

## The Role of Perceived Usefulness in Mediating Perceived Ease of Use Toward Intention To Use and Consideration of The Impact of Trustworthiness

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### Abstract:

This research was conducted to analyze the effect of perceived usefulness, perceived ease of use, and trustworthiness in the intention to use online motorcycle taxi customers in the city of Bondowoso. This research is quantitative research conducted in the city of Bondowoso by involving a sample of 120 respondents who have used the Ter ater online motorcycle taxi. The method used in this research is path analysis with the help of the SPSS application. The results showed that perceived ease of use was able to encourage new customers to use Ter later. Ter ater use is sustainable, supported by perceptions of benefits and trust.

**Key Word:** Perceived Usefulness, Perceived Ease Of Use, Trustworthiness, Intention to Use.

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### I. Introduction

Information technology is currently developing very rapidly. According to data reports from information communication through Press Release No. 53 / Hm / Information communication / 02/2018 explains that the number of internet users in 2017 has reached 143.26 million people or equivalent to 54.68 percent of the total population of Indonesia. This number shows an increase of 10.56 million people from the survey results in 2016. This was announced by the Indonesian Internet Service Providers Association (APJII) after surveying the penetration and behavior of internet users in Indonesia. The composition of internet users based on gender consists of 48.57 percent of women and 51.43 percent of men. For the composition based on age, the largest figure is shown by people aged 19 - 34, namely 49.52 percent. However, the biggest penetration was at the age of 13-18, which was 75.50 percent. While the penetration rate of internet users is the second-largest based on the economic level, namely respectively in the lower middle class of 74.62 percent, and upper-middle-class society by 16.02 percent. This shows that currently, the benefits of the internet are not only accessible to the upper class. The development of internet technology is now changing the lifestyle of Indonesian people to become technology-based. Internet technology facilitates the work of Indonesians in many ways, including travel mobility. Increasing internet access via smartphones among the Indonesian people invites the presence of online transportation in Indonesia.

Ter Ater is an online transportation service that is now starting to be widely used among the people of Bondowoso, East Java. Its existence can help meet the needs of society, especially in daily mobility, besides that Ter Ater also serves food ordering services, purchasing pulses, etc.

Thompson et. al Thompson, (1991) then put forward the conclusion that the benefits of information technology are the impacts expected by information technology users in carrying out their duties. Thompson (1991) also stated that individuals will use information technology if the person has an understanding of the benefit or usefulness is good for its use.

Ease of use is also one of the points in the TAM model, which has been tested in the research of Davis et al. (1989). The results of these studies indicate that this factor is proven empirically, can explain the end-user reasons for using the information system, and explain that the new system is currently being developed, end users accepted.

The perspective of ease (Perceived Ease of Use) of use can convince users that the information technology to be applied is an easy thing and not a burden for them. Information and communication technology that is not difficult to use will continue to be applied by companies. Davis (1989) in his book also states that the perspective of perceived ease of use is a level where someone believes that the use of a particular system, able to reduce one's effort in doing something. The frequency of use and interaction between the user and the system is

also able to show the ease of use. The more frequently used system indicates that the system is better known, easier to operate, and easier to use by its users.

Generally, researchers from various scientific disciplines agree that there are interrelationships between opportunities, uncertainty, and the possibility of getting benefits (Mayer et al. 1995; Komiak and Benbasat (2006). In conditions where there is an element of uncertainty, automatically contains a risk; in risky conditions, Trust is needed so that the parties involved are willing to take action (Mayer et al. 1995). Based on this definition, belief refers to a concept consisting of three characteristics, namely: ability, benevolence, and integrity (Jarvenpaa et al. 2000). These three characteristics are also referred to as 'trustworthiness' (Jarvenpaa et al. 2000). According to Mayer, Davis, and Schoorman (1995), trust with someone can be realized if that person has the trustworthiness of what is known as Trustworthiness. This aspect is based on the consistency of activities that have occurred, credibility, communication, and the congruence between what was said and done.

