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Analysis of Factors Affecting Interest in Using Digital Payment Methods in E-wallet in Denpasar City

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Abstract

This research was conducted to obtain the results of the factors that affect a person's interest in using the LinkAja e-wallet, especially in the Denpasar city area, using the TAM (Technology Acceptance Model) model. This study used three main variables from TAM and four additional variables from previous studies' results. In this study, data were obtained directly from parties related to distributing questionnaires, for the number of samples used were 120 respondents using the area sampling technique. In this area sampling technique, 120 samples were divided based on four areas in the city of Denpasar. Thus, the sample used for each area was 30. The data obtained were analyzed using the Partial Least Square (PLS) method using smartPLS software. The results of the tests carried out indicate that the accepted hypothesis is the computer self-efficacy variable on the perceived usefulness and perceived easy of use variables, the culture variable on perceived usefulness, the perceived security variable on trust, the perceived usefulness variable on attitude toward using, the perceived ease of use variable on perceived usefulness and attitude toward using, attitude toward using a variable on behavioural intention to use the variable, trust variable on behavioural intention to use the variable. Then there are also the results of the rejected hypothesis with a positive but not significant effect on the interest in using the LinkAja e-wallet, namely the culture variable on the perceived usefulness variable.

Keywords
E-wallet; LinkAja; Technology Acceptance Model; Interest in Use; SEM PLS.

I. Introduction

The development of technology has developed very rapidly. This rapid technological development cannot be separated from increasingly complex human needs and human dissatisfaction, which causes science to develop from time to time. With the support of science and technology that is constantly updated, it produces innovations that always make human life more manageable. These technological developments, of course, can now be felt in everyday life, where currently, almost all sectors have used technology to provide convenience in carrying out activities. One of several sectors that have been touched by technology today is the financial sector, the technology in this financial sector that is best known by the public is Fintech (Financial Technology). Fintech can be defined as an industry that utilizes technology to support the financial system and delivery of financial services more effectively and efficiently. The trigger for this technological development is because of the development of technology and the internet since 1966. In the 80s, it started to run in the banking and business finance sector, which can be accessed through the internet network. Human Resources (HR) is the most important component in a company

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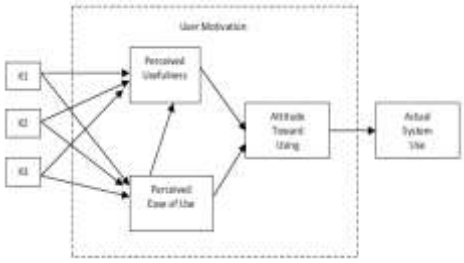
or organization to run the business it does. Organization must have a goal to be achieved by the organizational members (Niati et al., 2021). Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired (Shah et al, 2020). The development of human resources is a process of changing the human resources who belong to an organization, from one situation to another, which is better to prepare a future responsibility in achieving organizational goals (Werdhiastutie et al, 2020).

Indonesia is currently a country that has supported the implementation of Fintech, one of which is in terms of using payment methods. This is evidenced by the inauguration of the GNTT (National Non-Cash Movement) by the Governor of Bank Indonesia Agus DW Martowardojo, on Thursday, August 14, 2014, in Jakarta, one of which is aimed at reducing and replacing the cash payment method. LinkAja is one of the payment method platforms and, at the same time, an application platform for digital-based wallets (e-wallets) in Indonesia that has been registered with Bank Indonesia based on Bank Indonesia Permit Number 21/65/DKSP/B dated February 21, 2019.

LinkAja has developed a target user in the micro-business world to help reduce payments using cash and provide alternative payments via e-wallet, namely the QRIS feature. However, from the results of the snap card in 2020, at which time a survey was conducted on respondents in Indonesia with the results of Shopee being e-wallet with a percentage (50%), then followed by others, namely Ovo (23%), Gopay (12%) Dana (12%) and LinkAja (3%). This indicates that user interest in the LinkAja application can still not compete with the other four e-wallets in the survey. In addition, a study found that the total transactions using e-wallets are only about 1% of the total transactions using electronic payments in Indonesia.

