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Perceived Usefulness, Ease of use, and Attitude Towards Online Shopping Usefulness Towards Online Airlines Ticket Purchase

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Abstract

Internet acceptance has been widely tested using Technology Acceptance Model (TAM) which records perceived ease of use and usefulness towards the use of internet for shopping online. It is because perceived ease of use and usefulness affect attitudes toward usability. To prove if that's the case or not this research was undertaken. Its purpose is to measure the influence of perceived ease of use and usefulness on attitudes toward usability to confirm the past research. Questionnaire was deployed as research instrument to collect data. Respondents to the study were the consumers who have access to the internet. Data was analyzed using Structural Equation Modeling (SEM). The result show that perceived usefulness influence the attitudes towards usability of airlines ticket reservation stronger than perceived ease of use and trust.

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*Keywords:*Perceived ease of Use, Perceived Usefulness, Attitudes Toward Usability, Air line Ticket Reservation;

1. Introduction

Online shopping is increasingly becoming attractive with penetration of the Internet in the modern times. It saves time and offers convenience (Alba at al. 1997), reduces the costs which otherwise would have been incurred on searching the goods (Seo & Kim, 1999), offers a price cheaper than brick-and- mortar store (Foley & Sutton, 1998; O'Conner & O'Keefe, 1997), and constantly being perceived as 'secured' for online transactions, apart from reduced cost of internet due to its mass diffusion.

Online transactions give scope for understanding online shopping behavior. Several studies show that online shopping experience is a good predictor for online search behavior (Klein, 1998; Liang & Huang, 1998; Eastlick, 1996; Weber & Roehl, 1999; Shim, Sherry, & Wamington, 2001). Many of these previous researches on internet acceptance were done using Technology Acceptance Model (TAM) developed by Davis (1989). It has been well established that online purchase behavior model can be developed from TAM. TAM deals with external variables affecting 'perceived ease of use' and 'usefulness'. Perceived ease of use and usefulness affect 'attitudes toward usability' that shapes 'intention to use'. Perceived usefulness has however direct influence on intention to use. It is also the fact that behavioral intention influences the actual behavior. This model has been tested by many researchers and findings reported agree to this relationship.

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Many previous researches on behavior also show that trust is an important factor in online shopping. Online transaction, either through a debit, credit card or paypal transfer and the likes involve trust factor. Generally most of them focus oninterpersonal relationships, trust in economic and strategy field, or on the inter-organization relationships. However, the analysis of trust in the context of electronic or e-commerce should be considered as the relationship between firm and individual aspects. The technology—the Internet—itself has to be considered as an object of trust (Shankar, Urban, &Sultan, 2002).

TAM has been widely used in studying consumer behavior in Indonesia, including in studying people's interest with respect to e-learning, consumer perceptions, studies of information systems, acceptance of the application of audit techniques, in case of e-procurement, the use of information technology, use of internet banking, the use of mobile internet, and others.

So far, previous research does not imply that the model of online consumer behavior is static from time to time and from case to case. Consumer behaviour changes dynamically over the time as they adopt the technological developments. Online airline ticketing business which has been evolving significantly in Indonesia has not been explored much in any of those previous studies. Purchasing airline tickets through travel agents or airline offices has been finding the shift towards online ticket purchases. The fact could be attributed to internet penetration that is pretty good in Indonesia, however, many people are still reluctant to utilize internet as online shopping media due to security concerns. Many people still question the safety of online transaction and payment. The research objective of this paper is thus to evaluate consumer attitudes towards the usability of online shopping taking into consideration their perceived ease of use and usefulness towards online shopping and trust. Airline ticketing has been taken as an example to explore the objective.

2. Research methods

The study is done using survey research design method which requires deploying the questionnaire as research instrument. Respondents to the study were consumers who have access to the internet. Research model to be tested is shown as Figure 1.

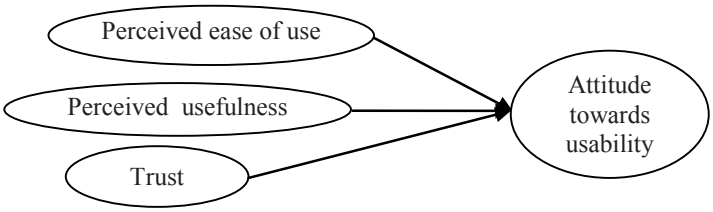


Figure 1. Research model

Questionnaire was distributed by email and also physically by meeting the eligible respondents. Data collected was duly coded and analyzed using Structural Equation Modeling (SEM). SEM was chosen as research model is built by latent variables and also needed to investigate indirect effect between latent variables.

