

# Analysis of Interest in Using Go-Pay Services for Students in Pontianak City Using the Technology Acceptance Model

Fita Kurniasari<sup>1</sup>

Corresponding Email: [fita.kurniasari@unmuhpnk.ac.id](mailto:fita.kurniasari@unmuhpnk.ac.id)

<sup>1</sup>Faculty of Economics and Business, University of Muhammadiyah Pontianak, Indonesia

## Abstract

The development of technology and communication today has affected human life on all sides, one of which is financial transactions. The innovation of financial transactions has given birth to a new way of transacting with electronic payments without using cash that is more practical. The purpose of this research is to find out what factors influence the interest in using Go-Pay services for students in Pontianak City. The sample in this study were 300 students in the city of Pontianak. The data analysis method used is Structural Equation Modeling (SEM) with WarpPLS Approach. Before interpreting the results of hypothesis testing, the model should have a Goodness of Fit.

**Keywords:** E-Money, Gopay, Technology Acceptance Model, Behavior Intention

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## Introduction

The development of technology and communication today has affected human life on all sides, one of which is financial transactions. The innovation of financial transactions has given birth to a new way of transacting with electronic payments without using cash that is more practical (Ozili, 2018). Telecommunications and banking companies are also competing to issue e-money services and products. Almost all major banks in Indonesia currently have e-money services.

There are 2 forms of e-money in Indonesia, the first is chip-based e-money. This type of electronic money is generally in the form of a card. The second type, server-based e-money. This type of e-money is usually in the form of an application. There are 37 e-money providers registered with Bank Indonesia in February 2019.

Go-Pay is one of the most widely used server-based e-money products in Indonesia (Puteri et al., 2022). According to a survey conducted by YouGov Indonesia in January 2019, the result was that 80 percent of respondents chose Go-Pay as a non-cash payment instrument. Then followed by OVO, Paypal, and T-Cash successively. Go-Pay transactions are increasing along with the many variations of services provided by Go-Pay and the QR (Quick Response) Code feature (Kaburuan et al., 2019). The start of GOJEK's operation in May 2017 in Pontianak City also had a significant impact on the use of Go-Pay.

Technology Acceptance Model (TAM) is one of the models used to analyze and understand the factors that influence the acceptance of the use of computer technology (Ibrahim et al., 2017). This can be used as a strategy for e-money service providers as input for the use of e-money technology in Indonesia.

The formulation of the problem in this study: what factors influence the interest in using e-money services for students in Pontianak City? The purpose of this study was to determine what factors influence the interest in using e-money services for students in Pontianak City.

This research will increase the knowledge and expertise of lecturers/researchers. This study also provides some input for e-money service providers in Pontianak City.

## Literature Review

### Electronic Money

Electronic Money is defined as a means of payment that meets the following elements: issued on the basis of the value of money that was deposited in advance to the issuer; the value of money is stored electronically in a medium such as a server or chips; and the value of electronic money managed by the issuer is not a deposit as referred to in the law governing banking (Bank Indonesia, 2013).

In simple terms, electronic money is defined as a means of payment in electronic form where the value of the money is stored in certain electronic media. Users must first deposit their money to the publisher and store it in electronic media before using it for transaction purposes (Zuhriyah, 2022). When used, the value of electronic money stored in electronic media will be reduced by the value of the transaction and after that it can be refilled (top-up).

### Go-Pay

Go-Pay is an e-money application developed by PT Dompot Karya Anak Bangsa. Go-Pay or previously referred to as Go Wallet is a virtual wallet to store Go-Jek Credit that can be used to pay for transactions related to services in the Go-Jek application (Widjojo, 2020). To be able to use Go-Pay, you only need to fill in the balance in Go-Pay Go-Jek. Currently Go-Pay has been integrated with major banks in Indonesia to top up balances into Go-Pay.

### Technology Acceptance Model

One theory of technology integration that is quite popular is the technology acceptance model (TAM). TAM development describes that there are two factors that dominantly affect technology integration. The first factor is the user's perception of the benefits of technology. While the second factor is the user's perception of the ease of using technology. Both of these factors affect the willingness to use technology (Venkatesh & Bala, 2008).

The Technology Acceptance Model (TAM) developed by Davis (1989) is a successful and highly acceptable model for predicting acceptance of a newly applied technology.

