Factors Affecting Fashion Product Customer Satisfaction
A Case Study of Indonesian E-Commerce Users

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Abstract. This study aims to analyze factors that affect customers' satisfaction when purchasing fashion products through Indonesia's e-commerce. The respondents involved in this study were those who purchased fashion products on e-commerce at least 3 times in the last 3 months and were at least 18 years old. This study uses a quantitative approach, employing SEM methods for structural equation modeling, and uses SPSS 25 and AMOS 26 for data processing. This study shows that Online shopping experience, Seller service, External incentives, and Security/Privacy directly influence Customer satisfaction. This study's findings could help e-commerce and online businesses focus on establishing better customer satisfaction strategies.

Keywords: customer satisfaction · online shopping experience · external incentives · e-commerce

1 introduction

The Covid-19 pandemic has forced Indonesia to implement various policies, which have led to a drastic increase in online transactions through e-commerce because online transactions have become more convenient for people. The volume of transactions in most e-commerce platforms in Indonesia showed an increased result since 2020. It can be seen from the customer traffic for each e-commerce platform. In 2020, Indonesia's e-commerce sales showed that most purchased product was fashion products. The society's shifted behavior toward online transactions via e-commerce arose during Q3 and Q4 in 2020, whereas it happened not long after the first pandemic outbreak in Indonesia. Simultaneously, the highest transaction occurred in Q4 2020.

E-commerce, or what is commonly called the term Ecom or Emerce (EC), is a regular business exchange using Electronic Data Interchange (EDI) transmission, email, electronic bulletin board, facsimile machine, and electronic fund transfers related to shopping transactions on the internet shopping [1].

In 2020, the number of customers of e-commerce increased a lot due to the Covid-19 pandemic. However, customer satisfaction is still not well maintained, as proven by many complaints made by the customer regarding delivery, security issues, and incorrect product information. Based on research by Nguyen [2] conducted in the Vietnamese beauty

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and cosmetics market, four factors could affect customer satisfaction: online shopping experience, seller or customer service, external incentives, and security and/or privacy. All of these aspects have a positive and significant impact on customer satisfaction. Moreover, research conducted by Nguyen [2] has a different result or research gap from other researchers. Sheng and Liu [3] found that privacy has no significant impact on customer satisfaction. Liu et al. [4] revealed that seller or customer service has no significant impact on customer satisfaction. Holloway and Beatty [5] postulated that external incentives have no significant impact on customer satisfaction.

According to Kotler and Keller [6], customer satisfaction is feelings of joy or disappointment after comparing the expected performance with the product's performance. The customer has expectations that might come from their colleague or friend who had bought or used the products or from the customer's previous experiences themselves.

The online shopping experience impacts persuasive communication and customer's feelings after using the product. The online shopping experience is essential in influencing customer's desire to repurchase, customers will repurchase the product if they are satisfied with the product that has been bought [7].

The external incentive includes several elements such as the price of products, promotion activities and policy, product attributes and quality, brands of products, and source of opinion [8]. These factors are expected to significantly affect customer experience and, therefore, customer satisfaction.

Security and privacy can be described as the security of credit card payments from customers purchasing products. In other words, it is considered the privacy of shared information [9]. High security and privacy will increase customer satisfaction.

Selling service or customer service that is highly appreciated will likely make the customer have good behavioral intentions [10]. Hence, customer satisfaction will be positively affected. Therefore, customer satisfaction is an essential aspect of e-commerce. If customer satisfaction is fulfilled, the customer will trust the e-commerce, affecting the customer's interest in having another transaction in the future.

Considering the background above, this study is conducted to analyze factors that affect customer satisfaction of e-commerce users, especially those who buy fashion products. Using Nguyen [2] research as the baseline, the hypotheses for this study are:

H1: Online shopping experience has a significant impact on customer satisfaction of e-commerce fashion products

H2: Seller or Customer Service has a significant impact on customer satisfaction of e-commerce fashion products

H3: External incentives have a significant impact on customer satisfaction of e-commerce fashion products

H4: Security and/or privacy have a significant impact on customer satisfaction of e-commerce fashion products.

