THE ANALYSIS OF TECHNOLOGY ACCEPTANCE MODEL (TAM) ON INTENTION TO USE OF E-MONEY IN MANADO (STUDY ON: GOPAY, OVO, DANA)

ANALISA MODEL PENERIMAAN TEKNOLOGY TERHADAP MINAT UNTUK MENGGUNAKAN UANG ELEKTRONIK DI MANADO (STUDI KASUS: GOPAY, OVO, DANA)

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Abstract: In this digital era technology has become the part of today's people life, e-money has played an important and central role in transaction and development of e-money from data 2014-2018 the development of users e-money that always increase, even rather rapidly. The purpose of this study is to find out more about the factors of affecting the intention to use e-money. Four variables used in this research, are Perceived Usefulness, Perceived Ease of Use, Perceived Risk, and Perceived Trust. This study employs multilinear regression to analyzed the influence of those variables to intention to use e-money. This study conduct with 100 users e-money (Gopay, OVO, DANA) in Manado as the respondents. The result of this study showed that Perceived Usefulness and Perceived Risk have no significant influence to Intention to Use e-money, meanwhile Perceived Ease of Use and Perceived Trust have significant and positive influence on Intention to Use. The applications have to improve their performance and services so that the consumer will feel more secure and more comfortable in making transaction.

Keywords: E-money, Technology Acceptance Model, Perceived Usefulness, Perceived Ease of Use, Perceived Risk, Perceived Trust, Intention to Use.

Abstrak: Di era digital saat ini teknologi sudah menjadi bagian dari kehidupan masyarakat. Saat ini, uang elektronik berperan penting dan sentral dalam transaksi dan perkembangan uang elektronik dari data 2014-2018 menunjukan pengguna uang elektronik terus meningkat, bahkan semakin meningkat dengan cepat. Tujuan dari penelitian ini adalah untuk mengetahui lebih lanjut tentang faktor-faktor yang mempengaruhi niat dalam menggunakan uang elektronik. Empat variabel yang digunakan dalam penelitian ini adalah Perceived Usefulness, Perceived Ease of Use, Perceived Risk, dan Perceived Trust. Penelitian ini menggunakan regresi multilinear untuk menganalisis pengaruh variabel-variabel tersebut terhadap niat menggunakan uang elektronik. Penelitian ini dilakukan dengan responden 100 pengguna uang elektronik (Gopay, OVO, DANA) di Manado. Hasil penelitian ini menunjukkan bahwa kegunaan dan resiko tidak berpengaruh signifikan terhadap minat untuk menggunakan uang elektronik, sedangkan kemudahan penggunaan dan kepercayaan penggunaan berpengaruh signifikan dan positif terhadap minat menggunakan uang elektronik. Aplikasi uang elektronik harus meningkatkan performa dan layanan sehingga pengguna akan merasa lebih aman dan nyaman dalam melakukan transaksi.

Kata kunci: Uang elektronik, Model penerimaan teknologi, Kegunaan, Kemudahan penggunaan, Resiko, Kepercayaan penggunaan, Minat untuk menggunakan

INTRODUCTION

Research Background

In this digital era, technology encourages people to carry out various activities and transact online because it is considered more efficient in terms of time and easier to obtain the information needed. Technology has become the part of today's people life even when they don't realize it. The application of technology stretching from basic things, such as electricity to the more sophisticated as in financial technology (fin- tech). The simplicity and speed of this technology have led people to adopt it in their everyday life. This has been augmented with the invention of the smartphone, allowing people to use applications of fin-tech (eg. e-payment/ e-wallet/ e-money) directly from their own hand.

The data from Bank Indonesia, in Indonesia the average annual transaction growth from 2014-2018 shows that the growth of e-money grew rapidly at 94.7% while debit cards and credit cards only grew below 20% and the development of fintech especially e-money had increase. The biggest 3 e-money application in Indonesia are Gojek, OVO and DANA.