3. Results and discussion

Questionnaires were distributed to 300 respondents but only 283 were returned duly filled. Respondent's responses were coded following Likert scale rule. Answers to the statement were coded between 1 up to 5.

Research variables consist of 7 latent variables which has 4 variables as exogenous and others as endogenous variables. Perceived ease of use, perceived usefulness, trust, and experience are exogenous variables while attitude, intention, and action are endogenous variables.

Prior to questionnaire distribution, validation and reliability test were performed. Questionnaire was distributed to 20 eligible respondents for that. Validation test was performed using correlation, and reliability test was done

using Alpha Cornbach. From these tests, it was found that questionnaire was valid and reliable to pursue the research.

3.1. Model fitting interpretation

Data was analyzed using SEM software using Confirmatory Factor Analyses (CFA) in which manifest variables under each latent variable is investigated for fit and also, the direct and indirect effects of latent variables towards other latent variables is observed. Validity of the model is based on goodness of fit statistics. The measure to validate the model for goodness of fit statistics were Chi Square (p value), Root Mean Square Error Approximation (RMSEA), Normed Fit Index (NFI), Goodness of Fit Index (GFI), and Adjusted Goodness of Fit Index (AGFI).

Table 1. Goodness of fit statistics

Index	Acceptance value	Value
Chi-Square (P-value)	> 0.01	166.78 (0.13858)
Root Mean Square Error (RMSEA)	<0.08	0.021
Normed Fit Index (NFI)	Close to 0.9 is a very good fit	0.952
Non-Normed Fit Index (NNFI)	Close to 0.9 is a very good fit	0.989
Goodness of Fit Index (GFI)	Close to 0.9 is a very good fit	0.947
Adjusted Goodness of Fit Index (AGFI)	Close to 0.9 is a very good fit	0.917

Chi-Square is a statistics fit which specifies whether model provides is a perfect fit to data (within the limits of sampling error) or not. Decision towards the hypothesis can be tested based upon p-value. P-value greater than 0.05 indicates good fit and closer to 1 indicates perfect fit. As shown in Table 1,p-value of proposed model is 0.13858 which is greater than 0.10. It can be interpreted from here that the model is a very good fit to the data. Second fit of statistics is RMSEA. RMSEA indicates the close fit of model in relation with degrees of freedom (Browne & Cudeck, 1993; Steiger 1990). Value 0.05 or below is very close, 0.08 and below still acceptable, but never use 0.1 and above. Hu & Bentler (1999) recommend a cutoff value of 0.06. A p-value for testing the hypothesis that the discrepancy is smaller than 0.05 may be calculated (test of close fit). As shown in Table 1, RMSEA is 0.021 lower than 0.05. This shows data has a very close model to the data.

Norm Fit Index (NFI) suggested by Bentler and Bonett's (1980) is an independent model testing. NFI shows how much better the model fits as compare to the independence model. It measures the proportionate improvement in fit (defined in terms of f or χ^2) as one moves from the baseline to the target model. Value close to 0.9 indicates a good model fit. NFI value for this model is 0.952 which is greater than 0.9. It means that the model is a very good fit to the data. Non-Normed Fit Index (NNFI) modified version of NFI designed to lessen its dependence on sample size. However, it may be biased upward for small N when the model is misspecified, and the parsimony correction may be inappropriate. Hu & Bentler (1999) recommend a cutoff value of 0.95 but other recommend 0.9. NNFI for this study is 0.989 reflects a very good fit.

Goodness of fit Index (GFI) is proportion of the variances and covariances in S accounted for by the fitted model. This index should fall between 0 and 1, although it can be smaller than 0. Values greater than 0.9 sometimes deemed desirable. However this index is not recommended by Hu & Bentler (1999). GFI for this study is 0.947, means a very good fit of the model. Adjusted GFI is adjustment based on the same logic as in the case of an adjusted R^2. Values greater than .9 are sometimes deemed desirable. Similar to GFI, it is not recommended by Hu & Bentler (1999). AGFI for this study is 0.917 which means a very good fit for the data. Overall, it can be said that the model showsa very good fit to the data.