In this study, researchers tested and analyzed the factors that influence customer interest in using the most popular online motorcycle taxi services in the Bondowoso district. The factor that will be examined is the user's perception of the benefits obtained when using these services, User perceptions of the ease with which they are obtained and the beliefs that arise, giving rise to a strong interest or desire to use Ter ater online motorcycle taxi services.

## **II. Literature Review**

### **Perceived Usefulness**

Davis et al. (1989: 320) define perceived usefulness as a belief in usefulness, that is, the level at which users believe that the use of technology/systems will improve their performance at work. From this definition, it is known that perceived usefulness is a belief about the decision-making process. Davis (1989) in Jogiyanto (2007) to form a useful perception construct uses 6 indicators, namely: Work more quickly, job performance, increase productivity, effectiveness, makes Job easier, Useful.

### **Perceived Ease Of Use**

According to Davis (1989) cited by Gahtani (2001), perceived ease of use is defined as a level or situation where someone believes that using a certain system does not require any effort. The indicators (manifest variable) to be used in this study are adopted from the indicators developed by Weber (1999) in his book entitled Information System, control and audit (prentice hall) which includes: very easy to learn, do easily what the user wants, very easy to improve user skills, very easy to operate.

### **Trustworthiness**

According to Mayer, Davis, and Schoorman (1995), trust with someone can be realized if that person has the trustworthiness of what is known as trustworthiness. Trustworthiness is a person's eligibility to be trusted by being measured from 3 aspects, namely from ability, benevolence, and integrity.

### **Intention to Use**

According to Kotler and Keller (2003: 181) "Is consumer buying interest is a consumer behavior where consumers have the desire to buy or choose a product, based on experience in choosing, use and consume or even want a product. Consumer purchases are strongly influenced by cultural traits, social, personal, and psychology. Psychological factors that influence purchasing decisions include motivation, learn, perception, beliefs, and attitudes. Perception factors include beliefs and attitudes.

## **III. Formulation Of Hypotheses**

H1: Perceived Eazy Of Use has a significant effect on Perceived Usefulness.

H2: Perceived Eazy Of Use has a significant influence on the intention to use of Online motorcycle taxis customers Ter Ater

H3: Trustworthiness has a significant influence on the intention to use of Online motorcycle taxis customers Ter Ater

H4: Perceived Usefulness has a significant influence on the intention to use an Online motorcycle taxi, Ter Ater.

H5: Perceived ease of use has a significant influence on the intention to use of Ter Ater's online motorcycle taxi customers through perceived usefulness.

H6: Perceived Usefulness has a dominant effect on the intention to use of Online motorcycle taxis customers Ter Ater

## **IV. Research Methods**

This type of research is quantitative research. In this study, primary and secondary data sources were used, namely through the distribution of questionnaires and existing customer data on Ter Ater Bondowo's side. The population in this study is as many as 5000 people who are users of the TerAter application. While the sample in this study were 120 people using the Probability Sampling method with the Simple Random Sampling technique. The data analysis technique in this study used Path Analysis with the help of the SPSS application.

**V. Result**

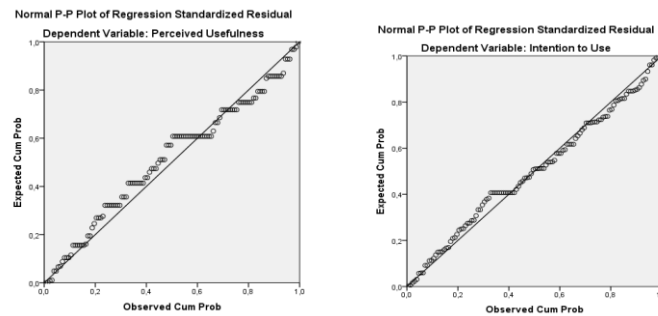
**Instruments testing**

The results of the instrument validity test with the Pearson Correlation to the Perceived Usefulness questionnaire, Perceived Ease of Use, Trustworthiness, and Intention to Use obtained the value of r count of each item meets the requirements, namely > 0.179 and obtained that the Cronbach Alpha value meets the requirements, namely > 0.600 so that the variables used are reliable.

