



The Effect of Ease of Use on Purchase Decisions through Buying Interest as an Intervening Variable

Ibnu Tri Prabowo

Universitas Pelita Bangsa

ibnuasmoro57@gmail.com

Abstract

This study aims to test the ease of use for purchase decisions through purchase intent as an intervention. In this study, it was analyzed using a statistical approach and the SEM PLS system model version 4. PLS analysis will be used to determine the best model in the calculation of the Buying Interest index using Shopee. The method used in collecting data is the probability sampling method. Data was collected by distributing questionnaires to UPB students for the 2023-2024 batch in the form of a Google Form. To analyze the data, the PLS-SEM method was used with the help of SMARTPLS-4 software. PLS analysis has seven stages, namely: (1) development of theoretical models, (2) development of path diagrams, (3) conversion of path diagrams to structural equations, (4) selection of input matrices and estimation types, (5) identification of models, (6) assessment of goodness of fit criteria, (7) interpretation of results. The findings of the structural model have three hypotheses that are declared supported. The results of the study prove that there is a positive influence of ease of use on buying interest, there is a positive influence of buying interest on purchase decisions and there is a positive influence of ease of use on purchase decisions through purchase intention as mediation.

Keywords: Ease of use, buying interest, purchase decision

Introduction

The development of technology in the current digital era is increasingly rapid, this is accompanied by many products with digital technology that are increasingly used by the community as a tool to support daily activities such as smartphones which are felt to have become an item that is always carried by everyone everywhere and anywhere around the world, smartphones with the support of digital technology today make it easy to access any information, anytime and from anywhere.

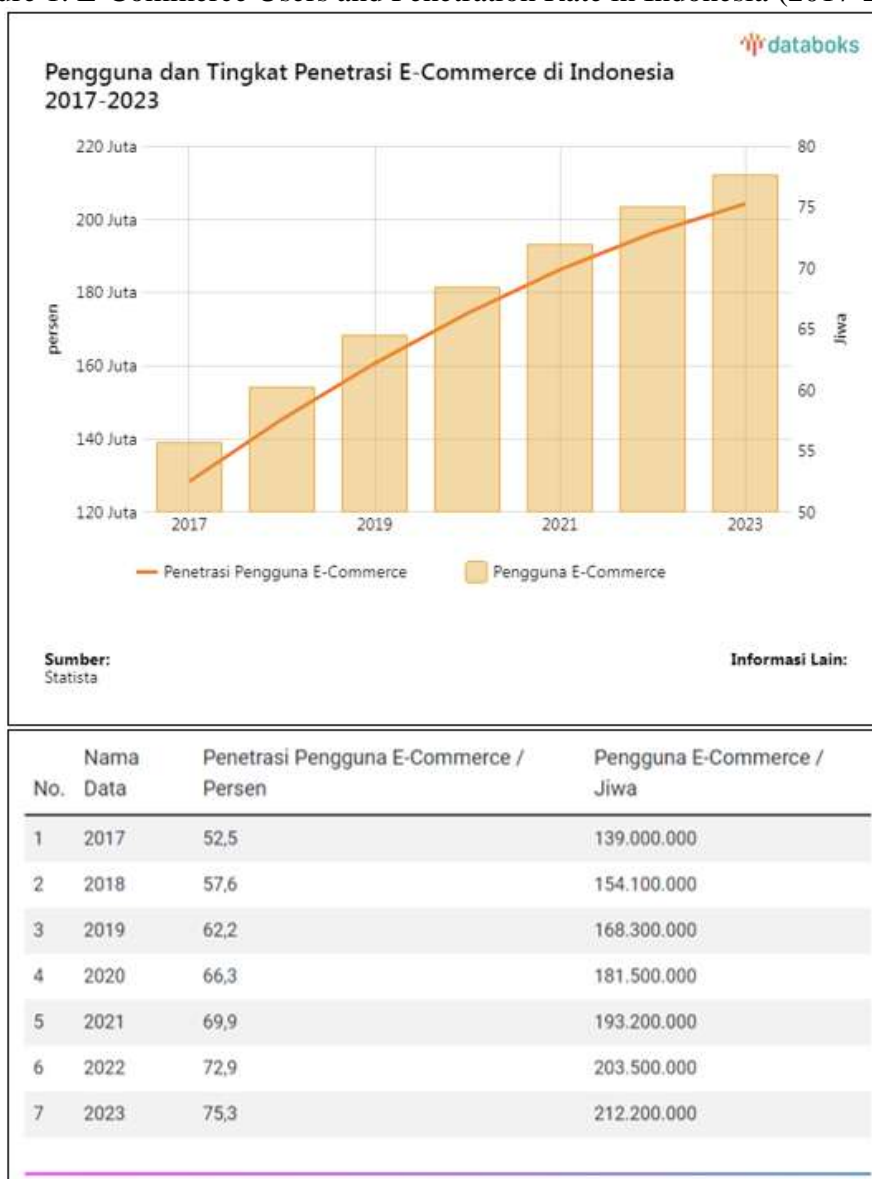
In general, people buy and sell directly, meaning that the seller and buyer meet to make a transaction, which makes the buying and selling process more of a bargain to reach an agreement and then the transaction occurs. Such a buying and selling process, of course, there are many weaknesses and shortcomings both from the seller and buyer side, from the seller side it will be very difficult to find a buyer when the goods offered are not common or rarely needed by people, as well as the buyer's side it is very difficult to find the item that is being sought when the item is not widely circulated.

