THE ROLE OF TRUST AS A MEDIATION BETWEEN THE EFFECT OF PERCEIVED USEFULNESS AND PERCEIVED EASE OF USE TO INTEREST TO BUY E-BOOK

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Abstract: The purpose of this study is to know and explain whether the benefits and ease of using e-books affect the interest in buying e-books. This research is intended to explain and analyze whether the trust mediated the effect of perceived usefulness and perceived ease of use on the intention to buy e-books. This study examines the interest of buying e-books. By adopting the TAM model, this study proposed trust as a mediator of perceived usefulness and perceived ease of use influence on intention to buy an e-book. The hypotheses were tested statistically using the SEM-PLS model. The results of this study indicate that perceived usefulness has no significant effect on the intention to buy an e-book, perceived ease of use has a significant effect to the intention to buy e-books, and trusts have been significantly mediated the effect of perceived usefulness and perceived ease of use on the intention to buy an e-book.

Keywords: TAM, Perceived usefulness (PU), Perceived ease of use (PEOU), Trust, Intention to buy an e-book

The growth of internet users in Indonesia continues to increase. That is supported with mobile device users, especially smartphones. APJII noted, in 2013 internet access via smartphones reached 65% then to 85% in 2014. As a result, the internet made it possible to do it online. Various products that are traded on the internet, wrong is an e-book.

Rao (2001), influences e-books as text in digital form or books that are converted into digital form or digital reading material or books in computer file format or electronic files consisting of sentences and images for display on a computer or through a Network computer or bonus on computer/notebook/special equipment (e-book reader). In general, e-book users are PDA (Personal Digital Assistant) users who are students, tourists, and readers who cannot use print publications.

In Indonesia, there were 70 online bookstores in 2008 (Eviwidi, 2008). It continues to grow with a variety of platforms and applications that allow internet users to go online and use electronic devices to read e-books. Some e-book sellers in Indonesia include Scoop, Book Store, WayangForce, Tablet Book, Qbaca, IndoBooks, BukuOn, Gramedia.com, and others.
E-books have various advantages and wider internet access, but e-book sales in Indonesia do not apply to progress. Sim’s research, et al. (2014), revealed that low e-book users in Indonesia are influenced by user characteristics, language, and reading habits.

Phenomenon, facts, opinions, and research that has been done to reveal more about purchasing e-books in the territory of Indonesia. Interest arises and increases after individuals find information relevant to previously identified objects. Interest in buying online as a consumer and purchasing for online transactions (Pavlou, 2003 in Chen and Barnes, 2007).

Study of the interest in using information technology using the Technology Acceptance Model (TAM) developed by Davis (1989). TAM is an adaptation of the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975) and Ajzen and Fishbein (1980). Comparatively, TRA is more general while TAM is more specific in technology (Ma’ruf, et al., 2005). TAM predicts technology users that are determined by two factors, namely Perceived usefulness (PU) or perceptions of benefits and perceived use of convenience (PEOU) or perceptions of comfort using (Roca, et al., 2009).

Roca, et al. (2009), suggests that PU is defined as the degree to which a person feels that using a particular system will improve its performance. By using it, PU can also increase consumer interest in e-books, in this case, it can help as one of the variables used to measure e-books. If someone wants to use a system that will be free from physical and mental endeavors, then repairing it will also affect consumers on e-books. This study also proves that PEOU is also one of the important variables in consumers towards e-books.

Table 1  Summary of Gap on Research Results

| Variable                          | Influence between variables                    | Research result   | Researcher                          |
|-----------------------------------|------------------------------------------------|-------------------|-------------------------------------|
| Perceived usefulness (PU)         | Perceived usefulness to Interest to buy Online | Significant       | Roca, et al. (2009)                 |
| Perceived ease of use (PEOU)      | Perceived ease of use to Interest to buy Online| Significant       | Letchumanan and Muniandy (2013)     |
|                                   |                                                 | Not Significant   | Roca, et al. (2009)                 |
|                                   |                                                 | Not Significant   | Mandilas, et al. (2013)             |