These application provides many conveniences and benefits in online transactions, but at the beginning of the emergence of this application is less well known by the wider community but still limited information obtained by consumers related to the advantages possessed by the application, and promotion has not been optimal either through electronic media or print media. , so the number of users is also still limited. In early 2018, these applications were initiated in collaboration with various expenditure centers, online stores, e-commerce and non-cash banking transactions.

Research Objectives

To identify the influence of:
1. Perceived Usefulness, Ease of Use and Risk and Trust relationship with customer intention to use e-money in Manado
2. Perceived Usefulness (PU) relationship with customer intention to use e-money in Manado
3. Perceived Ease of Use (PEOU) relationship with customer intention to use e-money in Manado Ambient influence on behavioral intention of 5 restaurants in Manado.
4. Perceived Risk (PR) relationship with customer intention to use e-money in Manado
5. Perceived Trust (PT) relationship with customer intention to use e-money in Manado

THEORETICAL REVIEW

Marketing

Marketing is the process by which companies create value for customers and build strong customer relationships in order to capture value from customer (Kotler and Amstrong, 2009). Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large (Kotler and Keller, 2009). Marketing is an activity to plan the right strategy to satisfy the wants and needs of the customers, so it will make profits for the company (Marwan, 1991)

Consumer Behavior

Consumer behavior is the study of the process involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires (Solomon et al, 2006). Consumer behavior is the study of how individuals, groups and organizations select, buy, use and dispose of goods, services, ideas, or experiences to satisfy their needs and wants (Kotler and

Keller, 2006). Studying consumers provides clues for improving or introducing products or services, setting prices, devising channels, crafting messages, and developing other marketing activities (Kotler and Amstrong, 2009)

Customer Purchase Intention

Purchase intention as a situation where consumer tends to buy a certain product in certain condition (Morinez et al, 2007). Purchase intention usually is related to the behavior, perceptions and attitudes of consumers. These studies suggest that purchase intention may not serve as a useful or strong predictor of actual behavior.

E-money

Electronic money, people often understand the accounting system of rights to public and private currency. Currently, these systems use electronic storage media. However it is useful to note, that such systems, as well as non-cash payments, were around thousands of years ago (Rupeika-Apoga and Nedovis, 2015; Thalassinos, 2008; Thalassinos and Kiriazidis, 2003).

Technology Acceptance Model (TAM) and Extension of TAM

Technology Acceptance Model is one of the most popular research models to predict use and acceptance of information systems and technology by individual users (Davis, 2000). Technology Acceptance Model is a framework aim to explain the acceptance consumer system toward and explaining user behavior to use toward the technology. Technology Acceptance Model explain by five related different construct including external variables, first is Perceived Ease of Use (PEOU), second is Perceived Usefulness (PU), third is Attitude Toward Using, fourth is Behavioral Intention to Use, and Actual System Use (Davis, Bagozzi & Warshaw, 1989)

Perceived Usefulness (PU)

Perceived usefulness defined as the individual's perception that using the new technology will enhance or improve her or his performance (Davis, 1989; Davis, Bagozzi, and Warshaw, 1989). Perceived usefulness was defined as "the level of person believes that using a particular system would enhance his/her task performance" (Refer from Davis, 1989)

Perceived Ease Of Use (PEOU)