As time goes by, the current digital era has emerged many e-commerce (electronic trade) that has changed the habits or behavior of a person who increasingly wants convenience in carrying out buying and selling activities. With the existence of e-commerce, buying and selling transactions can be carried out through smartphones or other electronic devices, where



sellers and potential buyers do not meet each other face-to-face or face-to-face, sellers only need to sell or display their goods in e-commerce with pictures, complete with specifications, prices, and other information that is needed by consumers, then prospective buyers when they want to find the desired goods just need to look on e-commerce with the name of the item or using a certain code, it will appear on the e-commerce. These conditions make it easy to make buying and selling transactions anywhere and anytime. Therefore, sales through e-commerce have increased significantly in recent years, here are user data and E-Commerce Penetration Rate in Indonesia 2017-2023:

Figure 1. E-Commerce Users and Penetration Rate in Indonesia (2017-2023)

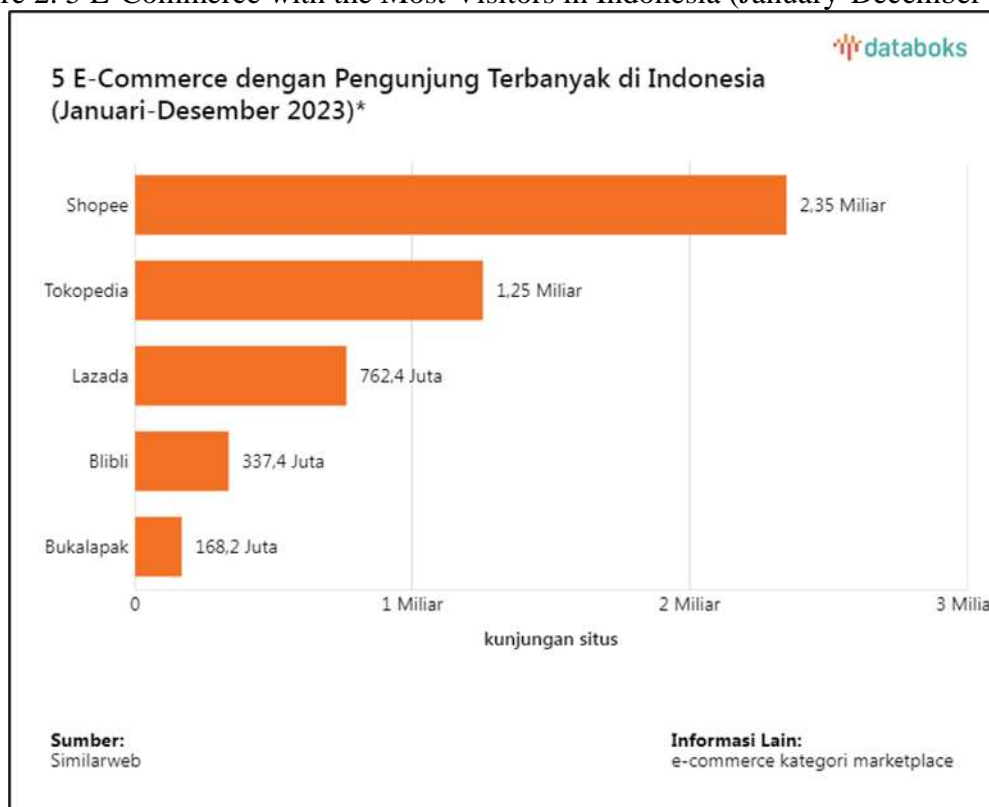


The data above illustrates that the trend of e-commerce users in Indonesia has grown quite large in recent years. The prediction is that growth will continue to occur in the next few



years. Statista noted that the number of e-commerce users in Indonesia in 2017 reached 139 million users, then increased by 10.8% to 154.1 million users last year. This year it is projected to reach 168.3 million users and 212.2 million in 2023. The same thing also happens with the penetration rate of e-commerce which is always increasing. Until 2023, it is projected to reach 75.3% of the total population of the selected market. The e-commerce sector with the highest revenue is in fashion, which in 2023 is projected to reach US\$ 11.7 billion.

Figure 2. 5 E-Commerce with the Most Visitors in Indonesia (January-December 2023)



The data above illustrates that Shopee will be the e-commerce with the largest visitors in 2023. Based on SimilarWeb data, Shopee is the marketplace category e-commerce that has received the most site visits in Indonesia throughout 2023.

During January-December 2023, cumulatively, the Shopee site achieved around 2.3 billion visits, far surpassing its competitors. In the same period, the Tokopedia website gained around 1.2 billion visits, and the Lazada website 762.4 million visits. Meanwhile, the BliBli website received 337.4 million visits, and the Bukalapak website 168.2 million visits. In addition to winning in terms of quantity, the Shopee website also achieved the highest growth rate of visits. Throughout January-December 2023, the number of visits to the Shopee website increased by 41.39% (year-to-date/ytd). On the other hand, visits to the Tokopedia website decreased by 21.08% (ytd), Lazada decreased by 46.72% (ytd), and Bukalapak decreased by 56.5% (ytd). Shopee's competitor whose visits grew positively was only BliBli, which increased by 25.18% (ytd).



