The Influence of Perceived Usefulness, Perceived Ease of Use, and Perceived Security on Repurchase Intention at Tokopedia.com

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Abstract
This study aims to analyze the influence of perceived usefulness, perceived ease of use, and perceived security to the intention of repurchase on Tokopedia.com. This type of research is causative research looking at the effect of independent variables i.e. perceived usefulness, perceived ease of use, and perceived security against the dependent variable is the intention of repurchase. Respondents in this study are previous customers who have made transactions on the Tokopedia.com. Determination of the number of samples using purposive sampling technique as much as 200 respondents. Data analysis technique used is path analysis. The results of the study show: (1) Perceived usefulness has significant effect on repurchase intention at Tokopedia.com; (2) Perceived ease of use has no significant effect on repurchase intention at Tokopedia.com; (3) Perceived security has significant effect on repurchase intention at Tokopedia.com.

Keywords: perceived usefulness, perceived ease of use, perceived security, repurchase intention.

Introduction
The use of internet and web in business transactions is also called e-commerce. More formally, e-commerce is about the commercial transactions that make it possible digitally between organizations and organizations as well as between organizations and individuals (Laudon, 2014). Javalgi and Ramsey (2001) mentioned that in e-commerce activities actually means the relationship between sellers and buyers, transactions between business actors, and internal processes that support transactions with companies. For the most part, this means transactions that occur over the Internet and the Web. Commercial transactions involve the exchange of values (eg, money) across the boundaries of organizations or individuals in return for products and services. E-commerce has changed the way companies do business (Darch and Lucas, 2002).

According to Laudon (2014) the development of e-commerce is very fast due to the unique nature of the internet and the web. These properties are differentiated into several kinds of ubiquity, global reach, universal standards, information richness, interactivity, information density, and personalization / customization (personalization / customization). Growth of e-commerce in ASEAN countries, especially Indonesia, has grown rapidly with the number of internet users reached 88.1 million (President RI, 2016) and the value of transactions that have been made by the people of Indonesia reached 130 trillion rupiah. This figure is obtained not only from transactions in major cities of Indonesia, but also from small cities that have followed the development of the e-commerce market.

One of the largest retailers in Indonesia engaged in the e-commerce retail industry is Tokopedia.com. In mid-2017, Tokopedia.com fulfilled the third largest position in Indonesia under Lazada.co.id and Blibli.com. Salisbury et al (2001) adopted a TAM proposed by Davis with little change which in the proposed model was added with web security. In that study, he proposed that the usefulness, ease of navigation and web security had a direct impact on purchase intent.

In the technology and information industry, security is an important factor for consumers in deciding for them in using e-commerce. Various information that consumers have such as biodata,
credit cards, and various other data needed in transacting through e-commerce. This is where the vital role of security that must be able to be presented by e-commerce. A lot of consumer information and data can attract people who want to abuse that information and data. With the sense of security felt by consumers, then consumers will use e-commerce as a means of transactions.

Perceived usefulness, perceived of ease of use, and perceived security, researchers select as variables in this study as a determinant factor in consumer intentions repurchase-commerce because these three factors are closely related to the intention of repurchase for consumers when making online transactions.

Based on the description on the background mentioned above, the authors conducted a study entitled "The Influence of Perceived usefulness, Perceived Ease of Use, and Perceived security on Repurchase Intention at Tokopedia.com ".

Technology Acceptance Model (TAM)

The technology acceptance model (TAM) is an information system theory that models how users can receive and use technology. Many researchers criticize TAM, though often using it, directing the original pioneers to try to redefine it several times. Chuttur (2009) criticizes TAM as "theory" encompassing questionable heuristic values, limited explanatory and predictive powers, trivia, and lack of practical value. Benbasat and Barki (2009) suggested that TAM "distract researchers from other important research issues and have created the illusion of progress in the accumulation of knowledge." Furthermore, independent efforts by some researchers to expand TAM in order to adapt it to ever-changing technology and information, the environment has led to a state of theoretical chaos and confusion "(Benbasat & Barki, 2007).