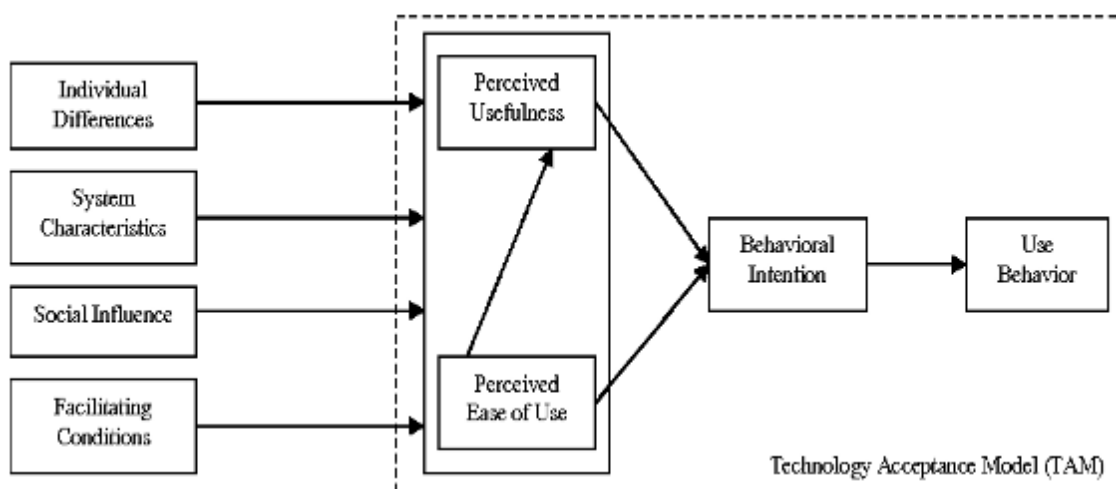


Figure 1. Technology Acceptance Model

Source: (Venkatesh & Bala, 2008)

### Perceived Ease of Use

Ensuring that the information technology will be easy to use. Perceived usefulness is a level where a person believes that the user of a particular system will be able to improve that person's work performance.

### Perceived Usefulness

Ensuring that the information technology used will provide benefits. The perceived convenience must be able to convince users that the information technology to be used is easy and not a burden to the user.

### Methods

#### Research Location

This research was conducted in the city of Pontianak with the object of research, namely students in Pontianak City.

#### Population and Sample

Population is a generalization area consisting of: objects/subjects that have certain qualities and characteristics determined by the researcher to be studied and then draw conclusions (Sugiyono, 2014). There are 30 universities, both public and private in Pontianak City, which are under the Ministry of Research, Technology and Higher Education of the Republic of Indonesia.

Table 1. Number of State and Private Universities in Pontianak

No	Form	Total
1	University	5
2	Institute	2
3	High School	10
4	Polytechnic	3
5	Academy	12
Total		32

The appropriate sample size in the study is between 30 to 500 (Sugiyono, 2014). The sampling technique used is quota sampling. Quota sampling is a technique for determining a sample from a population that has certain characteristics to the desired amount (quota). The sample used in this study amounted to 300 students.

#### Research Variables

The independent variables are perceived usefulness (X1); perceived ease of use (X2) and the intervening variable is behavior intention (Y1); and the dependent variable is use behavior (Y2).

#### Data Analysis Method

The data analysis method used is Structural Equation Modeling (SEM) with WarpPLS Approach. Before interpreting the results of hypothesis testing, the model should have a good Goodness of Fit. Goodness of Fit in question is an index and a measure of the goodness of the relationship between latent variables (inner model) related to its assumptions (Fernandes, 2017). Goodness of Fit Model in WarpPLS analysis can be seen in the following table.

Table 2. Model Fit and Quality Indices

No	Model fit and quality indices	Fit Criteria
1	Average path coefficient (APC)	$p < 0,05$
2	Average R-squared (ARS)	$p < 0,05$
3	Average adjusted R-squared (AARS)	$p < 0,05$
4	Average block VIF (AVIF)	Acceptable if $\leq 5$ , ideally $\leq 3,3$
5	Average full collinearity VIF (AFVIF)	Acceptable if $\leq 5$ , ideally $\leq 3,3$
6	Tenanhaus GoF (GoF)	Small $\geq 0,1$ , medium $\geq 0,25$ , large $\geq 0,36$
7	Sympson's paradox ratio (SPR)	Acceptable if $\geq 0,7$ , ideally = 1
8	R-squared contribution ratio (RSCR)	Acceptable if $\geq 0,9$ , ideally = 1
9	Statistical suppression ratio (SSR)	Acceptable if $\geq 0,7$
10	Nonlinear bivariate causality direction ratio (NLBCDR)	Acceptable if $\geq 0,7$