Perceived Ease Of Use (PEOU) is defined as the extent to which a person believes that using a particular system will be free from effort (Davis, 1989; Davis, Bagozzi, and Warshaw, 1989). Perceived usefulness refers to consumers' perceptions regarding the outcome of the experience, perceived ease of use refers to their perceptions regarding the process leading to the final outcome (Monsuwe, Dellaert, & Ruyter, 2004)
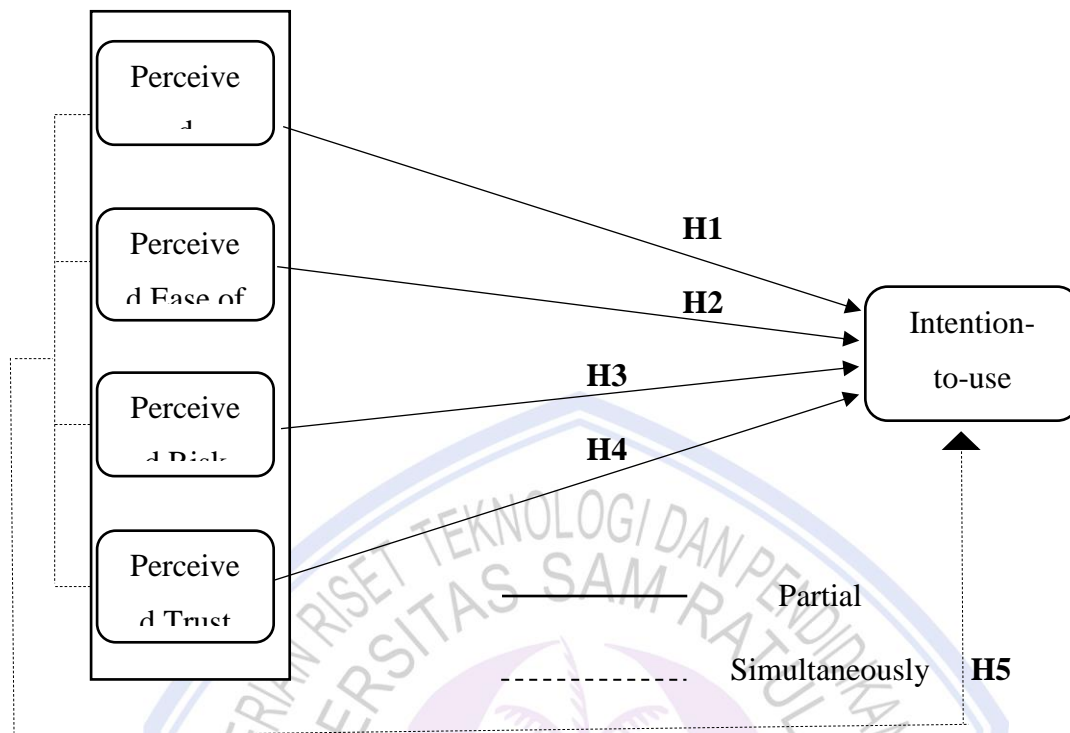
Perceived Risk

Perceived risk is the "uncertainty about the outcome of the use of the innovation" (Gerrard and Cunningham, 2003). Perception of risk is a crucial driver to determine innovative technology acceptance (Luo et al, 2010). Perceived Risk is very much close to Perceived Security and privacy. Still people have fear in doing E-payment transaction, as they are concerned with security and privacy aspects of such system

Perceived Trust

Perceived credibility is a determinant of behavioral intention to use an information system (Hanudin, 2007). Perceived trust is a key component in technology adoption and helps merchants to build strong customer relationship (Reichheld and Schefter, 2000)

Conceptual Framework

Figure 1. Conceptual Framework

Research Hypothesis
H1: There is an influence of Perceived Usefulness on Intention to use
H2: There is an influence of Perceived Ease of Use on Intention to use
H3: There is an influence of on Perceived Risk Intention to use
H4: There is an influence of Perceived Trust on Intention to use
H5: There is an influence of Perceived usefulness, Perceived Ease of Use, Perceived Risk, and Perceived
      Trust on Intention to use simultaneously

RESEARCH METHOD

Research Approach
          The purpose of this research to identify customer's acceptance towards intention to use e- money system in Manado (case study: DANA, OVO, GO-PAY). Researcher would like to investigate if perceived usefulness (PU), Perceived ease of use (PEOU), Perceived Risk (PR), Perceived Trust (PT) affect customer behavior intention in order to use e-money which are OVO, DANA and GO PAY in Manado

Population, Sample, and Sampling Technique
          The population of this research are the customers of OVO, DANA, GO-PAY application. The sample method used in this research is convenience sampling method. The questionnaire were distributed to 100 e-money users.