Shopee is an application for online shopping that offers a variety of products to meet the needs of the community (Saidani et al., 2019). Shopee is available in Southeast Asian countries such as the Philippines, Malaysia, Singapore, Vietnam, Thailand, and Indonesia. Shopee comes in the form of a mobile application that helps consumers support consumer shopping activities easily and quickly. The types of products offered on Shopee include men's and women's clothing (fashion), cellphones and accessories, computer equipment, home supplies, care and health, men's shoes and bags, women's shoes and bags, electronic goods, photography, and food and beverages (Andrian, 2019).

Many factors can affect buying interest and purchase decisions, one of the factors that can affect buying interest and purchasing decisions is ease of use, A study conducted by (Romla & Ratnawati, 2018) tested the Effect of Ease of Use on Purchase Decisions. The results of this study show that ease of use has a positive and significant effect on purchase decisions. Research by (Dimas et al., 2023) examined the Effect of Buying Interest on Purchase Decisions, the results of the study showed that buying interest had a positive effect on purchase decisions. Meanwhile, research conducted by (Kurniawan et al., 2019) examined the effect of ease of use on buying interest, the results of the study showed that ease of use had a positive and significant effect on buying interest.

Looking at the data and description above, the researcher is interested in conducting further research to test "the effect of convenience on purchase decisions through buying interest as an intervening variable".

Method

The population in this study is Shopee e-commerce users, while the sample is Shopee users in the Cikarang area with a nonprobability sampling technique using purposive sampling, which is a sampling technique based on certain criteria. In this study, there were 170 respondents collected, all of whom were used as samples and had met the criteria, namely Shopee users who had made purchases on Shopee. The data collection method was carried out using a questionnaire containing closed and open questions. Closed questions make it easier for respondents to provide answers based on existing options and save research time, while open-ended questions aim to expand the results of research analysis. The questionnaire was distributed to respondents using Google Forms to save costs and efficiency, using a Likert scale of 1-7, where the number 1 indicates strongly disagree and the number 7 indicates strongly agree.