Thus, of course, there is a need for an increase in understanding of the needs of users in order to create a more significant service quality improvement and an increase in interest in an e-wallet, especially LinkAja. Achieving this requires knowledge of the factors influencing an applicant's interest and behaviour, such as an e-wallet. One widely used model to analyze the level of acceptance and use of an e-wallet is TAM (Technology Acceptance Model of Use, Actual System Usage, Attitude Toward Using, Behavioral Intention to Use. The following is the original form or model of TAM issued by (Davis et al., 1989)



Source: (Davis et al., 1989)
***Figure 1.** Original Model of TAM*

Research related to e-wallets with this model has also been carried out by several researchers earlier. Some of these researchers, for example, are research with the title "Perception of usability, perception of ease of use, perception of security, and perception of compatibility with intentions to use mobile payment in Indonesia", which was carried out in 2019 by Hari Rizki Ananda in Yogyakarta, the results of this study show that

perceived usefulness and perceived ease of use have a positive and significant effect on interest in using mobile payments.

Based on this explanation, the researcher also intends to research the e-wallet using the theory from TAM, with a case study on the LinkAja application platform. The researcher uses the LinkAja Platform is bese based on the description of the Snapchat survey above; it is stated that LinkAja has the lowest position. In this study, the researcher plans to use one of the cities in Bali, Denpasar, as the research location. Researchers chose this location based on research conducted by Gusi Putu Lestara Permana, Hesty Pahlevy Setyo Rini. I Gusti Ngurah Darma Paramartha, in February 2021, explained that the city of Denpasar is the centre of all community activities in Bali, so Denpasar City is the main target for researching user behaviour in the use of e-wallets. It can also be said that the people in Denpasar City are pretty familiar with this e-wallet application. In addition, in Denpasar City, there has been an inauguration of the Quick Response Indonesia Standard (QRIS) service for BPD Bali to promote non-cash transactions held at the 12th Denpasar Festival (Denfest) on Saturday, December 28, 2019 [8]. Therefore, this research is entitled "Analysis of factors that influence the interest in using digital payment methods in e-wallet in Denpasar" with a case study on the e-wallet LinkAja

II. Research Method

The research method used in this study is using quantitative methods. In general, quantitative methods consist of survey methods and experimental methods. [9].

The type of data used to conduct this research is the type of quantitative data. This research uses primary data sources; the data is obtained directly from respondents related to this research.

III. Result and Discussion

3.1 Respondent

Processing Data processing in this study uses the SEM-PLS technique by using tools or test equipment in the form of software called SmartPLS. The following are the steps taken in this method:

a. Model Design

The initial stage carried out is by making an initial design in the form of an inner model and also an outer model. The inner model is formed by connecting one variable to another, then for the outer model by connecting the latent variable with the indicator of the variable. This model is designed on smartPLS software, the following is the model created in this study:

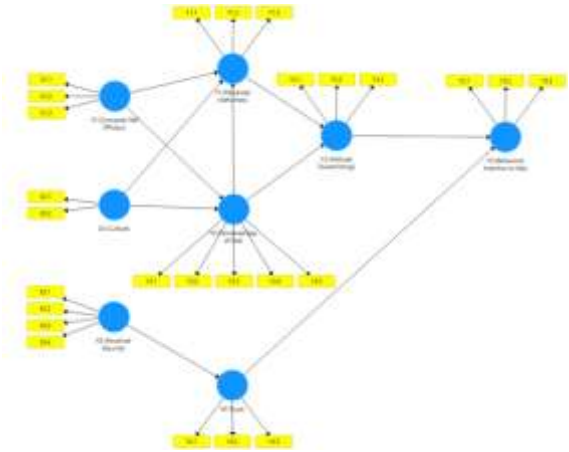


Figure 3. *Model Design*

b. Evaluation Model

Evaluation of the model is carried out to verify the observed variables (indicators) and latent variables, this is done before the hypothesis testing stage is carried out. This stage is done by testing the outer and inner models that have been designed. Testing is done using smartPLS software.