Operational Definition of Research Variables
Table 1. Operational Definitions and Indicators

Variables Name	Operational Definitions	Indicators
Perceived Usefulness (X1)	The degree to which a person believes that using a particular system would enhance his/her performance (Davis, 1989)	1. Improve productivity 2. Effective in the transaction 3. Improve the effectiveness of the purchase
Perceived Ease Of Use (X2)	PEOU refers to the extent to which users believe that their continued use of e-money is free of effort. If a system is relatively easy to use, individuals will be more willing to learn about its features and finally intend to continue using it	1. Easy to use 2. Understandable 3. Flexible
Perceived Risk (X3)	Perceived Risk refers to people's feeling of uncertainty about the outcome of the use of e-money	1. Functional Risk 2. Psychological Risk 3. Time Risk
Perceived Trust (X4)	Perceived Credibilty is when people feel safe and trust when they use e-money	1. Reliable features 2. Personal information safety 3. Personal information safety
Intention-to-use (Y)	The ability of users to create or support a decision in accordance with wishes	1. Utilization 2. Intensity to use 3. Expect to use E-money continue in the future

Source: Author's Note, 2020

Table 3 shows the general explanation about variables and indicators that used in this research. The variables are, perceived usefulness, perceived ease of use, perceived risk, perceived trust, intention to use

RESULT AND DISCUSSION

Data Analysis Method
Validity test was conducted to analyze of whether all questions used for variables in the questionnaire were valid or not. The variable could be classified as a good variable when the values are above 0.3 (Sekaran and Bougie, 2010).Reliability test is established by testing for both consistency and stability of the answer of questions. Consistency indicates how well the items measuring a concept hang together as a set. Alpha Cronbach is reliable coefficients that can indicate how good items in asset have positive correlation one another (Sekaran, 2010).And the Cronbach Alpha value is said to be reliable or acceptable if the value of Cronbach Alpha> 0.60 (Hair et.al, 2010).

Multiple Linear Regression
Analysis Multiple linear regression analysis is a technique to observed value more than one X to estimate or predict corresponding Y value. The formula of linear regression (multiple linear regressions) in general as follows:

$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4x4 + \varepsilon$

Description:
Y = Intention to Use
X1 = Perceived Usefulness
X2 = Perceived Ease of Use

X3 = Perceived Risk
X4 = Perceived Trust
α = Constant
β1, β2& β3 = The regression coefficient of each variable
ε = Error

RESULT AND DISCUSSION

Result
Result of Validity and Reliability Test
Table 2. Validity Test Result

Variables	R_{count}	R_{table}	Explanation
Perceived Usefulness	0.546	0.195	Valid
Perceived Ease of Use	0.505	0.195	Valid
Perceived Risk	0.435	0.195	Valid
Perceived Trust	0.674	0.195	Valid
Intention to Use	0.707	0.195	Valid

Source: Author's calculation (2020)

Table 2. Shows that the correlation index is higher than 0.3 and below the significance level of 5%. Therefore, the data is considered valid.

Reliability Test
Table 3. Reliability Test Result

Reliability Statistics	
Cronbach's Alpha	N of Items
.733	3

Source: SPSS Output (2020)

Table 3. Shows that Alpha Cronbach is 0.669 which is above the acceptance limit of 0.6; therefore, the research instrument is reliable.