Based on the methodological approach, this study is a quantitative research that uses data in the form of numbers to answer the formulation of research problems (Saunders et al., 2016). Based on the purpose of the study, this study is an explanatory research used to obtain evidence of the existence of a causal relationship between one variable and another variable (Malhotra & Leslie, 2017). A good sample is one that can describe the entire population in its numbers and sampling techniques (Malhotra & Leslie, 2017). According to Hair et al. (2016), the number of viable samples is between 100-200 samples, depending on the number of indicators of the estimated parameters with a guideline of 5-10 times the number of indicators. In this study, the sample size used was 100, based on the number of indicators as many as 10 multiplied by 10 ($10 \times 10 = 100$) for more accurate data analysis results.

The data analysis method uses an inferential statistical approach with PLS (Partial Least Square) using Smart-PLS software. In the PLS analysis, the following parameters were



evaluated: Structural Model or Inner Model which describes the relationship between latent variables based on literature review and previous research to predict the relationship between latent variables according to the research model, using the Goodness of Fit / R-square indicator, the path coefficient test, and the hypothesis test. The Measurement Model or Outer Model is a test of the validity and reliability of research instruments (questionnaires), where the validity of the instrument includes convergent validity (loading factor > 0.7) and discriminatory validity (Fornell-Larcker criterion value > 0.7). The questionnaire is considered reliable if the composite reliability value or Cronbach's alpha ≥ 0.7 (Ghozali & Latan, 2017).

Results and Discussion

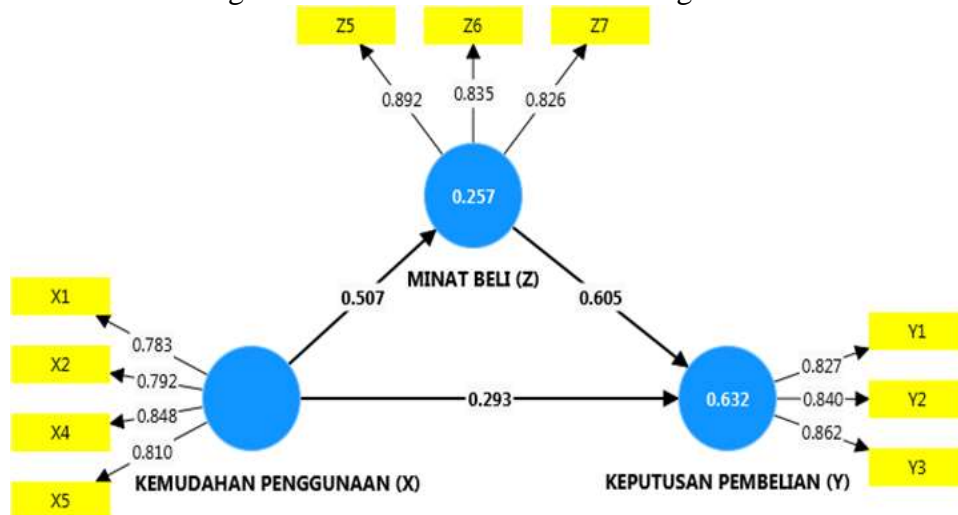
Descriptive statistical analysis is used to describe and describe the variables used in this study, Ghozali (2020). This analysis aims to provide an overview or describe the data in the form of mean values, maximum, minimum and standard deviation to describe the research variables so that they are contextually easy to understand. The results of descriptive statistical analysis were obtained from the results of the analysis of the description of the respondents and the results of the analysis of the description of the research variables.

