

# Technology Compatibility Factors in the Implementation of the Ovo Digital Payment Application

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## ABSTRACT

Digital developments are increasingly reaching the financial world, leading to a variety of new payment service innovations, one of which is OVO. The emergence of digital payment technology is not necessarily in accordance with the habits of users in using digital payments using mobile devices. Therefore, this study aims to determine the suitability factor of digital payment technology, determine the factors that can affect digital payment technology in the OVO application and understand the benefits of digital payment technology from the user's side so that it provides an increase in individual performance. To be able to find out the suitability of the use of technology, the researchers collected data from 551 respondents using OVO. The data analysis technique used is SEM (Structural Equation Modelling) analysis technique with the help of the smartPLS tool. The theoretical model used in this study is the Task Technology Fit (TTF) and is combined with the variables from the Technology Acceptance Model (TAM), namely the perception of usability. The results of this study are to determine the factors that affect the suitability of digital payment technology in the OVO application. The results of this study indicate that comfort, safety, and confidence have an impact on the use of OVO. And several other factors that have a positive influence. Therefore, the elements in this study can provide advice to payment service providers digitally to be able to get more users.

**Keywords:** Task Technology Fit, TAM, Digital Payment

## 1. INTRODUCTION

Ease of making payment transactions provides convenience for users and practicality in making non-cash payments in transactions. The ease of use of payment is integrated into the technology that is now on the device that attaches to the user. Previously people knew digital payment as a digital money wallet that could be used to pay for various transactions that were already available. The trend that developed through the media extends to several instant services such as public transportation services, daily housekeeping services, food delivery services and payment at food outlets/ restaurants. An application that supports this technology is OVO. Users of OVO applications come not only from the upper classes but also from the middle class can enjoy the services already available in the application. Meanwhile, while using the middle to lower classes, I don't understand the different functions available. So that the use of this application is considered less than the

maximum. Therefore, in addressing the problem, it is necessary to conduct the socialization activities to provide information about the procedures for using existing applications.

User satisfaction is also an important success point in technology. If the OVO application catches the user's attention and creates the largest social network, chances are the user will be able to adopt it successfully. The more people use technology, the technology is successful. A model for evaluating technological success is the Technological Task Suitability (TTF) method. This model of the importance of compatibility between genomes, technology and the ability of individuals to influence the impact of individual performance. The utility of the task and technology fitness model as a measure of the extent to which a technology can help individuals execute their genomes that may affect individual performance. The TTF model states that information technology will only be used if the features

and benefits available to support user activity. This model reflected that performance will improve when technology provides features and support that can be associated with the task.

## **2. THEORETICAL REVIEW AND HYPOTHESIS DEVELOPMENT**

### **2.1. Digital Payment**

Digital payment, or better known as electronic money, has two basic forms, namely computer networks and digital systems. Digital payment is a payment method made through a digital method [13]. In payment transactions, payers and recipients use the digital way to send and receive money. All digital payment transactions are carried out online.

A digital payment system is an electronic means that allows consumers to carry out electronic commerce transactions for their purchases. Consumers have a moderate level of perception of digital payments, and there is a significant difference between the socio-economic status of consumers and their perception in terms numerous. Consumer perceptions positively and significantly influence the level of digital payment adoption. At the same time, digital payment systems need to take adequate measures to address undue delays in payment processing.

In recent years there has been interested in the development of digital currency [3]. Digital money has the potential to replace cash as the primary means of payment. Even digital money

considered to have greater potential to replace central bank currency [3]. The existence of digital money will have an impact on the entire banking system and the policies that have been determined. This is where the Governor's role is needed in developing more convenient and secure digital payment methods for cash withdrawal transactions.

### **2.2. Task Technology - Fit**

Task Technology - Fit is a match between the needs of the task, individual capabilities and the utility of technology. The Task Technology - Fit component focuses on tasks, technology, and individuals. The dependence between tasks that require information; this information also requires the role of technology as a support to make it easier for users to access that information. Information technology has a positive impact on the performance of individual technologies in delivering collaborative information systems by developing a TTF to investigate how technology has an effect on individual performance[9].