Departing from the gap in the results of these studies, researchers want to know and explain whether the benefits and ease of using e-books can affect the interest in buying e-books. The research gap in the form of inconsistencies in the results of PU and PEOU research on interest in buying was dissolved by proposing Trust variables as mediating variables. Trust variables are positioned as mediation based on Roca, et al. (2009). The main objective of this research is to find out and explain whether PU and PEOU influence the interest in buying e-books. The second objective is to explain and analyze whether trusts mediate the influence of PU and PEOU on the interest in buying e-books. The results of this study are expected to increase knowledge about the TAM concept in marketing management and can contribute to the managerial in formulating strategies to increase interest in buying e-books.
METHOD

Figure 1 shows the conceptual model of this study. Trust variables are positioned as the mediating variable of the influence of PU variables and PEOU variables on the interest in buying e-books.

Hypothesis 1: Perceived usefulness has a direct effect on the interest in buying e-books.

Hypothesis 2: Perceived ease of use has a direct effect on the interest in buying e-books.

Hypothesis 3: Perceived usefulness has a direct effect on trust.

Hypothesis 4: Perceived ease of use has a direct effect on trust.

Hypothesis 5: Trust has a direct effect on interest in buying e-books.

Hypothesis 6: Trust mediates the influence of Perceived usefulness on the interest in buying e-books.

Hypothesis 7: Trust mediates the influence of Perceived ease of use against interest in buying e-books.

One hundred graduate students of Brawijaya University Malang 2015/2016 used as respondents of this study. Respondents filled out the questionnaire by selecting the answer choices arranged in a Likert scale from Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1). In accordance with the conceptual framework based on the results of the theoretical studies and hypotheses tested, the analysis technique used in this study is Partial Least Squares (PLS).

RESULTS

From the characteristics of the sexes shows more women by 55%, the majority of respondents aged 20 years to 29 years. This age range is classified as young and productive, easy to accept new things especially those related to technology. In addition, the average respondent spends 6-9 hours reading in one month. This illustrates a low reading interest even though respondents are S2 students who are required to read a lot of books or literature. All respondents know e-books and have used e-books, meaning that respondents are end users of e-books. As many as 48% of respondents claimed to be interested in e-books because of their contents, the rest were interested in the title (21%), who the author was (16%), and the cover (15%). The results of the analysis of the description of the respondents’ characteristics above show that respondents who are S2 students of Malang Brawijaya University are end-user e-books, prioritizing the content of an e-book, and potentially paid e-book buyer.
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Table 1 Description of Respondents Answers Perceived usefulness variables

| Item  | STS | TS | N | S | SS | Mean Item |
|-------|-----|----|---|---|----|-----------|
|       | F   | %  | f | % | f  | %        | f | %        |
| PU 1  | 0   | 0% | 5 | 5%| 5  | 5%       | 62| 62%      | 28| 28%      | 3.76|
| PU 2  | 0   | 0% | 5 | 5%| 5  | 5%       | 72| 72%      | 18| 18%      | 4.01|
| PU 3  | 0   | 0% | 5 | 5%| 5  | 15%      | 62| 62%      | 18| 18%      | 3.76|
| PU 4  | 0   | 0% | 9 | 9%| 10 | 10%      | 67| 67%      | 15| 15%      | 3.91|
| PU 5  | 0   | 0% | 8 | 8%| 10 | 10%      | 67| 67%      | 15| 15%      | 3.89|

**Table 1 Description of Respondents Answers Perceived usefulness variables**

The results of the description of the PU variable obtained results that the majority of respondents’ answers to the statement items are agreed answers (S). PU variables in this study were measured through 5 question items. The results of responses to the PU variables as shown in Table 1 above show that the average respondents’ perception index of PU is 3.88. This means that respondents understand the perception of PU. The most important item in the PU variable is that e-books are useful for respondents. This is because respondents agree and understand that e-books have good benefits because of their digital nature, so they are more efficient and easy to carry everywhere.