Repurchase Intention

The intention of repurchasing as a person decides to purchase certain products or services from the same company / company for the second time, keeping in mind the current condition and environment. Unplanned purchases, partially planned purchases, and fully planned purchases. Aribowo and Nugroho (2013) interpret the intention of purchase described by Engel as a measure of the strength of one's intention to perform certain behaviours in this case is transacting, the intention to transact is determined together by the attitude and social norm. The intention of repurchasing as a person decides to purchase certain products or services from the same company / company for the second time, keeping in mind the current condition and environment.

The intended intention of repurchase here is how much a person intends to make a buyback at least once using or transacting online through the Tokopedia.com web.

Perceived usefulness

Usefulness is a subjective probability that using technology will improve the way the user can accomplish a given task. Mathwick et al., (2001) defines the benefits as to how far one assumes a particular system to improve its performance. In contrast to Davis, Salisbury et al (2001) in his study found that perceived usefulness has a significant and positive effect on purchase intent. In line with Salisbury et al's research, several researchers such as Nugroho (2009), Mahardika & Saino (2013), Eze et al (2011), Trisnawati, Suroso & Kumorohadi (2012), Chiu et al (2008), Lee & Wan (2008), Abdullah, Ward & Ahmed (2016), Aren et al (2013), Hamid et al (2017) in their study found that perceived usefulness had an effect on purchasing intentions from consumers. From these statements can be concluded that perceived usefulness plays an important role in the intention to behave a person towards a system. This is the basis of authors include perceived factors of usefulness as one of the variables that will be examined in this research.
It can be concluded that perceived usefulness (benefit) here is all the benefits derived from an online shopping that is believed to increase consumer interest when shopping online through Tokopedia.com.

**Perceived ease of use**

According Pavlou (2001) perceived ease of use is defined as intrinsic motivation in using technology to transact internet. According to Adams, Nelson, & Todd (1992), the intensity of use and interaction between users with the system can also indicate ease of use. The more frequently used systems show that the system is easier to understand, easier to operate and easier to use.


**Perceived security**

Considered as an important risk attribute that affects the consumer decision-making process when purchasing a product or consuming multiple services. According to Salisbury et al (2001), perceived web security is the rate at which a person believes that the online vendor or web is secure, and is very important in things like transferring information like credit card details. Lallmahamood (2007) defines user perceptions about the protection of security threats and the control of personal information in the online environment. Eid (2011) defines the perception of security as consumer perception of security in conducting e-commerce transactions.

From the previous explanation it can be concluded that perceived security is a perceived consumer belief that the security of information systems and data they have is not stolen or misused when making transactions using the internet.

Based on the above, the researcher describes the conceptual framework as follows

![Conceptual Framework](image)

**Figure 1 Conceptual Framework**

**Hypothesis**

Based on the results of previous research and literature review, the research hypothesis can be formulated as follows:

1. Perceived usefulness has a significant and positive effect on purchasing intention back to Tokopedia.com
2. Perceived ease of use has a significant and positive impact on the intention of repurchase on Tokopedia.com
3. Perceived security has a significant and positive effect on repurchase intention at Tokopedia.com

Methods
This research belongs to causative research that is determining how far the influence of perceived usefulness, perceived ease of use, perceived security, to the intention of buy back. This research uses purposive sampling technique with amount of 200 responders. The analytical method used in this research is path analysis that is to analyse the effect of causal variable to the variables either directly or indirectly. This research was conducted at Universitas Negeri Padang and carried out in 2018.

Data collection techniques are carried out directly through research questionnaires by visiting respondents directly who have been determined as samples. Table 1 summarizes the definitional of variables and measure of the items.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repurchase Intention</td>
<td>How much do you want someone to repurchase at least one time using or transacting online through the Tokopedia.com</td>
<td>1. The consumer's willingness to re-use the Tokopedia.com. 2. The desire of consumers to recommend the Tokopedia.com.</td>
</tr>
<tr>
<td>Perceived usefulness</td>
<td>All benefits, uses or benefits felt by a student that can lead to the desire to transact on the Tokopedia.com</td>
<td>1. Benefits of using the Tokopedia.com. 2. Improved performance when using the Tokopedia.com.</td>
</tr>
<tr>
<td>Perceived ease of use</td>
<td>Everything that provides convenience and expedites the business felt by a student that can lead to the desire to transact on the Tokopedia.com</td>
<td>1. Efficiency when using the Tokopedia.com site 2. Ease of the Tokopedia.com site</td>
</tr>
<tr>
<td>Perceived security</td>
<td>The level of security and tranquility felt by a student that can lead to the desire to transact on the Tokopedia.com site</td>
<td>1. Information security system on Tokopedia.com site 2. Security when transacting on the Tokopedia.com site</td>
</tr>
</tbody>
</table>