Performance in an organization is a measure of the success or failure of the set organizational goals. In

addition, Goodhue and Thompson define TTF as a means of measuring the extent to which tasks are supported by technology. TTF is also operationalized as an evaluation for users and intermediates

Individuals and tasks have a direct impact on perceptions of performance [9]. Priority Task-Technology Fit (TTF) is an interaction between tasks, technology and individuals. This evaluation model has eight factors measuring the success of TTF, namely a) Data Quality, b) Data locatability, c) Authorization to access data, d) Data compatibility, e) Ease of use/training, f) Production timeliness, g) System reliability, h) Relationship with users

### **2.3. Technology Acceptance Model**

TAM is the theoretical basis of the Theory of Reasoned Action (TRA) proposed by Ajzen and Fisbein (1980). The main objective of TAM is to provide an explanation of the acceptance of computer use accompanied by an explanation of user behavior or attitudes [7]. This model states that behavioral intention to use is determined by two beliefs, namely perceived usefulness (one's belief in using a system that can improve performance), perceived ease of use (belief in the ease of the system). The impact of TAM's external variables on intention to use is influenced by perceived usefulness and perceived ease of use. The TAM concept explains that perceived usefulness is influenced by perceived ease of use.

TAM (Technology Acceptance Model) is the best concept to explain user behavior towards new technology systems. The TAM model explains that user perceptions will determine their attitudes in using technology and clearly describe the use of technology which is influenced by benefits and ease of use [14]. In this theory there are two supporting factors, namely behavior beliefs and normative beliefs. These factors will encourage someone to have outcome evaluation and motivation comply. So that the presence of these two factors will encourage someone to do Attitude and Subjective Norms.

### **2.4. Hypothesis Development**

There are three variables that affect individual performance, namely task-technology fit, perceived usefulness, and utilization variables. The task-technology fit variable is influenced by three constructs, namely the technology characteristic, task characteristic, and individual characteristic. In addition, this variable also affects the precursor of utilization variable and perceived usefulness. For the precursor of utilization variable, it affects the variable utilization itself. Meanwhile, the variable perceived usefulness is influenced by variables which are the factors that

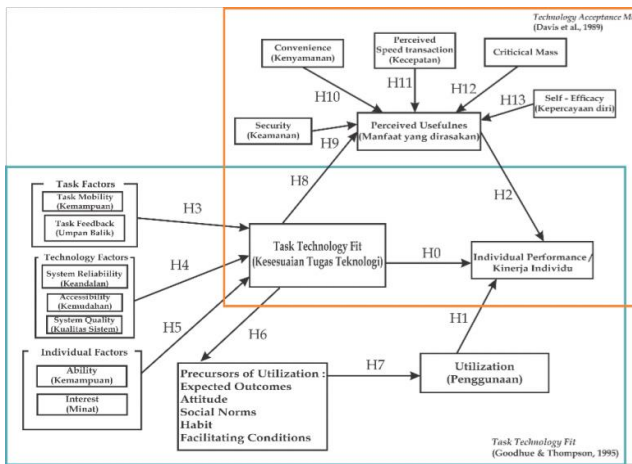


Figure 1 Conceptual Model

influence the suitability of the technology-task of using digital payments, namely security, convenience, speed transactions, critical mass and self-efficacy.

### 3. RESEARCH METHOD

This study looks for factors that influence the suitability of technology on the use of digital payments for OVO users. This study used a privately managed survey. With the development of the trend in the use of digital payments, the research used 551 respondents of students and workers who were active in using digital payments consisting of 286 people (52%) students and 265 people (42%) workers.

#### 3.1. Evaluation of the Measurement Model

At this stage, convergent validity analysis is carried out to determine which indicators are valid, composite reliability, and average variance extracted as well as discriminant validity analysis. Valid indicators can be seen from the results of loading factors, if the higher the correlation, it will show a better level of validity [12]. Here is a model using indicators that are declared valid.