3.2 Outer Model

Test The outer model test (measurement model) is used to determine the specification of the relationship between latent variables and their indicators, this test includes *convergent validity, discriminant validity and composite reliability.*

a. Outer Model

Convergent validity is obtained from the *loading factor* value (indicator value) resulting from the calculation of the PLS *Algorithm* smartPLS. The *loading factor* obtained for each indicator must be > 0.7 [11]. If an indicator obtains a loading factor value of <0.7 then the indicator must be eliminated from the measurement model. In this study, there are two indicators that have an indicator value below 0.7. The first indicator is the Flexible level indicator (Y2.5) which underlies the measurement of the latent variable culture and the Interaction level indicator (X3.1) which underlies the measurement of the latent variable attitude toward using. Therefore, these 2 indicators are eliminated from the model and recalculated on the remaining indicators. After recalculation, the following results are obtained:

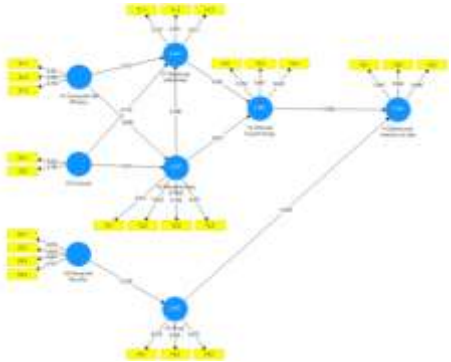


Figure 4. *The results of factor loading after elimination*

b. Discriminant Validity

Discriminant validity is a value based on cross loading or correlation between indicators and other latent variables. Discriminant validity was assessed based on cross loading with a reference value > 0.7. Based on the results of data processing shows that the overall correlation value of each variable observed with the latent variable> 0.7.

c. Composite reliability

Composite reliability is the value of an indicator that is able to provide a measurement of the latent variables owned. The value of *composite reliability* is > 0.7 so that the latent variables in the model can be said to be reliable.

Table 4. Composite Reliability

	Composite
X1	0.851
X2	0.870
X3	0.873
Y1	0.857
Y2	0.891
Y3	0.865
Y4	0.913
Y5	0.917

_ *Reliability*.

3.3 Inner Model

Test The inner model test is conducted to determine the R-Square value. The R-Square output results are obtained from the PLS Algorithm calculation on the smartPLS software. The following is the R-Square output obtained:

Table 5. R-Square

	R-Square
X1	-
X2	-
X3	-
Y1	0.430
Y2	0.401
Y3	0.381
Y4	0.489
Y5	0.570

The following is an explanation of the R-Square table shown above:

a. In the model that has been made in this study, the endogenous variable Y1 has an R-Square value of 0.430. This means that the variables X1, X2, and Y2 in the model that have been made are able to influence the Y1 variable as much as 43% and the rest are influenced by other variables outside the model.

b. In the model that has been made in this study, the endogenous variable Y2 has an R-Square value of 0.401. This means that the variables X1 and X2 in the model that have been made are able to influence the Y2 variable as much as 40.1% and the rest are influenced by other variables outside the model.
c. In the model that has been made in this study, the endogenous variable Y3 has an R-Square value of 0.381. This means that the variables Y1 and Y2 in the model that have been made are able to influence the Y3 variable as much as 38.1% and the rest are influenced by other variables outside the model.
d. In the model that has been made in this study, the endogenous variable Y4 obtains an R-Square value of 0.48.9. This means that the X3 variable in the model that has been made is able to influence the Y4 variable as much as 48.9% and the rest is influenced by other variables outside the model.
e. In the model that has been made in this study, the endogenous variable Y5 has an R-Square value of 0.570. This means that the variables Y3 and Y4 in the model that have been made are able to influence the Y5 variable as much as 57% and the rest are influenced by other variables outside the model.

3.4 Hypothesis Testing Hypothesis

Testing was carried out using the boostraping method which was run from the smartPLS software. This step is done to see the relationship and influence between variables. By using this boostraping method, the output results in the form of path coefficients and t-test statistics can be obtained. In this study the path coefficient is used as a benchmark whether the relationship between variables has a positive or negative influence, provided that if a value is obtained from -1 to 0 then the variable is said to have a negative influence and if the range of values is obtained from 0 to 1, the variable is said to have a positive influence. For statistics, the t test is used to provide an overview of whether the hypothesis made can be accepted or not (rejected). The hypothesis will be accepted if the value of t statistic < t table (1.96), but otherwise the hypothesis is rejected [11]. The output results of bostraping can be seen in the following table:

Table 6. Output Boostraping

	Original Sample (O)	***T Statistics***
X1 -> Y1	0.247 2.611	1.789
X1 -> Y2	0.535	6,371
X2 -> Y1	0.158	0.208
X2 -> Y2	3,294	X3
-> Y4	Y1	0.699 15.268
-> Y3	2.866	0.287
Y2 -> Y1	0.393	4,412
Y2 -> Y3	Y3	0.401 3,898
-> Y5	0.463	5,969
Y4 -> Y5	0.414	4,863

The following is an explanation of the boostraping output table:

a) Effect of *computer self efficacy* (X1) variable on variables *perceived usefulness* (Y1)
In table 6 it is shown that the path coefficient value on the X1 variable to Y1 has a range of 0 to 1 which is 0.247, this proves that there is a **positive** between the X1 variable and Y1. Then it is also shown that there is a significant relationship between the X1 variable and the Y1 variable, this is proven because the t statistic > t table is 2.611 > 1.96. Thus it can be concluded that hypothesis **H1 can be accepted** while hypothesis H0 is rejected. This means that computer skills affect the user's perception of using the LinkAja application that it can improve performance.

b) The effect of the computer self efficacy variable (X1) on the perceived easy of use variable (Y2).
Table 6 shows that the path coefficient value on the X1 variable to Y2 has a range of 0 to 1 which is 0.535, this proves that there is a **positive** between the X1 variable and Y2. Then it was also shown that there was a significant relationship between X1 and Y2. This was proven because the value of t statistic > t table, which was 6.371 > 1.96. Thus, it can be concluded that hypothesis **H2 can be accepted while** hypothesis H0 is rejected. This means that the skill of using a computer affects the user's perception of using the LinkAja application that it can improve performance.

c) The influence of the culture variable (X2) on the perceived usefulness variable (Y1).
In table 6 it is shown that the path coefficient value on the X1 variable to Y1 has a range of 0 to 1 which is 0.158, this proves that there is a **positive** between the X2 variable on Y1. Then it is also shown that there is an insignificant relationship between the X2 variable and the Y1 variable, this is proven because the t statistic value < t table is 1.789 < 1.96. Thus it can be concluded that hypothesis H3 is rejected while hypothesis **H0 is accepted**. This means that the culture (internet experience) of the LinkAja application will not affect the user's perception of the usefulness of the LinkAja application to improve performance.

d) The influence of the Culture variable (X2) on the perceived easy of use variable (Y2).
In table 6 it is shown that the path coefficient value on the X2 variable to Y2 has a range of 0 to 1 which is 0.208, this proves that there is a **positive** between the X2 variable on Y2. Then it is also shown that there is a significant relationship between the X2 variable and the Y2 variable, this is proven because the value of t statistic > t table is 3.298 > 1.96. Thus, it can be concluded that **the H4 hypothesis can be accepted** while hypothesis H0 is rejected. This means that the culture (experience of using the internet) of the LinkAja application will affect the user's perception of the ease that LinkAja offers in carrying out tasks.

e) The effect of the perceived security variable (X3) on the trust variable (Y4).
In table 6 it is shown that the path coefficient value on the X3 variable to Y4 has a range of 0 to 1 which is 0.699, this proves that there is a **positive** between the X3 variable on Y4. Then it is also shown that there is a significant relationship between the X3 variable and the Y4 variable, this is proven because the t statistic value > t table is 15.268 > 1.96. Thus it can be concluded that hypothesis **H5 can be accepted** while hypothesis H0 is rejected. This means that the security perception of the LinkAja application will affect the trust of linkAja users to use the LinkAja application.

f) The effect of the perceived usefulness variable (Y1) on the attitude toward using (Y3) variable.
Table 6 shows that the path coefficient value on the Y1 variable to Y3 has a range of 0 to 1, which is 0.287, this proves that there is a **positive** between the Y1 variables and

Y3. Then it was also shown that there was a significant relationship between the Y1 variable and the Y3 variable, this was proven because the t statistic value > t table, which was 2.66 > 1.96. Thus it can be concluded that hypothesis **H6 can be accepted** while hypothesis H0 is rejected. This means that users will show an attitude of accepting or rejecting the use of the LinkAja application based on the benefits offered by the LinkAja application to complete tasks.