Source: (Fernandes, 2017)

If there are one or two indicators from the results of Model Fit and Quality Indices of course the model can still be used in a study. E. Research Hypothesis

Based on theoretical, empirical and research background studies, the following hypotheses can be formulated:

The hypothesis of this research is as follows:

H0.1 = Individual Differences Expectations have no effect on Perceived Ease of Use Go-Pay application.

Ha.1 = Expectations of Individual Differences affect the Perceived Ease of Use Go-Pay application.

H0.2 = Individual Differences Expectations have no effect on Perceived Usefulness Go-Pay application.

Ha.2 = Expectations of Individual Differences affect Perceived Usefulness Go-Pay application.

H0.3 = System Characteristic Expectations have no effect on Perceived Ease of Use Go-Pay application.

Ha.3 = System Characteristic Expectations affect the Perceived Ease of Use Go-Pay application.

H0.4 = System Characteristic Expectations have no effect on Perceived Usefulness Go-Pay application.

Ha.4 = System Characteristic Expectations have an effect on Perceived Usefulness Go-Pay application.

H0.5 = Expected Social Influence has no effect on Perceived Ease of Use Go-Pay application.

Ha.5 = Social Influence Expectations have an effect on Perceived Ease of Use Go-Pay application.

H0.6 = Expected Social Influence has no effect on Perceived Usefulness Go-Pay application.

Ha.6 = Social Influence Expectations have an effect on Perceived Usefulness Go-Pay application.

H0.7 = Expectation I Facilitating Condition has no effect on Perceived Ease of Use Go-Pay application.

Ha.7 = Expectations of Facilitating Condition affect the Perceived Ease of Use Go-Pay application.

H0.8 = Expectation of Facilitating Condition has no effect on Perceived Usefulness Go-Pay application.

Ha.8 = Expectations of Facilitating Condition affect Perceived Usefulness Go-Pay application.

H0.9 = Expected Ease of Use does not affect Perceived Usefulness Go-Pay application.

Ha.9 = Expectations of Perceived Ease of Use affect Perceived Usefulness Go-Pay application.

H0.10 = Expectations of Perceived Ease of Use have no effect on Behavioral Intention Go-Pay application.

Ha.10 = Expectations of Perceived Ease of Use affect Behavioral Intention Go-Pay application.

H0.11 = Expectations of Perceived Usefulness have no effect on Behavioral Intention Go-Pay application.

Ha.11 = Expectations of Perceived Usefulness affect Behavioral Intention Go-Pay application.

H0.12 = Expected Behavioral Intention has no effect on the Use Behavior of the Go-Pay application.

Ha.12 = Behavioral Intention Expectations affect the Use Behavior of the Go-Pay application.

## Results and Discussion

### Respondent Profile

The number of respondents used in this study were 300 respondents who were students in all universities in Pontianak City. As for the profile of respondents, 58% are female, 76% are aged 18-21 years and come from Tanjungpura University.

### Inner Model

The results of the goodness of fit test in this study can be seen in Table 4, below.

Table 3. Goodness of Fit

No	Model Fit and Quality Indices	Fit Criteria	Analysis Results	Description
1	Average Path Coefficient (APC)	$p < 0,05$	0,288, $P < 0,001$	Good
2	Average R-squared (ARS)	$p < 0,05$	0,559, $P < 0,001$	Good
3	Average Adjusted R-squared (AARS)	$p < 0,05$	0,555, $P < 0,001$	Good
4	Average Block VIF (AVIF)	Acceptable if $\leq 5$ , ideally $\leq 3,3$	1,787	Ideal
5	Average Full Collinearity VIF (AFVIF)	Acceptable if $\leq 5$ , ideally $\leq 3,3$	2,342	Ideal
6	Tenehaus GoF (GoF)	Small $\geq 0,1$ Medium $\geq 0,25$ Large $\geq 0,36$	0,600	Large

7	Sympson's Paradox Ratio (SPR)	Acceptable if $\geq 0,7$ , ideally = 1	1,000	Ideal
8	R-squared Contribution Ratio (RSCR)	Acceptable if $\geq 0,9$ , ideally = 1	1,000	Ideal
9	Statistical Suppression Ratio (SSR)	Acceptable if $\geq 0,7$	1,000	Acceptable
10	Nonlinear Bivariate Causality Direction Ratio (NLBCDR)	Acceptable if $\geq 0,7$	1,000	Acceptable

Based on the table above, it can be concluded that all of the goodness of fit model tests in this study are acceptable.