**Classic assumption test**

**Regression Residual Normality Assumption Test**

The results of the regression residual normality test using the normal P-P plot graph and the Kolmogorov-Smirnov test are presented as follows:



**Figure 1.** Normal Probability Plot Graph

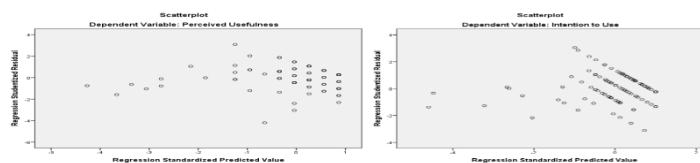
**Table 1.** Normality Assumption Test Results

Structural Equations	Kolmogorov-Smirnov Z	Sig value.	Information
X1 → M	1,185	0,120	Normal Distribution
X1, X2 dan M → Y	0,882	0,418	Normal Distribution

Based on the results of the normality test in the table above, it is known that the significance value of the regression residuals formed is greater than the 5% real level so that it can be said that the normality assumption is fulfilled.

**Heteroscedasticity Assumption Test**

The results of the heteroscedasticity test using a scatterplot and the Glejser test statistical test method can be presented in the Figure and table below:



**Figure 2.** Heteroscedasticity Test with Scatterplot

Based on the Figure, the results of the Heteroscedasticity test above show that the dots spread randomly and do not form a certain pattern. This shows that there is no indication of heteroscedasticity in the model being tested so that this assumption is fulfilled.

**Table 2.** Glejser Test Results

Independent Variable	Sig.	Information
Structural Equations 1		
X1	0,133	Heteroscedasticity does not occur
Structural Equations 2		

Independent Variable	Sig.	Information
X1	0,787	Heteroscedasticity does not occur
X2	0,539	
M	0,223	Heteroscedasticity does not occur

In the table, the results of the Glejser test above show that the sig value is obtained for each variable. > 0.05, it is concluded that heteroscedasticity does not occur. Or in other words, the assumption of non-heteroscedasticity has been fulfilled.

**Linearity Assumption Test**

The results of the linearity test show that the significance of each relationship is smaller than alpha 5% (0.050), so it can be concluded that there is a linear relationship between these variables, or in other words, the assumption of linearity is met. The linearity test results can be seen in the table below:

**Table 3.** Linearity Test Results

Variable independent	Variable dependent	Sig.	Information
Perceived Ease of Use (X1)	Perceived Usefulness (M)	0,000	Linear Relation
Perceived Ease of Use (X1)	Intention to Use (Y)	0,000	Linear Relation
Trustworthiness (X2)		0,000	Linear Relation
Perceived Usefulness (M)		0,000	Linear Relation

**The structural equation model testing**

**Table 4.** Influence Between Variables

Influence	Path Coefficient	t-count	Significance	R <sup>2</sup>
X1 → M	0,797	14,349	0,000	63,6%
Total				63,6%
X1 → Y	0,299	3,421	0,001	22,6%
X2 → Y	0,288	4,377	0,000	21,8%
M → Y	0,367	4,448	0,000	27,7%
Total				

Note: X1 = Perceived Ease of Use, X2 = Trustworthiness, M = Perceived Usefulness, Y = Intention to Use

**Effect of Perceived Ease of Use on Perceived Usefulness (X1-M)**

The path equation that is formed is:

$$M = 0,797 X1$$

The path coefficient of Perceived Ease of Use to Perceived Usefulness is 0.797, which means that every increase in the Perceived Ease of Use variable is 1 unit, then Perceived Usefulness will increase by 0.797 times. The contribution of the Perceived Ease of Use variable to Perceived Usefulness is 63.6%, which means that the 63.6% change in Perceived Usefulness is caused by changes in Perceived Ease of Use.