2 Research Method

This research applied quantitative research methods and was categorized as causal research, which was conducted based on the variables that use the previous research as

the baseline; the dependent variable is a variable whose value is influenced or explained by the independent variable. The dependent variable in this research was customer satisfaction. The independent variable is a variable that affects the dependent variable. The independent variables in this research were online shopping experience, seller or customer service, external incentives, and security and/or privacy.

This study used primary data obtained by distributing questionnaires online using Google Forms. This questionnaire was distributed to consumers who met the criteria of this study, specifically the customers of fashion products on e-commerce.

This study used the 5-point Likert scale indicating strongly disagree to strongly agree to measure the respondents' perception, attitude, or opinion of a person or group regarding an event or social phenomenon, based on the operational definition set by the researcher.

The population in this research was all customers of e-commerce who purchased fashion products with a minimum age of 18 years old and domiciled in Indonesia. In this study, a non-probability sampling technique was used with a purposive sampling approach; purposive sampling is suitable for quantitative research using specific criteria. The criteria defined in this sample selection were respondents have transactions of fashion products on e-commerce at least 3 times in 3 months during the research conducted, and respondents made the purchase by themselves.

SPSS 25 and AMOS26 were used for data processing and hypothesis testing. The first validity testing was carried out by using 30 samples and evaluating the instruments' validity of Pearson correlations by SPSS 25 software and can only be accepted if it shows a result of $\geq$0.5 with a significance level of $\leq$0.05 ($\alpha = 5\%$) [11]. The reliability test was also conducted to determine the reliability of the measurement variable of each indicator. A variable is considered reliable if the value of Cronbach's alpha is 0.7, but if Cronbach's alpha between 0.6 and 0.7 is still acceptable [11]. Therefore, it is considered reliable if the $\alpha \geq 0.6$.

AMOS 26 software was used for the measurement model of this research. The confirmatory factor analysis (CFA) method was carried out on all variables and indicators. If this measurement model has a Goodness-of-Fit index value, consisting of 5 indicators, namely CMIN/DF, RMSEA, GFI, CFI, and TLI. For the hypothesis in SEM, the value of the standard estimated (β) must show the same direction as the empirical results. Second, the results must show a significant value. If p-value $\leq$ 0.05, the null hypothesis is rejected, which indicates the designated hypothesis is supported. Hence, once the critical ratio |C.R.| $\geq$ 1.96, it indicates the hypothesis is supported [11].

3 Research Results and Discussion

The data processing results can imply and explain the problems that arise in this study by seeing the relationship between variables. In this research, 256 respondents answered the questionnaire. From 256 samples obtained, all respondents met the characteristics for the research and showed that 100% of them were fashion product consumers who shopped on the e-commerce platform 3 times in the last 3 months, domiciled in Indonesia, and were at least 18 years old.

Table 1 exhibits that CMIN/DF, RMSEA, and GIF have results that are considered in the Good fit category, which are in accordance with the criteria, namely CMIN/DF <

Table 1. The Goodness of Fit Index for Measurement Model

No.	Index	Criteria	Result	Desc.
1.	CMIN/DF	CMIN/DF ≤ 3	1.856	Good fit
2.	RMSEA	RMSEA ≤ 0.08	0.058	Good fit
3.	GFI	Marginal Fit (0.8–0.9) Good Fit ≥ 0.9	0.801	Marginal fit
4.	CFI		0.944	Good fit
5.	TLI		0.940	Good fit

Source: data processing with AMOS

Table 2. The Goodness of Fit Test for Structural Model

No.	Index	Criteria	Result	Desc.
1.	CMIN/DF	CMIN/DF ≤ 3	1.856	Good fit
2.	RMSEA	RMSEA ≤ 0.08	0.058	Good fit
3.	GFI	Marginal Fit (0.8–0.9) Good Fit ≥ 0.9	0.801	Marginal fit
4.	CFI		0.944	Good fit
5.	TLI		0.940	Good fit