The results of testing the hypothesis of this study can be seen in Table 5, below.

Table 4. Hypothesis Testing Results

No	Relationship Between Variables (explanatory variable - response variable)		Koef. Line	p-value	Description
1	ID_X1	PEU_Y1	0,224	<0,001	Highly Significant
2	ID_X1	PU_Y2	0,063	0,135	Weakly Significant
3	SC_X2	PEU_Y1	0,304	<0,001	Highly Significant
4	SC_X2	PU_Y2	0,326	<0,001	Highly Significant
5	SI_X3	PEU_Y1	0,052	0,184	Weakly Significant
6	SI_X3	PU_Y2	0,188	<0,001	Highly Significant
7	FC_X4	PEU_Y1	0,326	<0,001	Highly Significant
8	FC_X4	PU_Y2	0,225	<0,001	Highly Significant
9	PEU_Y1	PU_Y2	0,268	<0,001	Highly Significant
10	PEU_Y1	BI_Y3	0,618	<0,001	Highly Significant
11	PU_Y2	BI_Y3	0,191	<0,001	Highly Significant
12	BI_Y3	UB_Y4	0,668	<0,001	Highly Significant

From table 5 can be seen the output of the path coefficient and p-value. It can be seen that all the path coefficients of the influence of the predictor variables on the response variables are significant.

### Effect of Individual Differences on Perceived Ease of Use

Based on the research results, it is known that the influence between Individual Differences and Perceived Ease of Use has a Path Coefficient value of 0.224 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between Individual Differences and Perceived Ease of Use.

### The Effect of Individual Differences on Perceived Usefulness

Based on the results of the study, it is known that the influence between Individual Differences and Perceived Usefulness has a Path Coefficient value of 0.063 ( $p = 0.135$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a weak influence between Individual Differences and Perceived Usefulness.

### **Effect of System Characteristics on Perceived Ease of Use**

Based on the results of the study, it is known that the influence of System Characteristics on Perceived Ease of Use there is a Path Coefficient value of 0.304 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between System Characteristics and Perceived Ease of Use.

### **Effect of System Characteristics on Perceived Usefulness**

Based on the results of the study, it is known that the influence between System Characteristics and Perceived Usefulness has a Path Coefficient value of 0.326 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between System Characteristics and Perceived Usefulness.

### **The Effect of Social Influence on Perceived Ease of Use**

Based on the results of the study, it is known that the influence between Social Influence and Perceived Ease of Use has a Path Coefficient value of 0.052 ( $p = 0.184$ ) then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a weak influence between Social Influence and Perceived Ease of Use.

### **The Effect of Social Influence on Perceived Usefulness**

Based on the results of the study, it is known that the influence between Social Influence and Perceived Usefulness has a Path Coefficient value of 0.188 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between Social Influence and Perceived Usefulness.

### **Effect of Facilitating Condition on Perceived Ease of Use**

Based on the results of the study, it is known that the influence between Facilitating Condition and Perceived Ease of Use has a Path Coefficient value of 0.326 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between Facilitating Condition and Perceived Ease of Use.

### **Effect of Facilitating Condition on Perceived Usefulness**

Based on the results of the study, it is known that the influence between Facilitating Condition and Perceived Usefulness has a Path Coefficient value of 0.225 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between Facilitating Condition and Perceived Usefulness.

### **Effect of Perceived Ease of Use on Perceived Usefulness**

Based on the results of the study, it is known that the influence between Perceived Ease of Use and Perceived Usefulness has a Path Coefficient value of 0.268 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between Perceived Ease of Use and Perceived Usefulness.

### **The Effect of Perceived Ease of Use on Behavioral Intention**

Based on the results of the study, it is known that the influence between Perceived Ease of Use and Behavioral Intention there is a Path Coefficient value of 0.618 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between Perceived Ease of Use and Behavioral Intention.