3.2. Model analysis

Figure 2 below shows result of model analysis done. Perceived ease of use is measured using 5 indicators (manifest variables), i.e. booking, searching, transaction, booking procedures, and payment procedures. All indicators show close contribution each other in building perceived ease of use. However, biggest contributor is

perceived ease of searching and the least is perceived ease in booking. Perceived ease of use in this case is internal belief ties to respondent's assessment of the mental effort in using of company website (Davis, 1989).

Perceived usefulness has been also measured by using 5 indicators. These were- being fast (or quick), time saving, effort saving, cost reducing, and overall usefulness. As shown in the Figure 2, all these indicators contribute in the range from 0.36 to 0.57. The biggest contributor among them in building perceived usefulness is overall usefulness of online transaction, whereas the least is its use in effort saving. It means that respondent believe that purchasing airlines ticket online provides effectiveness, better performance, and productivity (Davis, 1989), which are equivalent to perceived usefulness of TAM (Triandis, 1980).

Online shopping trust (trust) has been measured using 6 manifest variables. They are – trust towards the site, trust on usefulness, trust on company promise and commitment, trust on company good intention, trust on company good works, and trust on safe transaction. Among them the biggest and the least contributors are trust on company promise and commitment and trust on safe transaction respectively.

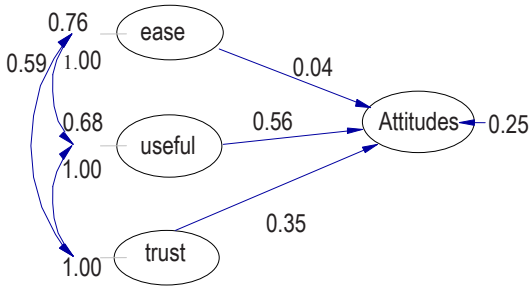
Attitude towards online shopping utility (attitude) is measured using 5 indicators. They are (1) online ticketing is a good idea, (2) using online ticketing instead of ticket agency is wise idea, (3) online ticketing is fun idea, (4) online ticketing is positive idea, and (5) online ticketing is interesting idea. The least contributor among them in building attitude towards usability of online shopping is "the good idea" and the biggest is "the wise idea."

As described in Fig. 2, it can be said that there is a direct influence of ease of use of the Internet to shop for online tickets on consumer attitudes towards the usability of online ticketing services, with a regression coefficient value of 0.039. Meanwhile, for latent variable usefulness has a direct impact on consumer attitudes towards usability of service tickets online with regression coefficient value of 0.561. Similarly, variable consumer trust in online ticket services shows a direct influence of 0349 on consumer attitudes towards the usability of online ticketing services. Therefore, it is very important for marketers to pay attention to these three variables.

The results are consistent with various previous researches on TAM. Using new technology, consumers can improve their performance / productivity without spending too much effort (Davis, 1989; Seyal & Rahman, 2003; Bertrand & Bouchard, 2008). They can raise the usefulness and ease of use for trust with online purchases (Yaobin & Tao, 2007; Flavian & Guinaliu, 2006) and also witness increased benefits, ease of use beliefs (Koufaris & Sosa, 2004; Chen & Barnes, 2007), and belief in the usefulness attitude (Suh & Han, 2003; Al Maghrabi & Dennis, 2010; George, 2004).

The variables that contribute the greatest influence and positive impact on attitude towards usability of online ticketing services as indicated by perceived usefulness show a regression coefficient of 0.561. It means consumers have a positive attitude toward the use of online ticket service when consumers feel greater benefits such as faster ticket search, low efforts, and cost saving will come to them by using online services for purchasing airline tickets

This is in line with many previous researches such as by Seyal and Rahman (2003), who conducted research on the acceptance of the use of Internet for academic activities among students at the National Higher Education in Brunei Darussalam. They showed that the biggest variable affecting attitudes toward the use of internet among students in Brunei Darussalam perceived its usefulness with a regression coefficient of 0.625.



Chi-Square=166.78, df=148, P-value=0.13858, RMSEA=0.021

Figure 2. Model output

4. Conclusion

The evidence show that this research is in line with previous researches. Perceived usefulness, perceived ease of use, and trust – all three influence attitudes towards online airlines ticketing usability, positively. Nevertheless, the reluctance of Indonesian consumers to do online transactions is due to perceived issues of online transaction security (trust), and perceived usefulness – that plays stronger role in shaping attitudes towards online shopping.

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