ANALYSIS OF FACTORS INFLUENCING USER INTENTION IN USING OVO APPLICATION

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ABSTRACT

In this era, technology development has provided many innovations in transaction. Nowadays, there is a popular trading system called mobile payment. The use of mobile payment transaction slowly changes the culture in Indonesia. This study examines the factors that influencing user interest in using OVO applications. In order to do so, this study use perspective of Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). The author uses quantitative research method for this study. The data was collected using questionnaires. The respondents were 322 undergraduate students of accounting department in Universitas Brawijaya Malang, who have experience in using OVO application services. The data and hypothesis were analyzed using Structural Equation Model (SEM) based on Partial Least Square (PLS). These research findings indicate that intention to use OVO application is determined by Ease of Use, Perceived Usefulness, Perceived Risk, Price Value, and Social Influence towards Behavioral Intention to do a transaction using OVO application services. The results show that all variables are significant influence towards the behavioral intention to use OVO application services. Moreover, all of the variables have positive influence, except perceived risk variable.

Keywords: Mobile Payment, Behavioral Intention, Ease of Use, Perceived Usefulness, Perceived Risk, Price Value, and Social Influence.
I. Research Background

In this era of globalization, the information technology has grown rapidly. The Internet has become a necessity for the community in this era. The online shopping business also participates making the Internet increasingly in need of many people. According to Asosiasi Penyelenggara Jasa Internet Indonesia (APJII) in 2018, there are 171.17 out of 262 million internet users in Indonesia, which surpasses the half of population in Indonesia. In 1990, electronic commerce (e-commerce) had introduced a unique way in business world. Nowadays, many people are using this unique way to do a transaction. It enables users to buy and sell in online transaction. Using e-commerce for business payments have taken the form of exchanging money electronically, as we called electronic payment (e-payment). In Indonesia, there are many famous mobile payment systems such as, Go-Pay, Ovo, and Dana.

In general, e-payments in the context of e-commerce refers to online transactions which are conducted via internet, although there are many other forms of electronic payment (Armesh et al., 2010). E-payments can also be defined as the payment process made without the use of paper instruments (Tella, 2012). The e-payment systems consists of online credit card transaction, electronic wallet (e-wallet), electronic cash (e-cash), online stored value systems, digital accumulating balance systems, digital checking payment systems and wireless payment systems (Laudon, 2011). Transaction in e-commerce site using Electronic Wallets (e-wallets) is common nowadays. Along with smartphone production, plenty of services have been created to utilize the possible functions of smartphone. Not only smartphone is used as a communication devices, but it is also to be used as tool for socialization, entertainment, internet access, and even payment. Mobile users nowadays, can use their smartphone to make money transaction or payment by using applications installed on their phones.

M-wallet on the one hand, is a technology that needs to be installed in the smartphone and allows customers to store money and do online transactions directly from the wallet whereas QR code works through a few banking apps, store apps to integrate debit/credit card details (Madan & Yadav, 2016; Singh et al., 2017).

This study is focusing on behavioral intention in using OVO application, which in this case is the student of Accounting in Universitas Brawijaya, Malang. According to PT Visionet Internasional – the developer of OVO application – OVO is the platform of electronic payment in Indonesia was established in November 2017. Until the end of November 2018, the OVO user base grew more than 400 percent with the application installed on 115 million devices (http://www.kompas.com.html).

Technology Acceptance Model is a model arranged to predict and explain how technology users can accept and use the technology in their work (Davis, 1989). According to the theory of Technology Acceptance Model (Davis, 1989) stated that there are two factors that influence individual interest in using a system technology (OVO application) that are perception of usefulness and perceived ease of use.

The User Acceptance and Use of Technology 2 model (UTAUT 2) is a development model of User Acceptance and Use of Technology 1 (UTAUT 1). This model proposed by Venkatesh (2012) stated that there are several factors that influence interest in using a technology system. These factors are performance expectations, business expectations, social factors, facilitating conditions, hedonic motivation, price values and habits.

