. Sig. (2-tailed)		0.003[c]	0.008[c]

Multicollinearity Test

Multicollinearity Test aims to test whether the Regression model finds a correlation among independent variables. A good regression model should not have a correlation among independent variables. Multicollinearity can be seen from the correlation between independent variables below 0.90, or can also be seen from the Variance Inflation Factor (VIF) and Tolerance Value. If the VIF value < 10 and the tolerance value of the independent variable > 0.10, it can be concluded that there is no multicollinearity among independent variables in the regression model in this study. The results of the analysis show that all independent variables have a Variance Inflation Factor (VIF) value < 10 and a tolerance value > 0.10, it can be concluded that there is No Multicollinearity among independent variables in the regression model.

Table 5. Multicolinierity Test

Model			Perceived_Ease_Of_Use_Of_Mobile_Payment_Systems
1	Correlations	Perceived_Ease_Of_Use_Of_Mobile_Payment_Systems	1.000
	Covariances	Perceived_Ease_Of_Use_Of_Mobile_Payment_Systems	0.006

Table 6. Multicolinierity Test

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	11.949	2.643		4.521	0.000		
	Perceived_Ease_Of_Use_Of_Mobile_Payment_Systems	0.604	0.077	0.620	7.825	0.000	1.000	1.000

Heteroscedasticity Test

Heteroscedasticity test can be done with a Scatterplot chart. Through graph analysis, a regression model is considered not to occur heteroscedasticity if the points are scattered randomly and do not form a specific pattern that is clear and spreads above and below zero on the Y axis. To find out if there are symptoms of heteroscedasticity, can be done using a scatterplot graph heteroscedasticity between the predictive value of the dependent variable with independent variables. From the scatterplot graph below, the points are scattered randomly and spread both above and below the zero point and the Y axis. It can be concluded that there is No Heteroscedasticity (Homoscedasticity) in the regression model, the regression model is feasible to be used in the test.

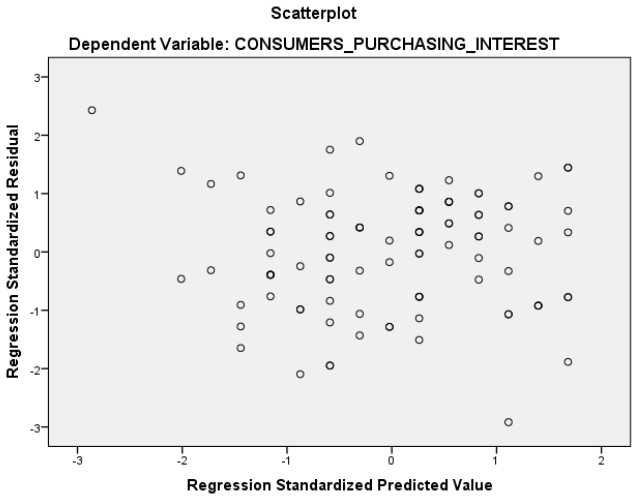

Figure 2. Heteroscedasticity Test

Simple Linear Regression Analysis Test

Below are presented the results of the simple linear regression analysis equation: Customer's Purchasing Interest = 11.949 + 0.604 Perceived Ease of Use of Mobile Payment Systems + error. The Regression Equation Model above can be interpreted as follows:

1. A Constant Value of 11.949 states that the Customer's Purchasing Interest variable is 11.949 if the Perceived Ease of Use of Mobile Payment variables are considered constant or equal to zero.
2. The Regression Coefficient of the Perceived Ease of Use of Mobile Payment Systems variable is 0.604, which means that if the value of the Perceived Ease of Use of Mobile Payment Systems variable increases by one unit, the Cutomer's Purchasing Interest variable will increase by 0.604.

Table 7. Simple Linear Regression Analysis Test

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	11.949	2.643		4.521	0.000		
Perceived_Ease_Of_Use_Of_Mobile_Payment_Systems	0.604	0.077	0.620	7.825	0.000	1.000	1.000

Simultaneous F Test

In this study, the F test was used to determine the level of significance of Perceived Ease of Use of Mobile Payment System variable simultaneously affect Customer's Purchasing Interest variable. The results of statistical calculations show the value of F_{count} = 61.224 > F_{table} = 3.09 and a significance value of 0.000 < 0.05, this indicates that the Perceived Ease of Use of Mobile Payment Systems variable influence simultaneously and significantly to Customer's Purchasing Interest variable.

Table 8. Simultaneous F Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	447.174	1	447.174	61.224	0.000[b]
	Residual	715.786	98	7.304		
	Total	1162.960	99			

Partial T Test

To test the level of significance of the regression model for each variable can be partially obtained using the t test which can be seen in the table below:

1. Partial test results from the hypothesis for the Perceived Ease of Use of Mobile Payment System variable shows the value of t_{count} = 7.825 > t_{table} = 1.984 with a significance value of 0.000 < 0.05, then it can be concluded that the Perceived Ease of Use of Mobile Payment Systems variable has a Positive and Significant influence to the Customer's Purchasing Interest variable.

Table 9. Partial T Test

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	11.949	2.643		4.521	0.000		
	Perceived_Ease_Of_Use_Of_Mobile_Payment_Systems	0.604	0.077	0.620	7.825	0.000	1.000	1.000

2. Determination Coefficient Test (Adjusted r^2)

The coefficient of determination is used to determine how far the independent variable affects dependent variable. The coefficient of determination is determined by the value of *adjusted r square*. Based on the table below, it can be seen that the coefficient of determination obtained is 0.378 or in other words the Perceived Ease of Use of Mobile Payment Systems variable has significant effect on Customer's Purchasing Interest variable by 37.8%, while the

remainder (100% - 37.8% = 62.2%) is influenced by other variables outside this regression model.

Table 10. Determination Coefficient Test (Adjusted r^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.620[a]	0.385	0.378	2.703

CONCLUSIONS AND RECOMMENDATIONS

From the results of the research's analysis, the researcher can conclude the results of this research as follows: Perceived Ease of Use of Mobile Payment Systems (X) variable has a positive and significant effect on Customer's Purchasing Interest (Y) variable. This research has been attempted and carried out in accordance with scientific procedures, however it still has limitations, such as:

1. The factor that influence Customer's Purchasing Interest variable, one of them is Perceived Ease of Use of Mobile Payment Systems, that is 37.8%, while there are many other factors (62.2%) affect it.
2. There is a limitation of the study using a questionnaire that is sometimes the answers given by respondents do not indicate the actual/inaccurate condition, because in practice it may still depend on the condition of the respondents in the field.
3. The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of Result and Discussion section. The conclusion section should lead the reader to important matter of the paper. It also can be followed by suggestion or recommendation related to further research. Limitation and contribution of research should be addressed in this section.

FURTHER STUDY

Every research is subject to limitations; thus, we need some suggestions that can make it better for the next research.

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