The model produces a loading factor value for each correlation indicator and variable. The results of the PLS Algorithm test regarding factor loading, not all indicator correlation values have a value greater than 0.5. The results of the evaluation on the test above, there are several correlation indicators with invalid variables. If it is not valid, then retest the validity of the loading factor on each indicator. This research was tested twice. This is done to eliminate indicators that have a value of less than 0.5. If the loading process meets the requirements, the model is further tested. The following analysis is carried out to determine the value of Composite Reliability, Cronbach's Alpha, and AVE, and R2.

To measure the reliability of a construct, it can be done with two programs, namely with Cronbach's alpha with a value of more than 0.70 and a composite reliability

Table 1. Results of Convergent Reliability and Validity

Variable	AVE	Composite Reliability	Cronbach's Alpha
CON	0.615	0.935	0.921
CM	0.825	0.904	0.789
IP	0.754	0.902	0.837
TRA	0.790	0.919	0.867
PU	0.651	0.882	0.822
PUT	0.531	0.944	0.936
SEC	0.572	0.965	0.962
SE	0.551	0.894	0.861
TC	0.508	0.912	0.892
TTF	0.521	0.938	0.928
TEC	0.531	0.941	0.932
UT	0.547	0.906	0.882
IC	0.572	0.888	0.849

value with a value also greater than 0.70 or what is often called Dillon-Goldstein's [12]. If all Cronbach's alpha values and composite reliability > 0.70, it can be said to be reliable [8].

Then perform the convergent validity test by looking at the average variance extracted (AVE) value. The AVE value which is used as a limitation to prove convergent validity is > 0.50 [12]. If the calculation results of each variable get the AVE value > 0.50, it can be said that it meets the convergent validity requirements.

#### 3.2. Structural Model Evaluation

The value of t\_statistics is the result of a statistical test of the indicator with its variables. To get a significant value, the value of t\_statistics must be > 1.96. This t\_statistics test shows the extent of the influence of one independent variable in proving the variation of the dependent variable.

$$Df = n - k \tag{1}$$

$$= 551 - 14 \tag{2}$$

$$= 537 \tag{3}$$

Description: Df = degree of freedom  
n = number of respondents  
k = number of variables

The Df value obtained is 537 with a significant 0.05 resulting in a t-value of 1.96. So that the t-statistic can be declared valid if the t-statistic value is > 1.96.

The next step is to test the R-Squared (R2) value. This test aims to measure the effect of the independent latent variable on the dependent latent variable [1]. R2 values were categorized into three, namely 0.67 (strong), 0.33 (moderate), 0.19 (weak). There are five variables that produce the R2 value.

**Table 2.** Results of the Bootstrapping Research Data Calculation

Variable	Original Sample (O)	T Statistics ( O/STDEV )
CON -> PU	0.228	3.233
CM -> PU	0.046	1.104
TRA -> PU	-0.017	0.338
PU -> IP	0.092	1.825
PUT -> UT	0.811	52.086
SEC -> PU	0.206	2.606
SE -> PU	0.219	3.387
TC -> TTF	0.459	6.875
TTF -> IP	0.347	6.795
TTF -> PU	0.147	1.731
TTF -> PUT	0.897	95.688
TEC -> TTF	0.308	5.037
UT -> IP	0.424	6.926
IC -> TTF	0.147	3.082

**Table 3.** Result test the R-Squared (R<sup>2</sup>)

Variable	R <sup>2</sup> Value
IP	0.651
PU	0.579
PUT	0.804
TTF	0.729
UT	0.658

To further determine the results of the value of  $f^2$  by looking at the effect of exogenous latent constructs on whether or not in the model, we can use the evaluation of the effect size  $f^2$  [12]. According to Cohen (1988) in Nurendah and Mulyana (2013), the criteria for effect size ( $f^2$ ) are divided into three, namely 0.02 (small), 0.15 (medium), 0.35 (large) [10].