Source: Data processing with AMOS

Table 3. The Results of Hypothesis Testing

Hypothesis		Standard Estimate	C.R.	P-Value	Desc.
H1 (+)	OSE → CS	0.237	3.377	***	Supported
H2 (+)	SS → CS	0.275	3.577	***	Supported
H3 (+)	EI → CS	0.167	2.187	0.029	Supported
H4 (+)	SP → CS	0.305	4.799	***	Supported

Source: Data Processing with AMOS, (***) significance at P ≤ 0.001, (*) significance at P ≤ 0.05

3, RMSEA < 0.08, and GFI 0.8 > 0.9. In this research, the results of CMIN/DF show 1.856, and RMSEA in the measurement model shows a result of 0.058, so it meets the criteria and is considered in the good fit category. Likewise, GFI shows a result of 0.871, so it meets the marginal fit criteria that have been set. However, the CFI shows a result of 0.944 and TLI of 0.940, so the CFI and TLI in this measurement model are considered a good fit. The standardized loading value on the indicator also shows a good value in accordance with the criteria, which is ≥0.5. Moreover, the AVE and CR results on each measured variable must meet AVE values > 0.5 and CR > 0.7. Thus, all the variables tested have met the requirements for the validity and reliability test of the measurement model. Table 2 shows that all indexes meet the criteria for the structural model test.

The value of CMIN/DF meets the criteria of ≤3 with the value of 1.856, which is considered as a good fit. The RMSEA value meets the required criteria ≤0.08 with a value of 0.058, which means a good fit. The GFI value has also met the criteria of marginal fit with a value of 0.801. Then the CFI and TLI values also meet the criteria of a good fit with values of 0.944 and 0.940. From the results of the structural fit test of the model in Table 2, it is found that most of the structural model shows a value that relatively meets the goodness of fit.

Based on Table 3, the following results are obtained, with all four hypotheses supported. Hypothesis 1 is supported since the influence of OSE on CS has a positive (+) direction with the C.R. (3.377) ≥ 1.96, p-value (0.0000) at the level of ≤0.001 (***). Hypothesis 2 is supported since the influence of SS on CS has a positive (+) direction with the C.R. (3.577) ≥ 1.96, p-value (0.0000) at the level of ≤0.001 (***). Hypothesis 3 is supported since the influence of EI on CS has a positive (+) direction with the C.R. (2.187) ≥ 1.96, p-value (0.029) at the level of ≤0.05 (*). Hypothesis 4 is supported since the influence of SP on CS has a positive (+) direction with the C.R. (4.799) ≥ 1.96, p-value (0.0000) at the level of ≤0.001 (***).

H1 testing result for the influence of OSE (Online Shopping Experience) influence on CS (Customer Satisfaction) shows C.R. (3.777) ≥ 1.96 and P-value = 0.0000. Because p ≤ 0.05, the effect of OSE on CS is significant. This means that H0 is rejected and H1 is accepted; this has the same result as Nguyen [2], which stated that the online shopping experience could significantly affect customer satisfaction.

H2 testing result for the influence of SS (Seller Service) on CS (Customer Satisfaction) shows C.R. (3.577) ≥ 1.96 with P-value = 0.0000. Because p ≤ 0.05, the effect of SS on CS is significant. This means that H0 is rejected and H2 is accepted; this has the same result as Nguyen [2], which stated that seller service can significantly affect customer satisfaction.

H3 testing result for the influence of EI (External Incentives) on CS (Customer Satisfaction) reveals a C.R. (2.187) of 1.96 with a P-value of 0.029. The effect of EI on CS is significant since p ≤ 0.05. This indicates that H0 has been rejected, and H3

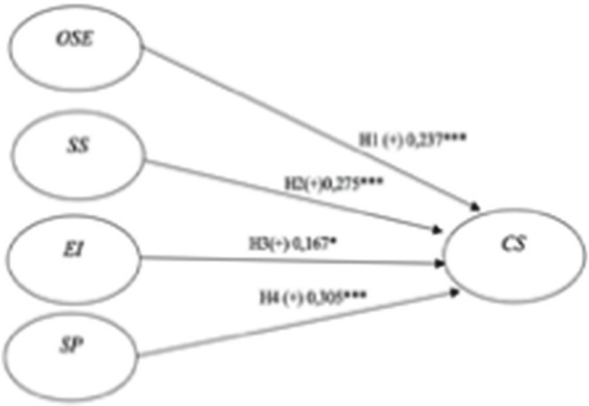

Fig. 1. Research Model Results

is accepted. According to Nguyen [2], external incentives significantly affect customer satisfaction.

