PARTIAL LEAST SQUARE: EFFECT OF FLEXIBILITY ON SATISFACTION AND LOYALTY

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ABSTRACT

This study aims to examine the direct effect of flexibility on customer satisfaction, the direct effect of flexibility on customer loyalty, the direct effect of customer satisfaction on customer loyalty, and examine the indirect effect of flexibility on customer loyalty with customer satisfaction as an intervening variable. The method used in selecting respondents is the purposive sampling method with a total of 100 respondents. Respondents in this study were students of the Faculty of Economics, Department of Accounting who were also Shopee users, and had shopped at least once. The research model uses Structural Equation Modeling Partial Least Square (SEM-PLS). From these studies, it can be found that flexibility has a significant positive effect on customer satisfaction at the 10% level. Flexibility has a significant positive effect on loyalty at the 10% level. Customer satisfaction has a significant positive effect on loyalty at the 10% level. There is a significant positive indirect effect between flexibility on loyalty and customer satisfaction as an intervening variable at the 10% level.

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INTRODUCTION

British research institute, merchant machine released a list of ten countries with the fastest-growing e-commerce in the world. Indonesia leads the ranks of these countries with a growth of 78% in 2018. This rapid growth reflects the compelling advantages that it offers over conventional brick and mortar stores, including greater flexibility, enhanced market outreach, lower cost structures, faster transactions, broader product lines, greater convenience, and customization. One of the e-commerce that is developing in Indonesia is Shopee. Shopee is an electronic trading platform headquartered in Singapore under the SEA Group which was founded by Forrest Li in 2009. Shopee was first launched in Singapore in 2015. One function of e-commerce is to facilitate its users, users can buy and goods without having to travel, or leave the house. Many benefits can be felt with e-commerce, including fast access to transactions, availability of goods and services, easy access for consumers, and their ability to reach consumers internationally.

The growth of the e-commerce industry in Indonesia is also directly proportional to the increasing competition between e-commerce industries. The difficulty of attracting new buyers or customers through the internet media and the difficulty of maintaining them so that it is not easy to turn to other online stores makes customer satisfaction and loyalty an invaluable asset for most online businesses (Zhang et.al, 2010).

LITERATURE REVIEW
Loyalty

According to Chen (2009) and Kuan (2008), customer loyalty is a crucial key for leading organizations to reach success. According to Kotler & Keller (2012), consumer loyalty is "a deeply held commitment to rebuy or patronize a preferred product or service in the future despite situational influences and marketing efforts having the potential to cause switching behavior". There are four characteristics of a loyal customer by Griffin (2005), such as (1) doing-repurchase periodically, (2) recommending to the others, (3) unwavering to the competitor, and (4) buying on the same product and service line. Roberts et al (2003) suggested six indicators on customer's loyalty, such as (1) willingness to share information, (2) explaining the positive value to the others, (3) giving recommendation to the others, (4) re-purchasing, (5) buying an addition service (6) testing the new services. Rizan and Nopiska's (2011) research on loyalty. The results of the research Rizan and Nopiska (2011) are brand trust variables have a positive and significant influence on brand loyalty in liquid lux customers.

Satisfaction

Customer satisfaction was originated by the differences between the expectation of the customers and what they got. If the customers got what they needed by their expectations, they would be satisfied. Shankar (2003), the customers would rather expect to buy goods online rather than offline. Oliver (1997) said the organizations should emphasize the satisfaction created for customers because it was regarded as the crucial backbone which would cause loyalty. According to Yeh & Yung-Ming (2009), satisfaction is a process of evaluation and the creation of comparisons after making a purchase. The satisfaction level is one of the important factors in online shopping. Satisfaction levels

come from happy and disappointed feelings after comparing people's expectations and the product's performance. Satisfaction can also be interpreted as experience gained by consumers (Chinomona et al., 2014). Suki (2012) revealed in his research that satisfaction refers to affective attitudes based on the results of consumer evaluations.

Flexibility

Flexibility is an ability to satisfy customer's expectations without increasing cost, time, or even excessive losses (Lowson, 2002). Every customer will be looking for benefits by comparing online and offline shopping. Media gives flexibility on access and information to create those benefits (Alba et.al, 1997). Hofacker (2001) suggested the navigation, comfort, and substitutability of personal examination had given the flexibility in an online transaction. Furthermore, online media give freedom to doing real-time transaction automatically (Hoffman and Nofak, 1996). The evidence had founded on Lynch and Ariely (2000) that customers are less sensitive to price and even buy more expensive products if the products have good quality.