This study is a replication of the previous research by Singh et al. (2019). The
research gap between this study with the previous research done by Singh et al. (2019) is the previous research not using the variable of price value that found by Venkastesh et al. (2012) in UTAUT2. Based on the description above, the author wrote his minor thesis entitled “ANALYSIS OF FACTORS INFLUENCING USER INTEREST IN USING OVO APPLICATION.”

II. Literature Review and Hypothesis Development

Mobile Payment

According to Au and Kauffman (2008), mobile payment can be defined as any payment where a mobile device is used to initiate, authorise and confirm an exchange of financial value in return for goods and services.

Type of Mobile Payment

According to Luna et al. (2018) there are several types of mobile payment services, such as:
1. SMS (Short Message Service)
   The use of SMS for mobile payment requires a communication protocol enabling the exchange of short text messages between two mobile devices (Valcourt et al., 2005).
2. NFC (Near Field Communication)
   NFC is economically attractive because it is based on open standards and users are not obliged to pay for licensing fees.
3. QR (Quick Response)
   QR codes are storage systems which use a dot matrix or two dimensional bar code developed by Denso Wave that can be printed or shown on a screen and are interpreted by a special reader to provide more extensive information than that found in a traditional bar code (Denso Wave, 2000).

OVO Application

OVO is a smart financial apps launched under the auspices of LippoX as a digital payment company that owned by the Lippo Group and PT Visionet Internasional. This application tries to accommodate various needs related to cashless and mobile payment. OVO wants to reach its services as a simple payment and smart financial services. In general, OVO Cash can be used for various types of payments which have been cooperating with OVO can be more faster (www.cermati.com). Whereas OVO Point is a loyalty rewards for those who make transactions using OVO Cash at OVO partner merchants. For OVO Points, you can exchange them for various attractive offers to be exchanged for transactions at OVO partner merchants.

By using OVO, the users can make various payment transactions while collecting OVO Points. The types of transactions, such as:
   a) Perform online or offline transactions at merchants who work with OVO.
   b) Parking payments in places that cooperate with OVO.
   c) Purchase telephone credit.
   d) Payment in the GRAB application services.
   e) Insurance payment.
   f) Electricity payment.

OVO PayLater

OVO Paylater established at the beginning of January 2019. OVO PayLater can be defined as a digital financial application (fintech/financial technology) that serves the users to purchase goods in advance and pay later (www.kompas.com). The credit limit that provided by OVO comes from Taralite, a startup company of fintech lending. OVO PayLater can only be activate if the user in the certain city. Such as Jakarta, Depok, Bogor, Bekasi, Tangerang, Bandung, and Surabaya. If the user is not in the city that already mention, the user cannot activate the OVO PayLater. OVO PayLater has validity for six months. After six month of activation, the user must have to re-register in OVO
application or in OVO that provided by Tokopedia.

**Technology Acceptance Model (TAM)**

Technology Acceptance Model (TAM) was introduced by Davis in 1986. It is an adaptation of the Theory of Reasoned Action (TRA), which is adapted to model the user acceptance of the system information. The purpose of Technology Acceptance Model (TAM) is to provide an explanation of mobile reception in general, to explain the behavior of the user includes a broad range and population. The main purpose of Technology Acceptance Model (TAM) in this study is to provide a basis for detecting the impact of external factors on internal beliefs, attitudes, and intention.

![Figure 1. Technology Acceptance Model (Davis, 1998)](image1.png)

**Unified Theory of Acceptance Use of Technology 2 (UTAUT)**

Unified Theory of Acceptance Use of Technology (UTAUT) was introduced by Venkatesh, Morris, Davis and Davis in 2003 and later to be extended by Venkatesh, Thong and Xu in 2012. The model is developed by TRA, TAM, TPB, TAM and TPB, Motivational Model, Model of PC Utilization, Innovation Diffusion Theory and Social Cognitive Theory Unified Theory of Acceptance Use of Technology (UTAUT) emerged for reviewing and discussing the literature of adoption of new information technology from the main existing models, compare them empirically, formulating a unified model and validating it empirically.