Table 2 Results Description Answers of Respondents Perceived ease of use

| Item  | STS | TS | N | S | SS | Mean Item |
|-------|-----|----|---|---|----|-----------|
|       | F   | %  | f | % | f  | %        | f | %        |
| PEU 1 | 0   | 0% | 5 | 5%| 5  | 5%       | 70| 70%      | 20| 20%      | 3.65|
| PEU 2 | 0   | 0% | 4 | 4%| 23 | 23%      | 63| 63%      | 10| 10%      | 3.49|
| PEU 3 | 0   | 0% | 10| 10%|22 | 22%      | 57| 57%      | 11| 11%      | 3.64|
| PEU 4 | 0   | 0% | 7 | 7%| 15 | 15%      | 67| 67%      | 11| 11%      | 3.69|

**Table 2 Results Description Answers of Respondents Perceived ease of use**

The results of the description of the PEU variable obtained results that the majority of respondents’ answers to statement items are agreed answers (S). PEU variables in this study were measured through 4 question items. Then the Results of responses to PEU variables. Table 2 above shows that the average perception index of PEU is 3.61. This means that the perceptions of respondents understand the perception of PEU. The most dominant item in the PEU variable is that respondents can find information from e-books quickly.
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Statement items are agreed answers (S). Trust variables in this study were measured through 5 question items. The results of responses to Trust variables indicate that the average respondent’s perception index of trust is 3.64. This means that respondents understand the perception of the Trust.

The most dominant item in the Trust variable is the Respondent believes the online e-book seller will keep his promise which means the respondent understands and agrees that the e-book seller can be trusted.

Table 3  Results of Description of Respondents’ Answers to Variable Trusts

| Item | STS | TS | N | S | SS | Mean Item |
|------|-----|----|---|---|----|-----------|
|      | F   | %  | f | % | f | % | F | % | f | %   |
| TRS 1| 0   | 0% | 10| 10%| 25| 25%| 50| 50%| 15| 15% | 3.50 |
| TRS 2| 0   | 0% | 6 | 6% | 6 | 6% | 63| 63%| 25| 25% | 3.85 |
| TRS 3| 0   | 0% | 10| 10%| 25| 25%| 50| 50%| 15| 15% | 3.50 |
| TRS 4| 0   | 0% | 10| 15%| 25| 25%| 50| 50%| 15| 15% | 3.50 |
| TRS 5| 0   | 0% | 4 | 4% | 20| 20%| 64| 64%| 12| 12% | 3.70 |

Mean Trust 3.64

Information:

TRS 1: Online e-book sellers have a good reputation.
TRS 2: I’m sure the online e-book seller will keep his promise.
TRS 3: Online e-book sellers offer customer privacy security.
TRS 4: I’m sure online e-book sellers will not take advantage illegally.
TRS 5: The performance of online e-book sellers will meet my expectations.

The results of the Trust variable description show that the majority of respondents’ answers to statement items are agreed answers (S). Trust variables in this study were measured through 5 question items. The results of responses to Trust variables indicate that the average respondent’s perception index of trust is 3.64. This means that respondents understand the perception of the Trust. The most dominant item in the Trust variable is the Respondent believes the online e-book seller will keep his promise which means the respondent understands and agrees that the e-book seller can be trusted.

Development of Path Diagrams

Figure 2  Development of Path Diagrams
The results of the analysis of each latent variable found that the loading factor of each item is more than 0.500 and the t-statistic value is more than 1.960, which means that each indicator can validate the latent variable well. Furthermore, discriminant validity is measured using cross-loading with criteria, if the value of the loading factor in a corresponding variable is greater than the indicator correlation value on other variables then the indicator is declared valid in measuring the corresponding variable. Cross loading calculation results are presented in the following table:

| Variable                  | Item | PU    | PEOU  | TRS    | MM    |
|---------------------------|------|-------|-------|--------|-------|
| **Perceived Usefulness (PU)** | PU 1 | 0.906 | 0.588 | 0.872  | 0.694 |
|                           | PU 2 | 0.904 | 0.775 | 0.852  | 0.743 |
|                           | PU 3 | 0.828 | 0.579 | 0.859  | 0.691 |
|                           | PU 4 | 0.859 | 0.658 | 0.811  | 0.722 |
|                           | PU 5 | 0.836 | 0.775 | 0.826  | 0.775 |
| **Perceived Ease of Use (PEOU)** | PEOU 1 | 0.737 | 0.919 | 0.765  | 0.659 |
|                           | PEOU 2 | 0.646 | 0.870 | 0.698  | 0.725 |
|                           | PEOU 3 | 0.735 | 0.938 | 0.763  | 0.691 |
|                           | PEOU 4 | 0.722 | 0.909 | 0.728  | 0.665 |
| **Trust (TRS)**           | TRS 1 | 0.887 | 0.812 | 0.919  | 0.843 |
|                           | TRS 2 | 0.844 | 0.764 | 0.889  | 0.887 |
|                           | TRS 3 | 0.858 | 0.796 | 0.916  | 0.854 |
|                           | TRS 4 | 0.827 | 0.544 | 0.889  | 0.632 |
|                           | TRS 5 | 0.849 | 0.739 | 0.895  | 0.764 |
| **Interest to Buy (MM)**  | MM1  | 0.805 | 0.718 | 0.904  | 0.917 |
|                           | MM2  | 0.468 | 0.457 | 0.473  | 0.899 |
|                           | MM3  | 0.218 | 0.431 | 0.250  | 0.909 |
|                           | MM4  | 0.560 | 0.617 | 0.592  | 0.868 |

Based on cross loading measurements in the table above, it can be seen that the overall indicators of each latent variable produce a greater loading factor than cross loading on other variables. Thus it can be stated that each indicator can measure the latent variables that correspond to the indicator.

The results of the construct reliability of latent variables obtained composite reliability values greater than 0.70. The structural model of research is formed by four latent variables, namely Perceived usefulness (PU), Perceived ease of use (PEU), Trust (TRS), and Buying Interest (MM). The inner goodness of fit model is done by looking at the coefficient of determination of the exogenous variables studied.

Trust is influenced by PU and PEOU with a determination coefficient (R square) of 0.875. This shows that 87.5% of Trust factors are influenced by PU and PEOU, while other factors cause those affecting the Trust by 12.5%. Buying interest is influenced by PU, PEOU, and Trust with a determination coefficient (R square) of 0.965. This shows that 96.5% of interest in buying is influenced by PU, PEOU, and trust, while those that affect buying interest are 3.5% due to other factors.
Examination of other inner goodness of fit models can use the total determination coefficient (Q2) which shows the structural model that is formed can represent the existing data. The results of the calculation of the total determination coefficient (Q2) are as follows:

\[
Q^2 = 1 - (1 - R_1^2) \times (1 - R_2^2)
\]

\[
Q^2 = 1 - (1 - 0.875) \times (1 - 0.965)
\]

\[
Q^2 = 1 - 0.016
\]

\[
Q^2 = 0.984
\]

Based on these calculations, the total determination coefficient is 0.984, meaning that the structural model that is formed can explain about 98.4% of the variance in the research data. It can also be said that the accuracy of the PLS model is 98.4%

The basis for deciding to test the hypothesis is to use the t value of Statistics, where the t Statistics value that is greater than t value of Table 1.960 shows a significant effect.

**DISCUSSION**

Perceived usefulness (PU) directly has a positive but not significant effect on the interest in buying e-books, so Hypothesis 1 is rejected. PU as a level where a person believes that using a particular system will improve his job performance. People will use or not use an application based on the belief that the application will be useful to improve their performance. The results of this study are not in line with the findings of Roca, et al. (2009) and Chen and Barnes (2007), who found that the dimensions of PU simultaneously and partially affect buying interest, but the results of this study are in line with the findings of Letchumanan and Muniandy (2013) and research by Zarrad and Debabi (2012), found that PU did not have a strong direct influence on buying interest.

Perceived ease of use (PEOU) directly has a positive effect on interest in buying e-books, so Hypothesis 2 is accepted. Davis formulated PEOU which is defined as the level at which a person believes that using a particular system will be free from effort. The key word is ease, which is free from difficulties or great effort. The effort is the visible power that is allocated by a person to the activity he is responsible for (Radner and Rothschild, 1975 in Davis, 1989). These findings are consistent with Roca, et al. (2009), which each research stated that PEOU had an effect on Buying Interest.