Results
The path diagram is a complete structure of the causal relationships between variables, which consists of sub-structure relationships structure, the results can be seen in the following table 2:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Path Coefficient (β)</th>
<th>t value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived usefulness (Xi)</td>
<td>0,348</td>
<td>5,313</td>
<td>0,000</td>
</tr>
<tr>
<td>Perceived ease of use (X2)</td>
<td>0,005</td>
<td>0,070</td>
<td>0,944</td>
</tr>
<tr>
<td>Perceived security (X3)</td>
<td>0,211</td>
<td>3,108</td>
<td>0,002</td>
</tr>
</tbody>
</table>

R Square = 0.171

Source: Primary Data Processing, 2018
Based on the Table 2, then the research results are described as follows:

Path coefficient of each independent variable along with test result t:
1) PYX1 of 0.348 and t count of 5.313 on the sig. 0.000 means significant path coefficient.
2) PYX2 of 0.005 and t count of 0.070 on sig. 0.944 means the coefficient of the path is not significant.
3) PYX3 of 0.211 and t count of 3.108 on sig. 0.002 means significant path coefficient.

Based on the results of path analysis shown in the above table, it can be seen that only Perceived usefulness (X1) and Perceived security (X3) variables have significant effect on Buying Intention (Y). While Perceived ease of use (X2) variable has no significant effect on Buying Intention (Y), it can be seen from sig value. > 0.05. Therefore, it is necessary to trimming by issuing Perceived ease of use variable from research model. The analysis results are shown in the table below:

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Path Coefficient (β)</th>
<th>t value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perceived usefulness (X1)</td>
<td>0.347</td>
<td>5.348</td>
<td>0.000</td>
</tr>
<tr>
<td>2</td>
<td>Perceived security (X3)</td>
<td>0.212</td>
<td>3.270</td>
<td>0.001</td>
</tr>
</tbody>
</table>

R Square = 0.171

Source: Primary Data Processing, 2018

Based on path analysis in Table 2 it can be seen that:
Path coefficient of each independent variable along with test result t:
1) PYX1 of 0.347 and t count of 5.348 on the sig. 0.000 means significant path coefficient.
2) PYX3 of 0.212 and t count of 3.270 on sig. 0.002 means significant path coefficient.
Thus it can be shown the path analysis diagram for the effect of perceived usefulness (X1) and perceived security (X2) significantly affect the Buy Back Purpose (Y) as follows:

Figure 2 Path Chart After Testing

**Hypothesis testing**

**Hypothesis 1**
Testing the first hypothesis in this study is to determine the effect of Perceived usefulness (X1) to Intention Buyback (Y). From the analysis result shows the coefficient value of 0.347 with t-value for variable perceived usefulness (X1) is 5.313> t-value 1.652 and significant significance value of significant level used (0.00 <0.05) then H0 is rejected and Ha accepted. Test results can be concluded that Perceived usefulness has significant effect on Buying Intention at Tokopedia.com. This means that H1 hypothesis is accepted.
Hypothesis 2

The result of the hypothesis testing is indicated that there is no significant influence between Perceived ease of use (X2) variable on Buying Intention (Y), it is shown from the t-value for perceived ease of use (X2) variable is $0.070 < t$-value 1.652 and the sig value 0.944 $> 0.05$ then H0 is accepted and Ha is rejected. From the analysis results can be seen the coefficient value of 0.005. The test results can be concluded that Perceived ease of use has no significant effect on Buying Customer intention Tokopedia.com. This means H4 Hypothesis is rejected.

Hypothesis 3

From the result of the third hypothesis testing to know the effect of perceived security (X3) to repurchase intention (Y) shows the value of t-value for variable perceived security (X3) is $3.270 > t$-value 1.652 and significance value of 0.002 $< 0.05$ which means that H0 is rejected and Ha is accepted. From the analysis results can be seen the coefficient value of 0.211. Test results can be concluded that perceived security has a positive and significant effect on the intention of repurchase on Tokopedia.com. This means the H3 hypothesis is accepted.