The model state several factors that influence the intention and acceptance in using technology system. UTAUT 2 explained performance expectancy, effort expectancy, and social influence affect the behavioral intention to use a technology, and the behavioral intention and facilitating conditions influence the actual use of technology.

![Figure 2. Unified Theory of Acceptance Use of Technology 2 (Venkatesh, 2012)](image2.png)

**Hypothesis**

- **H1:** Ease of Use has positive influence on the user’s intention to use mobile payment services.
- **H2:** Perceived Usefulness has positive influence on the user’s intention to use mobile payment services.
- **H3:** Perceived Risk has negative influence on user’s intention to use mobile payment services.

![Figure 3. Research Framework](image3.png)
H4: Price Value has positive influence on the user’s intention to use mobile payment services.

H5: Social Influence has Positive influence on user’s intention to use mobile payment services.

III. Research Method

This study used quantitative research approach with survey method as the data collection method. The population in this study is undergraduate accounting students in Faculty of Economics and Business, Universitas Brawijaya, in neither regular program nor international program. In this study, the researcher used non-probability sampling in convenience sampling method. Convenience sampling refers to the collection of information from members of the population who are conveniently available (Sekaran and Bougie, 2013).

The method used in this study is Slovin method to calculate the amount of sample by using the error rate of 5% of the population. The sample size in this research is 299 students. The researcher used realibility testing and validity testing to determine the rate of correctness of the questionnaire. After that, the researcher performs data processing by classifying data according to the demographics of the respondents. Furthermore, the data is analyzed using Partial Least Square (PLS) after that, the conclusion are formulated.

Definition, Indicator and Variable Measurement

Variables can be defined as any aspect of a theory that can vary or change as part of the interaction within the theory. Therefore, variables can influence and change the results of the study. There are five construct in this study, namely Perceived Usefulness (PU), Ease of Use (EOU), Perceived Risk (PR), Social Influence (SI), and Price Value (PR).

1. Perceived Usefulness
   Perceived Usefulness is defined as the individual’s perception that using the new technology will enhance or improve his or her performance (Davis, 1989). In this study, perceived usefulness composes four items (Singh et al., 2019). The items stated that mobile wallet is useful, helpful, efficient, and makes work become easier.

2. Perceived Ease of Use
   Perceived Ease of Use is defined as the individual’s perception that using the new technology will be free of effort (Davis, 1989). In this study, Ease of Use composes four items (Singh et al., 2019). The items stated that mobile wallet is easy to use, clear and understandable, time and energy saving, and easy to interact with.

3. Perceived Risk
   Perceived Risk is defined as a combination of uncertainty plus seriousness of outcome involved (Bauer, 1967), and the expectation of losses associated with purchase and acts as an inhibitor to purchase behavior (Peter and Ryan, 1976). In this study, Ease of Use composes four items (Singh et al., 2019). The items stated that mobile wallet is not completely secure, makes users feel not safe with their personal data and financial information, the high risk of misusing mobile wallet.

4. Social Influence
   Social influence is consumers perceive that important others (e.g. family and friends) believe that they should use a particular technology (Venkatesh et al., 2012). In this study, social influence variable composes three items (Venkatesh et al., 2012). The items stated that people who important for the respondent suggest that the respondent should use the system, people who influence the respondent behaviour suggest that the respondent should use the system, people whose opinions that the respondent value prefer the respondent to use the system.
5. Price Value
Price value is defined as the perceived benefits of using a technology given its costs (Venkatesh et al., 2012). In this study, price value variable composes three items (Venkatesh et al., 2012). The items stated that the system is reasonably priced, good for value for money, provides good value at current price.