PU directly has a positive effect on trust, so Hypothesis 3 is accepted. In the context of online trading, trust can be divided into a trust based on competence and intentional trust (Sako, 1992 in Salo and Kajaluoto, 2007). Trust based on competency is especially important in the challenges of online trading technologies such as privacy protection and facilitating secure payments. Therefore, the form of trust here leads to the belief of end users that service providers can keep their promises regarding security and other issues. Whereas intentional trust leads to the belief of the end-user that the service provider is honest or intends to keep his promises. Establishing intentional trust is an interesting challenge because there are no face-to-face transactions, buyers and sellers may come from different countries, not know each other or know. These findings are consistent with Roca, et al. (2009) and Chen and Barnes, (2007), which each study stated that PU had an effect on the Trust.

PEOU directly influences trust, so Hypothesis 4 is accepted. Trust is the trust of certain parties towards others in conducting transaction relationships based on a belief that the person they trust will fulfill all their obligations properly as expected (Rofiq, 2007). These findings are consistent with Roca, et al. (2009) and Chen and Barnes (2007), each of which states that PEOUs influence trust. Substantially the results of this study indicate that several aspects such as ease of access, ease of learning, ease of use, the speed of seeking information increase trust in e-book sellers. Consumers will more trust the seller who provides e-books that are easy to use.

Trust has a direct effect on the interest in buying e-books, so Hypothesis 5 is accepted. The higher the trust the respondent has for E-book, the higher the interest in buying e-books. Chen and Barnes (2007), stated that building online trusts is important for vendors to succeed in an online trading environment - where transactions are more impersonal and
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anonymous. In online trading, consumers are not in direct contact with the items offered (with little expectation), and consumers make purchase decisions based on information provided by online merchants and also from their perceptions of the website. Not only that, trust can reduce consumers’ desire to enjoy products or services offered by competitors (Gambetta, 2000 and Zaheer et.al., 1998, in Salo and Karjaluoto, 2007). In short, consumers will want to work with parties they trust rather than cooperate with an unknown party, especially in a less familiar or uncontrollable environment. These findings are consistent with research conducted by Roca, et al. (2009), Chen and Barnes, (2007), and Ponte, et al. (2014), which in each of his research states that trusts affect buying interest.

The Trust mediates the influence of PU on the interest in buying e-books, so Hypothesis 6 is accepted. The results of this study are in accordance with Roca, et al. (2009), whose research results state that PU has a significant influence on the interest in buying directly or indirectly mediated by trust. Based on the results of mediation testing, PU has a significant influence on interest in buying through trust, so the results of the analysis show that trust acts as a partial mediating variable. The existence of trust in e-book sellers - namely the belief that this seller has a good reputation, will not deceive the buyer, offer the privacy of the purchase, and will keep the promise to the buyer - heightening interest in buying e-books that are believed to be easily used by respondents.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The conclusion of this study is that perceived usefulness e-book which includes increasing work efficiency and improving performance is not enough to influence interest in buying e-books. E-books have many advantages compared to printed books. E-books are also easy to learn, especially in this growing era of technology, people can read e-books from their smartphones. Thus it can be concluded that the benefits and ease of use of e-book technology do not encourage enough interest in buying e-books. There must be a factor trust to e-book sellers as is common in online transactions today.

To overcome the interest in buying a small e-book, e-book sellers need to pay attention to things related to the product (e-book), customer service, and collaboration with the e-reader developer platform. E-book sellers can add to the e-book collection they sell and provide a review for each e-book posted on the site so that potential customers know the description of the contents of the e-book they see. The seller can also sell e-books per chapter so that consumers can more freely get the content they need. In addition, the seller also needs to manage the online bookstore site, keeping it active 24 hours a week and responding quickly to visitor questions. Providing attractive site views, complete content, and easy to learn can also be a way for sellers to attract consumers. In addition, the seller also needs to inform you how to order and order clearly. Managerial parties can establish cooperation with e-reader developer platforms, so e-book developers can more easily enjoy e-books through their mobile devices.

Recommendation

From the results of this study, there are still opportunities for further research, for example by adding other variables, expanding the object of re-
search, and compiling qualitative research with in-depth interview methods.

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