Table 1. Respondent Demographic Data

| Respondents' Characteristics | Frequency | Percentage (%) |
|------------------------------|-----------|----------------|
| Gender : | | |
| Male | 90 | 52.9% |
| Female | 80 | 47.1% |
| Total | 170 | 100.0% |
| Age : | | |
| < 21 y.o | 2 | 1.2% |
| 21 – 30 y.o | 154 | 90.6% |
| 31 – 40 y.o | 13 | 7.6% |
| > 40 y.o | 1 | 0.6% |
| Total | 170 | 100.0% |
| Latest Education : | | |
| Private Employees | 116 | 68.2% |
| Other | 54 | 31.8% |
| Total | 170 | 100.0% |
| Income : | | |
| < Rp 2.000.000 | 6 | 3.5% |
| Rp 2.000.000 - Rp 3.000.000 | 50 | 29.4% |
| Rp 3.000.000 - Rp 4.000.000 | 39 | 22.9% |
| > Rp 4.000.000 | 75 | 44.1% |
| Total | 170 | 100.0% |



Figure 3. Results of smartPLS 4.0 Algorithm



Source: Processing Output with smartPLS 4.0

Validity Test

Table 2. Convergent Validity test results

| Variable | Outer loadings | Information |
|------------------------------------|----------------|-------------|
| X1 <- Ease of Use (X) | 0.783 | Valid |
| X2 <- Ease of Use (X) | 0.792 | Valid |
| X4 <- Ease of Use (X) | 0.848 | Valid |
| X5 <- Ease of Use (X) | 0.810 | Valid |
| Y1 <- Purchase Decision (Y) | 0.827 | Valid |
| Y2 <- Purchase Decision (Y) | 0.840 | Valid |
| Y3 <- Purchase Decision (Y) | 0.862 | Valid |
| Z5 <- Minat White (Z) | 0.892 | Valid |
| Z6 <- Minat Beli (W) | 0.835 | Valid |
| Z7 <- Minat White (Z) | 0.826 | Valid |

Because there are invalid indicators or statement items, the data obtained cannot be directly analyzed for regression, but must be retested by eliminating the invalid question items. Table 2 is the result of the validity test analysis after not including data from invalid data. The results show that all question items are valid.

Table 3. Discriminant Validity Test Results (Fornell Larcker Criterion)

| | Ease of Use (X) | Purchase Decision (Y) | Minat White (Z) |
|------------------------------|-----------------|-----------------------|-----------------|
| Ease of Use (X) | 0.809 | | |
| Purchase Decision (Y) | 0.600 | 0.843 | |
| Minat White (Z) | 0.507 | 0.754 | 0.851 |



It shows that all manifests of variables/question items have a cross loading value of > 0.7 for each variable and greater than all other constructs, In addition to cross loading > 0.7 , the validity of discrimination is also tested with the Fornel-Larker criterion where a variable is considered valid if it has a value greater than 0.7 and the value is greater than the value of all other constructs, Table 3 shows that each variable has a value of more than 0.7 and the value is also greater than the other variables.

Table 4. Average Variance Extracted Test Results(AVE)

| Variable | Average variance extracted (AVE) | Conclusion |
|-----------------------|----------------------------------|------------|
| Ease of Use (X) | 0.654 | Valid |
| Purchase Decision (Y) | 0.711 | Valid |
| Minat White (Z) | 0.725 | Valid |

The validity of the construct can be seen from the Average Variance Extracted (AVE) value where the instrument is considered valid in a convergent manner if the AVE value > 0.50 , The results of the analysis show that all variables have an AVE value of > 0.50 (Table 4) so it can be concluded that the instrument for all variables is valid.

Reliability Test

Table 5. Composite Reliability and Cronbach's Alpha Test Results

| Variable | Cronbach's alpha | Composite reliability | Conclusion |
|-----------------------|------------------|-----------------------|------------|
| Ease of Use (X) | 0.826 | 0.836 | Reliable |
| Purchase Decision (Y) | 0.796 | 0.798 | Reliable |
| Minat White (Z) | 0.810 | 0.814 | Reliable |

In PLS analysis, to test the reliability of a construct can be done in two ways, namely Cronbach Alpha and Composite Reliability. The group of indicators that measure a variable has good composite reliability if it has Cronbach Alpha and composite reliability ≥ 0.7 . Table 5 shows that all variables have Cronbach Alpha and composite reliability ≥ 0.7 , so it can be concluded that the instruments for all variables are reliable.