Discussion

The Influence of Perceived usefulness (X1) Against Repurchase Intention (Y) on Tokopedia.com

Based on the results of analysis show that perceived usefulness have significant effect to Consumer Repurchase Purposes Tokopedia.com, this can be seen from t-value value for variable perceived usefulness (X1) is $5.348 > t$-value 1.652 and value sig 0.00 $< 0.05$ then H0 is rejected and Ha is accepted.

From the results of the first hypothesis testing it is known that there is a significant influence of perceived usefulness to the consumer buyback intention Tokopedia.com. The effect of total perceived usefulness on consumer repurchase intention was 14.7% with a direct influence of 12.1%. This shows that there is a direct relationship between perceived usefulness variables and the variable of repurchase intention, if the higher perceived usefulness, the higher the intention of buy back consumers on Tokopedia.com.

The results of the description of perceived usefulness indicate that consumers feel the benefits given by Tokopedia.com. Consumers also feel the speed in transacting, increasing productivity, effectiveness, and ease in transaction using Tokopedia.com. Benefits perceived by the consumer plays an important role in the smooth running of a business in online trading s. Benefits perceived by consumers to an online buying and selling sites is one factor for consumers to use an online buying site. In addition, with the benefits felt by consumers will be able to create the intention of buy back to the consumer an online buying site.

The results of this study are in line with several studies conducted by Salisbury et al (2001), Nugroho (2009), Mahardika & Saino (2013), Eze et al (2011), Trisnawati, Suroso & Kumorohadi (2012), (Chiu et al (2008), Lee & Wan (2008), Abdullah, Ward & Ahmed (2016), Aren et al (2013), Hamid et al (2017) who in their study found that perceived usefulness has a positive and significant impact on the purchase intentions of a consumer. In addition, through this research found that the speed of transactions, increased productivity, effectiveness, and ease in transcribing becomes an important factor for consumers in choosing an online buying site when they will make a buy back.

Tokopedia.com has been able to provide benefits to its customers. They run online trading s that provide speed in transactions, increased productivity, effectiveness, and ease in transcribing for consumers. Perceived usefulness is one of the elements of the Technology Acceptance Model that must be enhanced to create consumer buy-back intentions.

The Influence of Perceived ease of use (X2) Against Repurchase Intention (Y) on Tokopedia.com

Based on the results of the study can be seen that the variable perceived ease of use has no significant effect on the intention of repurchase at Tokopedia.com. This can be seen from the
coefficient value of the path of 0.005 with the value of t count for the variable perceived ease of use (X2) is 0.070 < t-value 1.652 and the value of sig 0.944 > 0.05 then H0 is accepted and Ha rejected.

The result of the second hypothesis testing shows that there is no significant effect of perceived ease of use on consumer buy back intention, meaning that the findings show that ease of use does not give meaning or contribution to the model. This shows that there is no unidirectional relationship between perceived ease of use variables and the variable of repurchase intention, so that any increase of perceived ease of use is high or low, it will not affect the consumer repurchase on Tokopedia.com.

If seen from the level of achievement of respondents, there is no significant influence between perceived ease of use variables on consumer buyback intentions because consumers feel that the is still not provide convenience for its users such as satisfied ease of access compared to others with the level of respondents are in the category of moderate / enough that is 69.60% and the practicality of the site with the level of respondent achievement of 70.00% while the ease in finding the product in the category enough that is 70.40% which means that although the ease of use owned by Tokopedia.com is still lacking but has no effect on the intention of buy back customers.

Ease of use owned by Tokopedia.com needs to be improved again so that consumers will find it easy in the use of Tokopedia.com that will be able to increase the intention of buy back consumers. The perceived ease of use variables in this study are characterized by several factors such as the practicality of usage, the ease of access, and the ease of finding products to be purchased given by Tokopedia.com.

Perceived ease of use is everything that consumers perceive in facilitating them to do everything related to transactions using the internet so as to produce efficiency in the transaction. Perceived ease of use is one of the elements in the Technology Acceptance Model (TAM). The ineffective and unsustainable perceived ease of use of an online selling has not guaranteed that the consumer will not make a purchase back to the online buying because there are other elements of influential TAM such as perceived usefulness.