To validate the overall model, a goodness of fit (Gof) value is needed. Goodness of Fit is a single method used to validate the combined appearance of the measurement model and the structural model [6]. The three categories of Gof scores are 0.1 (small), 0.25 (moderate), 0.36 (large). With the following formula:

$$GoF = \sqrt{\overline{Com} \times \overline{R^2}} \quad (4)$$

Value  $\overline{Com}$  is average communalities. The value of communalities is obtained from the AVE value. As for the value  $\overline{R^2}$  obtained from the average value of  $R^2$ . Judging from the calculation results, the average value of communalities is 0.613, while for  $R^2$  is 0.648. So that it can be obtained:

$$GoF = \sqrt{0.613 \times 0.648} = 0.63 \text{ (Large GoF)} \quad (5)$$

**Table 4.** Effect Size

Variable	Effect Size Value	Criteria
CON -> PU	0.029	small
CM -> PU	0.003	small
TRA -> PU	0.0003	small
PU -> IP	0.01	small
PUT -> UT	1.922	large
SEC -> PU	0.019	small
SE -> PU	0.033	small
TC -> TTF	0.205	large
TTF -> IP	0.113	small
TTF -> PU	0.009	small
TTF -> PUT	4.108	large
TEC -> TTF	0.084	small
UT -> IP	0.141	small
IC -> TTF	0.034	small

**Table 5.** Result Communalities

Variable	Communalities
CON	0.615
CM	0.825
IP	0.754
TRA	0.790
PU	0.651
PUT	0.531
SEC	0.572
SE	0.551
TC	0.508
TTF	0.521
TEC	0.531
UT	0.547
IC	0.572

## 4. DISCUSSION

Technological characteristics have a significant effect on TTF in using OVO applications (TEC -> TTF). Three factors affect the characteristics of technology, namely the reliability of the system, which refers to OVO's behaviour. Accessibility system refers to the ease of information that can be accessed by OVO users. The quality system refers to the quality that OVO provides. The reliability of the system (reliability system) of OVO applications has an impact on users that can increase the TTF. This thing can be exemplified that users feel helped by the OVO application, which provides practical and simple non-cash transaction services, OVO is also easier to understand, and OVO is safer to carry than cash. So that OVO has a reliable performance system that benefits

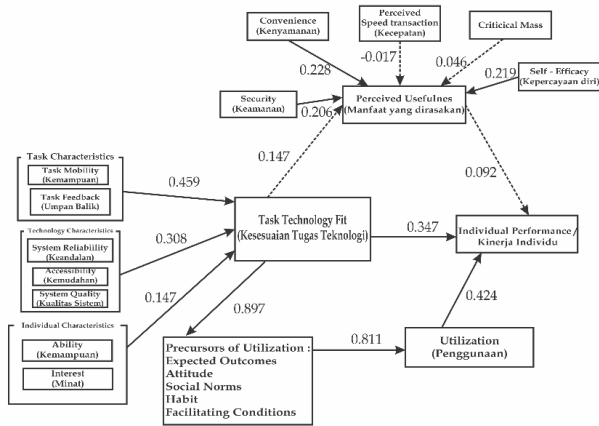


Figure 2 Structural Model

Table 6. Research Hypothesis Results

Hypothesis	Variable	Original Sample (O)	Conclusion
H10	CON -> PU	0.228	Significant
H12	CM -> PU	0.046	Not Significant
H11	TRA -> PU	-0.017	Not Significant
H2	PU -> IP	0.092	Not Significant
H7	PUT -> UT	0.811	Significant
H9	SEC -> PU	0.206	Significant
H13	SE -> PU	0.219	Significant
H3	TC -> TTF	0.459	Significant
H0	TTF -> IP	0.347	Significant
H8	TTF -> PU	0.147	Not Significant
H6	TTF -> PUT	0.897	Significant
H4	TEC -> TTF	0.308	Significant
H1	UT -> IP	0.424	Significant
H5	IC -> TTF	0.147	Significant

its users, namely transacting with OVO through a few processes and offering a variety of various non-cash transaction settlements.