Uji R Square

Table 6. R-Square Value Test Result (R2)

| | R-square | R-square adjusted |
|-------------------------|----------|-------------------|
| Keputusan Pembelian (Y) | 0.632 | 0.628 |
| Minat Beli (Z) | 0.257 | 0.252 |

According to Kuncoro (2018), the right R-square value to be interpreted in assessing the merits of a model of multiple regression equations (having two or more independent variables) is R-Square Adjusted. Table 6 shows that the R-Square Adjusted value is 0.628 which can be interpreted that 62.8% of the changes in the purchase decision variable are influenced by the variation of the ease of use variable, while 37.2% (100-62.8) is influenced by other variables that are not in the model. Thus, the purchase decision equation model is in a good category because the value of the elimination coefficient is between 61% - 80%.

According to the results of the research of Anggita & Ali (2017); Firmansyah (2021) and Rasyidin et al., (2022), other variables that are not in the model/equation but can affect purchasing decisions include price, promotion, and brand image.

Table 7. Hypothesis Test Results

| Model | Coefficient | P values | Information |
|---|-------------|----------|---------------------|
| Ease of Use (X) -> Purchase Decision (Y) | 0.293 | 0.000 | Hypothesis accepted |
| Ease of Use (X) -> Buying Interest (Z) | 0.507 | 0.000 | Hypothesis accepted |
| Buying Interest (Z) -> Buying Decision (Y) | 0.605 | 0.000 | Hypothesis accepted |
| Ease of Use (X) -> Buying Interest (Z) -> Purchase Decision (Y) | 0.307 | 0.000 | Hypothesis accepted |

The research hypothesis is tested by looking at the path coefficient and comparing the t-stat with the t-table or comparing the p-value with the α (0.05) where the path coefficient shows the form of influence (positive/negative) and the p-value shows the significance of the influence. When the p-value < 0.05 , the research hypothesis is accepted.

Discussion

The Effect of Ease of Use on Purchase Decisions

It shows that ease of use has a significant effect on purchasing decisions as shown from the p-value of $0.00 < 0.05$. The form of influence is positive which is indicated by the value of the coefficient is positive 0.293. This means that the better the ease of use, the better the purchase decision. Consumer perception of the ease of use of an application or e-commerce can directly affect consumer purchase decisions, This result is also in accordance with the results of previous research being conducted by (Rasyiddin & Rini, 2022) and (Firmansyah, 2021).

The Effect of Ease of Use on Buying Interest

It shows that Ease of Use has a significant effect on Buying Interest as shown by a p-value of $0.000 < 0.05$. The form of influence is positive, which is shown by the regression coefficient, which is positive 0.507. The better the Ease of Use, the higher the Buying Interest from consumers, This result is in accordance with the opinion (Prathama & Sahetapy, 2019) which states that with good ease of use – it will have an impact on Buying Interest, This result also supports previous research conducted (Hidayat & Paramita, 2021) showing that ease of use has a significant effect on buying interest.

The Effect of Buying Interest on Purchasing Decisions

It shows that buying interest has a significant effect on the purchase decision, which is shown by a p-value of $0.000 < 0.05$. The form of influence is positive which is indicated by a positive coefficient of 0.605. The better the consumer's buying interest, the higher the purchase

decision from the consumer, This result is in accordance with the opinion (Sari, 2020) and (Solihin, 2020) which data that the higher the buying interest, the higher the purchase decision.

Conclusion

Based on the research findings, the study demonstrates that ease of use has a significant positive effect on both purchase decisions and buying interest in the context of e-commerce, specifically Shopee. Additionally, buying interest is shown to positively influence purchase decisions. The study also confirms that ease of use indirectly affects purchase decisions through buying interest as a mediating variable. These results highlight the importance of user-friendly interfaces and seamless experiences in e-commerce platforms, as they not only enhance consumers' interest in making purchases but also directly impact their final purchasing decisions. The findings underscore the critical role of ease of use in shaping consumer behavior in the digital marketplace, suggesting that e-commerce businesses should prioritize user experience to drive sales and customer satisfaction.

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