H4 testing result for the influence of SP (Security and Privacy) on CS (Customer Satisfaction) shows C.R. (4.799) $\geq$ 1.96 and P-value = 0.0000. Because p $\leq$ = 0.05, the effect of SP on CS is significant. This implies that H0 is rejected and H4 is accepted, which is in line with Nguyen [2] that stated security and privacy have a significant effect on customer satisfaction.

Therefore, the final research model results based on the table of hypothesis testing results shows in Fig. 1.

4 Conclusion and Recommendation

This study's findings show that: (1) the online shopping experience variable has a significant positive influence on customer satisfaction (CS), because it has a probability value of $\leq$0.05; (2) the seller service variable has a significant positive influence on customer satisfaction (CS), because it has a probability value $\leq$0.05; (3) the external incentive variable has a significant positive influence on customer satisfaction (CS) because it has a probability value $\leq$0.05; and (4) the security and privacy variable has a positive significant direct influence on customer satisfaction (CS) because it has a probability value $\leq$0.05.

Online shopping experiences of the Indonesian fashion product customers on e-commerce have a significant and positive result on customer satisfaction. Customer satisfaction can be achieved when online businesses pay attention to customers online shopping experience. Practically, some aspects such as product packaging, brand reputation, seller professionalism, and the material of the fashion product that customers receive contribute to how customers feel about their online shopping experience. Moreover, the previous experience can lead to their judgment and behavior for the next purchase.

Seller service has a significant and positive result on customer satisfaction of Indonesia's e-commerce fashion products. Most e-commerce customers feel satisfied with the seller or customer service they receive when they purchase a fashion product. Commonly, the customers pay attention to the process of product return, how sellers respond to any complaints or questions, and how they handle their product. Better customer service will satisfy satisfied customers.

External incentives have a significant and positive on customer satisfaction of Indonesia's e-commerce fashion products. This suggests that discounts, lower prices, and a wide range of products are essential in online shopping. Customers are more inclined to purchase online in the same e-commerce to save money on shipping, and they are also more willing to choose stores with more appealing marketing strategies. Therefore, online businesses should increase and provide more promotions, special discounts, and product diversification to their clients to boost customer satisfaction.

The security and privacy variable have a significant and positive on customer satisfaction of Indonesia's e-commerce fashion products. The high value of the mean of this variable implies that customers on most e-commerce platforms in Indonesia already feel secure and safe while shopping for fashion products online.

The recommendation will be aimed at both the e-commerce platform/online businesses and for further research. As mentioned above, the highest value among 4 variables

comes from the security and privacy variable. This means the Security and Privacy variable has a significant influence on Customer Satisfaction, so it will further increase Customer Satisfaction the most. Therefore, it is expected that the e-commerce platform and online business can maintain and improve the security and privacy aspects. Ensuring customers are confident in sharing their data while feeling safe during the transaction can help customers have a trustworthy sense of the seller. For example, e-commerce platforms can pay attention to how they have payment options inside the application. Ensuring the user account is connected with a reliable and well-known bank is also important. Moreover, how e-commerce handles customer complaints related to product return, money return, and account identity can improve the customers' trust.

Considering that the independent variables in this study are very important in influencing customer satisfaction, it is hoped that the results of this study can be used as a reference for further research to be developed while considering other variables such as product quality or exploring more aspects and indicators that could increase customers satisfaction which is not involved within this study referring to [2].

Some limitations that could be found in this research are: 1. This study has a geographically limited respondents, which does not cover all regions in Indonesia; 2. The respondents involved in this study were not equally proportional based on their gender, which in detail, most respondents were females of 64.84% and males were 35.16%; and; 3. The age of respondents was dominated by 18–20 years old.

It is hoped that the age range of respondents can be more varied for further research, from teenagers up to elderly people, while cultivating the information from them to knowing their perspective about customer satisfaction, especially in e-commerce shopping.

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