**Effect of Perceived Ease of Use on Intention to Use**

The path coefficient of Perceived Ease of Use to Intention to Use is 0.299, meaning that every increase in Perceived Ease of Use is 1 unit, Intention to Use will increase by 0.299 times. The contribution of Perceived Ease of Use to Intention to Use is 22.6%, meaning that a change of 22.6% in Intention to Use is caused by a change in Perceived Ease of Use.

**The influence of Trustworthiness on Intention to Use**

The path coefficient of Trustworthiness to Intention to Use is 0.288, meaning that for each increase in Trustworthiness of 1 unit, Intention to Use will increase by 0.288 times. The 21.8% contribution of Trustworthiness to Intention to Use means that the 21.8% change in Intention to Use is caused by a change in Trustworthiness.

**Effect of Perceived Usefulness on Intention to Use**

The path coefficient of Perceived Usefulness to Intention to Use is 0.367, meaning that each increase in Perceived Usefulness is 1 unit, then Intention to Use will increase by 0.367 times. The contribution of Perceived

Usefulness to Intention to Use was 27.7%, meaning that a change of 27.7% in Intention to Use was caused by changes in Perceived Usefulness. The path equation formed from the variable relationship (X1) perceived ease of use, (X2) trustworthiness, and (M) Perceived Usefulness to the variable (Y) Intention to Use, namely:  $Y = 0.299 X1 + 0.288 X2 + 0.367 M$

#### **Total Coefficient of Determination**

The total coefficient of determination describes how big the path model is formed in explaining the data used in the study. The value of the coefficient of determination ranges from 0% to 100%, where the higher the coefficient of determination, the better the model in explaining the data used.

$$R_m^2 = 1 - [(1 - 0,636) \times (1 - 0,721)] = 0,898$$

The total coefficient of determination obtained based on the calculation of the path model is 0.898 which indicates that the path model used can explain 89.8% of the data used in the study.

## **VI. Discussion**

### **Perceived Easy Of Use has a significant effect on Perceived Usefulness**

The results of testing the direct effect of Perceived Ease of Use on Perceived Usefulness obtained t-count (14,349) which is greater than t-table (1.981) or significance (0,000) less than alpha 5% (0.050), it is concluded that there is a positive and significant influence on Perceived Ease of Use against Perceived Usefulness. The better the Perceived Ease of Use, the Perceived Usefulness will increase or vice versa, the better the Perceived Ease of Use will decrease the Perceived Usefulness.

### **Perceived Easy Of Use has a significant influence on the intention to use of TerAter's online motorcycle taxi customers'**

The results of the direct test of Perceived Ease of Use on Intention to Use obtained t-count (3,421) which is greater than t-table (1.981) or significance (0.001) smaller than alpha 5% (0.050), it is concluded that there is a positive and significant influence on Perceived Ease of Use on Intention to Use. The better the Perceived Ease of Use, the more the Intention to Use will increase or vice versa, the better the Perceived Ease of Use, the lower the Intention to Use.

### **Trustworthiness has a significant influence on the intention to use of TerAter's online motorcycle taxi customers'**

The results of the direct test of Trustworthiness on Intention to Use obtained t-count (4.377) which is greater than t-table (1.981) or significance (0.000) less than alpha 5% (0.050), it is concluded that there is a positive and significant effect of Perceived Usefulness on Intention to Use. The higher the Trustworthiness, the Intention to Use will increase or vice versa, the lower the Trustworthiness, the Intention to Use will decrease.