Multiple Linear Regression Analysis
Table 4. Multiple Linear Regression Output

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.129	1.567		.721	.473		
	Perceived_Usefulness	-.049	.093	-.042	-.531	.597	.841	1.189
	Perceived_Ease_of_Use	.272	.090	.241	3.029	.003	.821	1.218
	Perceived_Risk	.025	.081	.022	.305	.761	.977	1.023
	Perceived_Trust	.646	.088	.596	7.356	.000	.794	1.260

Source : SPSS Output (2020)

From the result in the table above, the model define as:
Y= (1,129) + -0,048 X1 + 0,272 X2 + 0,025 X3 + 0,646 X4 + e

Hypothesis Testing
Table 6. Simultaneous Test (F-Test Output)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	90.380	4	22.595	16.308	.000[a]
	Residual	131.620	95	1.385		
	Total	222.000	99			

a. Predictors: (Constant), Perceived_Trust, Perceived_Risk, Perceived_Ease_of_Use, Perceived_Usefulness

b. Dependent Variable: Intention_to_Use

Source : SPSS Output (2020)

Table 6 shows the f_{count} is 16.308 with significant value at 0.000. The result shows F_{count} is greater than F_{table} (16.308 > 2.46) and significant value 0.000 < 0.05. It means, Perceived Usefulness, Perceived Ease of Use, Perceived Risk, and Perceived Trust simultaneously influence Intention to Use

Table 7. Partial Test (T-Test Output)

Variable	t_{count}	t_{table}	Description
Perceived_Usefulness	0.874	1.664	Rejected
Perceived_Ease_of_Use	3.014	1.664	Accepted
Perceived_Risk	-0.391	1.664	Rejected
Perceived_Trust	6.088	1.664	Accepted

Source: Data Processed (2020)

Table 7 shows is the t_{count} of variable Perceived Usefulness which is $0.874 < t_{table}$ 1.664 it means Perceived Usefulness has no influence towards Intention to Use partially. Variable Ease of Use which is $3.014 < t_{table}$ 1.664 it means Perceived Ease of Use has positive influence towards Intention to Use partially. Variable Perceived Risk which is $-0.391 < t_{table}$ 1.664 it means Perceived Risk has no influence towards Intention to Use partially. Variable Perceived Trust which is $6.088 < t_{table}$ 1.664 it means Perceived Trust has very significant

Discussion
The finding of this research shows that Perceived Ease of Use (PEOU) and Perceived Trust variable have a positive influence to Intention to Use e-money in Manado. This result shows that e-money users in Manado influenced by the easy use of e-money, in the meaning e-money very understandable to use. This result is in line with the research that perceived ease of use had a significant positive effect on the behavioral intention of Indonesian in using e-money (Priambodo & Prabawani, 2016). And the result reveal, perceived usefulness and perceived risk variables does not have significant influence on customer's Intention to Use, this finding contradicted with previous study that identified of perceived risk and security can affect customer perception in general e-money and online payment (Jebran & Dipanker, 2012; He, 2007; Ozkan, 2009).

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

After examining the findings, the conclusions based on this research can be formulated as follows:

1. Perceived Usefulness, Ease-of-Use, Risk and Trust positively and significantly influence on Intention to Use.
2. Perceived Usefulness as one of independent variable has no significant influence on Intention to Use. The reason is for e-money users in Manado, the effectiveness of e-money and cash on their transaction is same.
3. Perceived Ease of Use as one of independent variable has positive and significant influence on Intention to Use. This result shows that e-money users in Manado influenced by the easy use of e-money, in the meaning e-money very understandable to use
4. Perceived Risk as one of independent variable has no significant influence on Intention to Use. This result shows that e-money users were not afraid of losing money while using e-money for transaction
5. Perceived Trust as one of independent variable has positive and significant influence on Intention to Use. The result from respondents showed that e-money users in Manado trust towards vendor e-money is relatively high

Recommendations

1. Electronic money should increase the knowledge about the electronic money products through the advertisement and promotion. So the public can know the usefulness and how to use electronic money as a payment instrument
2. Keep and improve the security system and also improve their performance and services so that the consumer will feel more secure and more comfortable in making transaction and to keep provides newest innovations that facilitate consumer in doing their transaction activities.

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