Individual characteristics have a significant effect on TTF (IC -> TTF) in using OVO applications. There are two factors that affect the characteristics of technology, namely the ability is a factor that measures the extent to which the user's ability to transact using OVO. Meanwhile, the experience factor measures the extent to which experienced users use non-cash transactions such as OVO. The ability of users to master or use mobile devices, as well as the ability to understand technology related to OVO, can increase TTF

TTF has a significant effect on the precursors of utilization in using OVO applications (TTF -> PUT). Factors that affect the suitability of technology to the task are data quality (the extent to which the accuracy and accuracy of information and data owned by OVO), authorization (user rights to access all services provided by OVO), system reliability (the reliability of the OVO application's system), ease of use (the extent to which users find it easy to use the OVO application), relationship with users (the extent to which the OVO application can make users interested in understanding) and fit (how the OVO application understands what I need). Like data quality, the OVO application displays the information needed by users, thereby increasing precursors of utilization.

Precursors of utilization have a significant effect on utilization in using the OVO application (PUT -> UT). Factors that affect the suitability of technology to the task are expected outcomes (expected results in using OVO), attitude (user attitudes when using OVO), social norms (individual beliefs in behaviour), habits (habits of OVO users) and facilitating conditions (conditions facilities provided by OVO to make transactions). In using OVO, users expect maximum results (expected outcomes) to increase utilization.

Utilization has a significant effect on the individual performance when using the OVO application (UT -> IP). The factor that affects the use of the OVO application, namely adaptability, is the extent to which users are able to adapt to using OVO to make non-cash transactions.

TTF has a significant effect on individual performance in using the OVO application (TTF -> IP). Factors that affect the suitability of technology to the task are data quality which measures the accuracy of OVO application information and data; authorization is the user's right to access all services that OVO has provided, system reliability is a factor to determine the reliability

the system owned by the OVO application, the ease of use factor used to measure the extent to which users find it easy to use the OVO application, relationship with user factors that know the extent to which the OVO application can influence and make users interested in using OVO in carrying out daily activities.

### 5. CONCLUSION

In this study, the factors that affect the suitability of technology tasks in the use of the OVO digital payment application are found. [1] Analysis of the effect of digital payment technology task suitability on individual performance, which shows the relationship between TTF -> IP is significant with a t-statistic of 6,795 > 1.96. The original value of the sample is positive, which is 0.347 which shows the direction of the relationship between TTF and IP is positive. Thus the hypothesis H0 in this

study states that "the technology task suitability variable has a positive relationship with the individual performance of OVO users, so the hypothesis H0 is accepted. This can be seen from the data quality (data quality) of OVO which will improve individual performance if the OVO application displays the information needed by users clearly from product and service information such as information on pulses or data packages, promos and assistance information for users. User authorization can improve individual performance, if it is in accordance with the ownership of an OVO account which is kept confidential and secure and the OVO application cannot be opened or used when the security code is not appropriate. System reliability that is only owned by OVO will increase individual performance, because it can be seen from whether or not there are frequent problems when users want to use OVO, such as filling balances that often don't enter, transferring fellow OVO users who are often slow to notify. or logins frequently but fails. In terms of user convenience, the OVO application is very easy and comfortable to use because it supports mobility payments so that it can improve individual performance. This can be exemplified by the ease with which the OVO application can be seen from the user interface which provides an understanding for users when they want to carry out various kinds of transactions.

Analysis of the effect of digital payment technology utilization on individual performance in the OVO application shows that the relationship between UT -> IP is significant with a t-statistic of  $6,926 > 1.96$ . The original sample value is positive, which is 0.424, which shows the direction of the relationship between UT and IP is positive. Thus, the H1 hypothesis in this study states that "variable utilization has a positive relationship with the individual performance of OVO users, so the H1 hypothesis is accepted". It can be proven that OVO users in Indonesia are not only from the youth but also from the elderly as well. So that requires OVO to create interactive and adaptive displays that will improve individual performance. This is exemplified by the interface on the OVO application that must be able to assist users in making various transactions such as transferring others and shopping for promos and cashback. For the use of the OVO application, user behaviour is needed as an individual condition in using the OVO application or not.

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