### The Effect of Perceived Usefulness on Behavioral Intention

Based on the research results, it is known that the influence between Perceived Usefulness and Behavioral Intention has a Path Coefficient value of 0.191 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between Perceived Usefulness and Behavioral Intention.

### Effect of Behavioral Intention on Use Behavior

Based on the results of the study, it is known that the influence between Behavioral Intention and Use Behavior has a Path Coefficient value of 0.668 ( $p = <0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a high influence between Behavioral Intention and Use Behavior.

### Research Results Model

The model of the path diagram research results in this study can be seen in Figure 4, below:

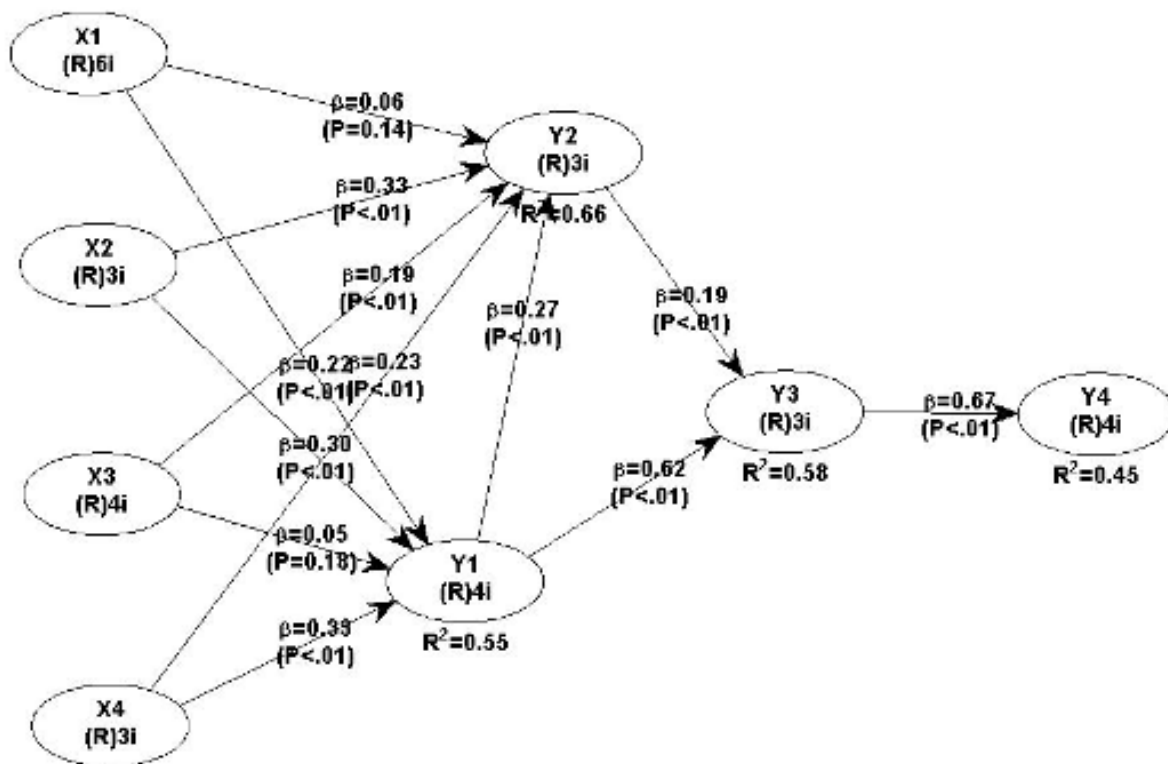


Figure 2. Research Model

### Conclusion

The null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_a$ ) is accepted when the Path Coefficient between Individual Differences and Perceived Ease of Use is 0.224 ( $p = 0.001$ ), showing a significant link between System Characteristics and Perceived Usefulness. When the Path Coefficient between the Facilitating Condition and Perceived Ease of Use was 0.326 ( $p = 0.001$ ), the alternative hypothesis ( $H_a$ ) was accepted and the null hypothesis ( $H_0$ ) was rejected. If the link between Perceived Ease of Use and Behavioral Intention has a Path Coefficient of 0.618 ( $p = 0.001$ ), then  $H_0$  is rejected and  $H_a$  is accepted. This indicates that the two are intricately connected.



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