g) The effect of the perceived easy of use variable (Y2) on the perceived usefulness variable (Y1).
In table 6 it is shown that the path coefficient value on the Y2 variable to Y1 has a range of 0 to 1 which is 0.393, this proves that there is a **positive** between the Y2 variable on Y1. Then it was also shown that there was a significant relationship between the Y2 variable and the Y1 variable, this was proven because the t statistic value > t table, namely 4.412 > 1.96. Thus it can be concluded that hypothesis **H7 can be accepted** while hypothesis H0 is rejected. This means that the perception of the ease felt by users in using the LinkAja application can affect the perception of the benefits of the LinkAja application itself.

h) The influence of the perceived easy of use (Y2) variable on the attitude toward using (Y3) variable.

i) Table 6 shows that the path coefficient value on the Y2 variable to Y3 has a range of 0 to 1, which is 0.401, this proves that there is a **positive** between Y2 and Y3 variables. Then it was also shown that there was a significant relationship between Y2 and Y3 because the value of t statistic > t table was 4.898 > 1.96. Thus it can be concluded that hypothesis **H8 can be accepted** while hypothesis H0 is rejected. means that the perceived ease of use by users in using the LinkAja application can affect the attitude of rejection or acceptance in using the LinkAja application itself.

j) The effect of the attitude toward using (Y3) variable on the behavioral intention to use (Y5) variable.
Table 6 shows that the path coefficient value on the Y3 variable to Y5 has a range of 0 to 1, which is 0.463, this proves that there is a **positive** between the Y3 variable and Y5. . Then it is also shown that there is a significant relationship between Y3 and Y5, this is proven because the value of t statistic > t table is 5.969 > 1.96. Thus, it can be concluded that hypothesis **H9 can be accepted** while hypothesis H0 is rejected. This means that the attitude towards the use of the LinkAja application by its users can automatically affect the interest in using the LinkAja application in completing tasks.

k) The effect of trust (Y4) on the behavioral intention to use variable (Y5)
In table 6 it is shown that the path coefficient value on the Y4 variable to Y5 has a range of 0 to 1, which is 0.414, this proves that there is a **positive** between the Y4 variable and Y5. Then it is also shown that there is a significant relationship between Y4 and Y5, this is proven because the value of t statistic > t table is 4.863 > 1.96. Thus, it can be concluded that the **H10 hypothesis can be accepted** while the H0 hypothesis is rejected. This means that trust in the use of the LinkAja application by its users can automatically affect the interest in using the LinkAja application in completing tasks.

IV. Conclusion

Based on the research results from the hypothesis test that have been described, this study concludes that there is an accepted hypothesis with a positive and significant impact on the interest in using the LinkAja e-wallet. The accepted hypotheses are:

1. Hypothesis 1 (X1->Y1) acceptedvariable computer self efficacy (computer skills) has a positive effect on the perceived usefulness (perceived usefulness)
2. Hypothesis 2 (X1->Y2) acceptedvariable computer self efficacy (computer skills) has a positive effect on the perceived easy of use (perceived ease of use)
3. Hypothesis 4 (X2->Y2) acceptedvariable culture (culture) has a positive effect on the perceived easy of use (perceived ease of use)
4. Hypothesis 5 (X3 ->Y4) accepted, the perceived security has a positive effect on the trust.
5. Hypothesis 6 (Y1->Y3) accepted, the perceived usefulness has a positive effect on the attitude toward using (attitude)
6. Hypothesis 7 (Y2->Y1) accepted, the variable easy of use (perception of convenience) has a positive effect on the variable perceived usefulness (perception of use)
7. Hypothesis 8 (Y2->Y3) accepted, the variable easy of use (perceived ease) has a positive effect on the variable perceived attitude toward using (attitude)
8. Hypothesis 9 (Y3->Y5) accepted, the variable attitude toward using (attitude) has a positive effectvariable behavioral intention (interest)
9. Hypothesis 10 (Y4->Y5) accepted, the trust has a positive effect on the behavioral intention (interest).

These hypotheses are accepted because the results of hypothesis testing with the boostraping on software show that t statistic obtained is greater than t table (1.96).

Then there are also the results of the rejected hypothesis with a positive but not significant effect on the interest in using the LinkAja e-wallet, namely, Hypothesis 3 (X2->Y1) rejected, the culture has a positive effect on the perceived usefulness. The hypothesis was rejected because the results of hypothesis testing using the boostraping on smartPLS showed that the t-statistical value obtained was smaller than t-table (1.96), the t-statistical value of the culture on the perceived usefulness was 1.789.

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