The findings of this study support the proposed research model Davis (1989) which states that there is no direct influence between perceived ease of use of a system. In the model proposed in the study by Davis it is clear that perceived ease of use has no direct effect on intent. In the model proposed by Davis, he explains that in his research perceived ease of use gives indirect influence to intent but through perceived usefulness. Based on the model and the results of this study can be concluded that perceived ease of use given a system or online buying and selling does not guarantee the creation of intention to buy back consumers because there are other factors that will affect the purchase intention of consumers. Although the company is not effective in providing ease of use to the but consumers can re-visit the because there are other factors that influence such perceived usefulness (benefits) of the

The Influence Perceived security (X3) Against Purchase Intention (Y) on Tokopedia.com

Based on the results of the analysis show that perceived security significant effect on Buying Intention at Tokopedia.com, this can be seen from the coefficient value of 0.212 with t-value value for variable perceived security (X3) is 3.270> t-value 1.652 and sig value 0.002 <0.05 then H0 is rejected and Ha accepted.

Perceived security has a significant influence on consumer repurchase intention of 7% with a direct influence of 4.4%, meaning that the findings indicate that security contributes to the model. This shows that there is a direct relationship between perceived security variables and the variable of repurchase intention, so the higher perceived security the higher the intention of buy back consumers on Tokopedia.com. This is in line with previous studies conducted such as Cheng, Lam & Yeung (2004), Lallmahamood (2007), Kim et al (2008), Lian & Lin (2008), and Aziz, Mohammad & Zakaria (2015). In their research it is clear and gambling to find that perceived security affects the use of e-commerce.
Park and Kim (2003) say that security guarantees play an important role in establishing trust by reducing consumer concern about the misuse of personal data and malicious data transactions. When the level of security assurance is acceptable and meets the consumer’s expectations, a consumer may be willing to disclose his personal information and will buy with a sense of security.

The results of this study show that perceived security affects the repurchase intentions seen from several factors such as the availability of transmission mechanisms to ensure the user’s information is secure, the availability of technical capacity to ensure that data from consumers is secure, security guarantees when making purchases on the web, and security in making electronic payment / e-payment provided by Tokopedia.com. Security is an important factor in creating consumer purchase intentions because the security is able to provide assurance to consumers that the data and information provided by consumers safe when transacting online.

The findings of this study support the findings of previous research which states that perceived security is able to create the intention of buy back consumers. Based on that opinion it can be concluded that with the existence of perceived security guarantee given by web of buying and selling online will create buy back consumer.

Conclusions

This study provides evidence that perceived usefulness and perceived security have significant effects on repurchase intention of consumer at Tokopedia.com. These indicate that in order to attract consumers to use Tokopedia.com, which is completely voluntary, it is utmost important to improve the quality of usefulness and security for the users. The example of actions that can be taken is by visibly posting security information on privacy policy on their web. This will help to instill consumers’ confidence to use Tokopedia.com. Besides, business needs to minimize the risks of loss to their customer by having a clear agreement or contract with the customer. This is important as the rights of the customer will be preserved if anything happen throughout the transactions.

Apart from that, perceived ease of use has shown a contrary result. This implies that consumer’s repurchase intention is not explained by level of ease of use but by other variables. The possible reason would be the degree of ease of use at Tokopedia.co is not an issue for educated people that have longer tenure of internet experience. Thus, it is not a determinant to explain their intention to use e-commerce.

Although the result can be considered as statistically significant, the study has several limitations that may affect the reliability and validity of the findings. The first limitation concerns the sample. In this study, the focus is only given to students of Universitas Negeri padang with identified characteristics. Therefore, a generalization of conclusions cannot be made on every Tokopedia.com consumers’. The other limitation of this work concerns on the model. The extended literature reviews demonstrate that TAM is not the only predictors of technology acceptance. In fact there are other variables or models that can be used to study user’s acceptance. This study only tested three variables (i.e. perceived usefulness, perceived ease of use, and perceived security) as the predictors of consumers acceptance. On this basis, this model might face the fact that there are other possible factors influencing e-commerce acceptance that were not included in the model.

The above limitations have paved the way to future research. One avenue for future research could be by extending the sample to the general population. Therefore, by conducting study on general population, the result can be used to make a generalization of conclusion. Secondly, there is a need to search for additional variable that will improve the ability of the model to predict user’s attention more accurately. The example of variables would be prior computing experience and system characteristics.
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