### **Perceived Usefulness has a significant influence on the intention to use TerAter's online motorcycle taxi customers'**

The results of the direct test of Perceived Usefulness on Intention to Use obtained t-count (4.448) which is greater than t-table (1.981) or significance (0.000) less than alpha 5% (0.050), it is concluded that there is a positive and significant effect of Perceived Usefulness on Intention to Use. The higher Perceived Usefulness, the Intention to Use will increase or vice versa, the lower the Perceived Usefulness, the Intention to Use will decrease.

### **Perceived ease of use has a significant influence on TerAter's online motorcycle taxi customers' intention to use through perceived usefulness**

The results of testing the indirect effect of Perceived Ease of Use on Intention to Use through Perceived Usefulness are obtained by t-count (6,278) which is greater than t-table (1.981) or significance (0,000) less than alpha 5% (0.050), it is concluded that there is a significant indirect effect with a positive direction between Perceived Ease of Use on Intention to Use through Perceived Usefulness. That is, if Perceived Ease of Use is getting better followed by Perceived Usefulness which is getting higher, the Intention to Use will increase. Conversely, if Perceived Ease of Use is getting worse, followed by lower Perceived Usefulness, the Intention to Use will decrease.

### **Perceived Usefulness has a dominant effect on the intention to use of TerAter's online motorcycle taxi customers'**

The relationship of variables that have a dominant effect on Y can be found in several ways, one of them is by finding the highest value of the path coefficient value or the beta value between variables X and M which has a direct effect on variable Y. In this study, the highest beta value is in the Perceived Usefulness (M) variable, namely 0.367. Below is a picture of the path diagram based on the analyzed results which have been discussed in the above research analysis discussion.

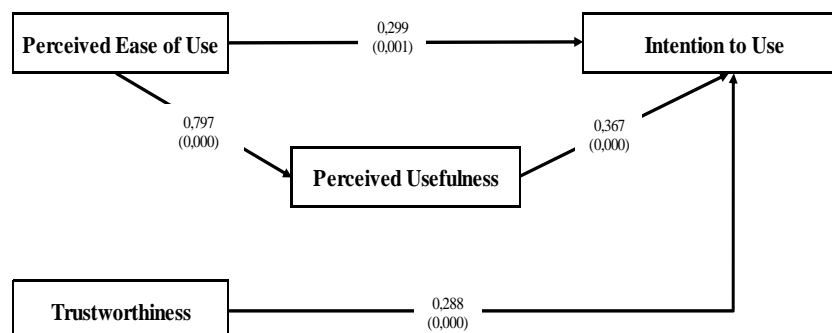


Figure 3. Path Path Diagram

## VII. Conclusions :

The results of the analysis of the influence of the Perceived Easy of use variable on perceived usefulness have a significant effect. This means that most of the respondents answered strongly agree, which means that there is a change in a positive influence on the two variables. The results of this study can answer the first hypothesis that there is a significant relationship between the two variables.

The results of the analysis on the relationship of Perceived Easy Of Use have a significant effect on the intention to use most online motorcycle taxi, customers. This analysis can answer the second hypothesis that the two variables have a significant effect.

The results of the analysis on the relationship between the Trustworthiness variable show that it has a significant effect on the intention to use of Ter Ater Online Ojek customers. This analysis answers the third hypothesis that there is an influence between the two variables.

From the results of the Hypothesis test, Perceived Usefulness has a significant influence on the intention to use of Ter Ater Online Ojek customers as well as can answer the fourth hypothesis that Perceived Usefulness is also the dominant variable that has a positive influence among other variables on variable Y.

The final test result is the relationship between the variable Perceived ease of use and has a significant influence on the intention to use TerAter's online motorcycle taxi customers through perceived usefulness.

In this study, satisfactory results were obtained where respondents gave positive responses to the existence of online motorcycle taxi services in Bondowoso. However, online motorcycle taxi service providers are also expected to be able to correct the deficiencies that customers have complained about. These drawbacks include simplifying the features of the application, network stability, and ethics in serving customers so that it is hoped that this online motorcycle taxi can develop to other cities throughout Indonesia.

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