6. Behavioral Intention
Behavioral intention is the perceived of individual's willingness to conduct a behavior in using a technology system. In this study, the variable is used to measure the customers’ intention to do a transaction in OVO application. The Behavioral intention composes three items (Singh et al., 2019). The items stated that the respondent intend to use mobile wallet, when the opportunities arise, the respondent likely to use mobile wallet in near future, the respondent plan to use mobile wallet frequently in their daily life.

IV. Finding and Discussion
In this study, the respondents of the researcher are the undergraduate students of Accounting Department, Faculty Economic and Business, Universitas Brawijaya, Malang. The number of questionnaires distributed in this study are 350. As the number of questionnaires received are 322, the rest 18 were not returned. After checking, 10 questionnaires cannot be used for research data.

a. Evaluation Model
The evaluation model was done using Partial Least Squares (PLS) in order to estimate the parameters and predict the relationship casualty. Evaluation of the model is done with three stages, namely the testing of convergent validity, testing of discriminant validity, and the testing of reliability.

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<tr>
<th>Table 1. Algorithm Table</th>
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<td><strong>AVE</strong></td>
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Convergent Validity: The assessment in convergent validity testing is based on the AVE, communality and factor loading. The rule of thumb for both AVE and communality is more than 0.50 (> 0.50) while the factor loading is > 0.70 (Chin, 1995 in Abdillah and Hartono, 2015). The rule of thumb is typically used to make the initial examination of the matrix factor, where ± 0.30 is considered as having met as minimum level, for loading ± 0.40 is considered better and for loading > 0.50 is considered significantly practical (Hair et al., 2006 in Abdillah and Hartono, 2015).

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<th>Table 2. Outer Loading</th>
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Based on the table above, it can be seen the value AVE and Communality in each construct is more than 0.5. Similarly, the outer loading test results in the table Outer Loading 4.13 above, all indicators value is above 0.7.

**Reliability testing:** After a test of construct validity is done and valid data are obtained, reliability testing takes place. Reliability test can be done in two methods: Cronbach’s Alpha value, whose value must be more than 0.6, and Composite Reliability value, that should be more than 0.7. According to algorithm table 4.8 above, all variables have the value of Cronbach’s Alpha is more than 0.6 and Composite Reliability value of more than 0.7. Hence, it can be concluded that the data and the results of measurements are considered reliable.

**b. Hypothesis Testing**

In hypothesis testing, if the coefficient path shown by the T-statistic is more than 1.96, then the alternative hypothesis can be stated as supported. If the statistical value of T-statistic is less than 1.96, then the alternative hypothesis is not supported.

### Table 3. Variable Effect

|     | Original Sample (O) | Standard Error (STERR) | T Statistics (|O/STERR|) |
|-----|---------------------|------------------------|----------------|
| EOU -> BI | 0.1498              | 0.0681                  | 2.199          |
| POU -> BI | 0.1289              | 0.0621                  | 2.0767         |
| PR -> BI  | -0.1872             | 0.0607                  | 3.0825         |
| PV -> BI  | 0.2775              | 0.0618                  | 4.4876         |
| SI -> BI  | 0.2126              | 0.0472                  | 4.5066         |


**Hypothesis 1**

The results of testing the hypothesis 1 states that the relationship of the Perceived Ease of Use with Behavioral Intention shows the path coefficient value of 0.1498 with a t value of 2.199. The direction of a positive relationship indicates if Perceived Ease of Use has an effect, it will be followed by an increase in the Behavioral Intention variable. The value of t-count is greater than the t-table (1.96). The value of original sample estimate positive, which indicates that variable of Perceived Ease of Use has significant influence to the Behavioral Intention in using OVO application. Based on the result, in can be concluded that Hypothesis 1 is supported.

**Hypothesis 2**

The results of testing the hypothesis 2 states that the relationship of the Perceived Usefulness with Behavioral Intention shows the path coefficient value of 0.1289 with a t value of 2.0767. The direction of a positive relationship indicates if Perceived Usefulness has an effect, it will be followed by an increase in the Behavioral Intention variable. The value of t-count is greater than the t-table.
The value of original sample estimate positive, which indicates that variable of Perceived Usefulness has significant influence to the Behavioral Intention in using OVO application. Based on the result, in can be concluded that Hypothesis 2 is supported.

Hypothesis 3

The results of testing the hypothesis 3 states that the relationship of the Perceived Risk with Behavioral Intention shows the path coefficient value of -0.1872 with a t value of 3.0825. The direction of a negative relationship indicates if Perceived Ease of Use has an effect, it will be followed by an increase in the Behavioral Intention variable. The value of t-count is greater than the t-table (1.96). The value of original sample estimate negative, which indicates that variable of Perceived Risk has significant influence to the Behavioral Intention in using OVO application. Based on the result, in can be concluded that Hypothesis 3 is supported.

Hypothesis 4

The results of testing the hypothesis 1 states that the relationship of the Price Value with Behavioral Intention shows the path coefficient value of 0.2775 with a t value of 4.4876. The direction of a positive relationship indicates if Price value has an effect, it will be followed by an increase in the Behavioral Intention variable. The value of t-count is greater than the t-table (1.96). The value of original sample estimate positive, which indicates that variable of Price value has significant influence to the Behavioral Intention in using OVO application. Based on the result, in can be concluded that Hypothesis 4 is supported.

Hypothesis 5

The results of testing the hypothesis 1 states that the relationship of the Social Influence with Behavioral Intention shows the path coefficient value of 0.2775 with a t value of 4.4876. The direction of a positive relationship indicates if Social Influence has an effect, it will be followed by an increase in the Behavioral Intention variable. The value of t-count is greater than the t-table (1.96). The value of original sample estimate positive, which indicates that variable of Social Influence has significant influence to the Behavioral Intention in using OVO application. Based on the result, in can be concluded that Hypothesis 5 is supported.

V. Conclusion

Conclusion

In this study, there are several variable, as follows Perceived Ease of Use, Perceived Usefulness, Perceived Risk, Price Value, and Social Influence. The result of the research is the four variables has significant influence towards behavioural intention to use OVO application services. The research model was tested in students in Accounting Department of Universitas Brawijaya who have an experience in doing a transaction in OVO application services. In conclusion, the results of this study shows clearly that there is a significant effect of ease of use, perceived usefulness, perceived risk, price value, and social influence towards user’s intention use OVO application services.

Implication of the Research Result

The results of this study is expected to provide input for the management of companies, especially Mobile Payment provider to give more attention to consumer’s ease of use, perceived usefulness, perceived risk, price value, social influence and intention in doing transaction in OVO application services. And also this study is expected to contribute to improve the system of OVO application to be easier to the users to use the OVO application services. After that, it is recommended for OVO to make a “recommendation” features so that customers’ can make a recommendation to their families, friends, teachers and students to use Traveloka, therefore people who have no experience on using OVO can have an intention to.
Limitation

There are some obstacles in this study. First is researcher used convinience sampling method, this technique was used because the researcher only processing data of students who have used the OVO application feature. This method however was perceived as necessary for the authors due to the population of the study being unknown, and a limited time frame that the primary data collection had to be gathered. This method enabled the authors to conduct the study on OVO application features and collect the necessary sample size.

The collection of the questionnaire was extremely challenging because author had to ask the undergraduate students of Accounting Department, Faculty of Economics and Business, Universitas Brawijaya who active in period 2018/2019 through online messaging application. Furthermore, the results of the study are limited due to the differences in the demographic variables (eg. gender, semester, etc.) of the respondents.

References


Cao., et al. (2011). Dynamics between the trust transfer process and intention to use mobile payment services: A cross-environment perspective. Information & management, 48(8), 393-403


Martins, C., Oliveira, T., & Popović, A. (2014). Understanding the Internet banking adoption: A unified theory of...


Teo, T. S. (2001). Demographic and motivation variables associated with Internet usage activities. Internet Research, 11 (2), 125-137.