Jin and Ngozi (2013) in their literature state that in decision-making theory, flexibility leads more to alternatives in the decision-making process. For example, in manufacturing, flexibility leads to the company's ability to change production systems, design processes, and the relationship between buyers and suppliers. Purwanto and Kuswandi (2017) agree with that. In the research of Purwanto and Kuswandi (2017), it was explained that flexibility in online transactions in the form of navigation, comfort, and substitution of personal examination.

RESEARCH METHOD

This research is explanatory research, namely research that explains the causal relationship between variables through hypothesis testing on the same data. Based on the explanation, the research used is associated research that is research that aims to determine the relationship or influence of two or more variables.

The population in this study is Shopee online shop visitors in Indonesia in 2019. The data source used in this study is the primary data. Data obtained by distributing a questionnaire online. The sampling technique in this study was purposive sampling, which is the sampling technique with certain considerations (Sugiyono, 2009). The sample criteria in this study are consumers who have shopped at least once and are students of the Department of Accounting, Faculty of Economics, Pamulang University. Determination of the number of samples with an error rate of 10% is calculated using the Slovin formula, namely:

$$n = \frac{N}{1 + N(k)^2}$$

$$= \frac{90.7 x 10^6}{1 + 90.7 x 10^6 (10\%)^2}$$

$$= 99.99988975 \approx 100,$$

where: n is the number of samples, N is the total population (90.7 million Shopee users in Indonesia in 2019) and K means the error rate used is 10%.

The data analysis method used in this study was the outer model, consist of convergent validity and reliability, then the inner model and hypothesis test. Moreover, it would apply Structural Equation Modeling with Partial Least Square approach.

RESULTS

The scale of measurement of flexibility and satisfaction in this research follows Purwanto and Kuswandi (2017). The measurement scales are presented in Table 1.

Table 1. The measurement scales

	Flexibility
X1.1	I am free to browse product information in real-time on the Shopee site.
X1.2	The easy of searching for products makes it insensitive to price.
X1.3	A map that makes me feel at home browsing items.
X1.4	An environment that comfortably makes me feel at home browsing items for 24 hours.
X1.5	An environment that comfortable increases efficient browsing.
X1.6	An environment that comfortably reduces the pressure of frustration.
X1.7	
X1.8	An environment that comfortably reduces costs of psychological.
X1.9	Shopping online feels like a traditional shop shopping environment. Online shopping enables a check of the desired item directly.
	Satisfaction
Y1.1	Overall, the e-commerce shopping experience was satisfying.
Y1.2	Overall, the e-commerce shopping experience was exciting.
Y1.3	Overall, the e-commerce shopping experience was favorable.
	Loyalty
Y2.1	I will shop again online at Shopee.co.id website.
Y2.2	I always order more than one item on the Shopee.co.id website in one shopping.
Y2.3	I will continue to shop online at the Shopee.co.id website despite the price increase.
Y2.4	I will continue to shop online at the Shopee.co.id website even though there is a similar website.
Y2.5	I will continue to shop online at the Shopee.co.id website despite changes in the terms and conditions of purchase.
Y2.6	I am willing to recommend the Shopee.co.id website to working-friends and relatives/family.
Y2.7	I am willing to try information about the new program/promotion of the Shopee.co.id website.

The initial model of this research is presented in Figure 1. Flexibility has nine indicators. Satisfaction has three indicators. The loyalty has seven indicators. Hypothesis:
H1: Flexibility has a significant effect on satisfaction.
H2: Flexibility has a significant effect on loyalty.
H3: Satisfaction has a significant effect on loyalty.

H4: Flexibility has a significant effect on loyalty with satisfaction as a variable intervening.
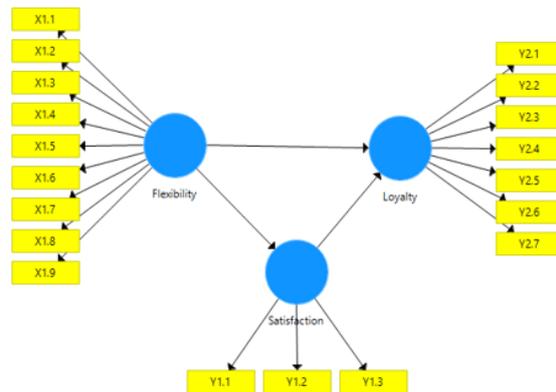

Figure 1. Conceptual Model

The Smart PLS version 3 application is used to process this research data. Fulfilled validity and reliability requires running repeatedly in executing this SEM-PLS. Figure 2 shows the Research Model.
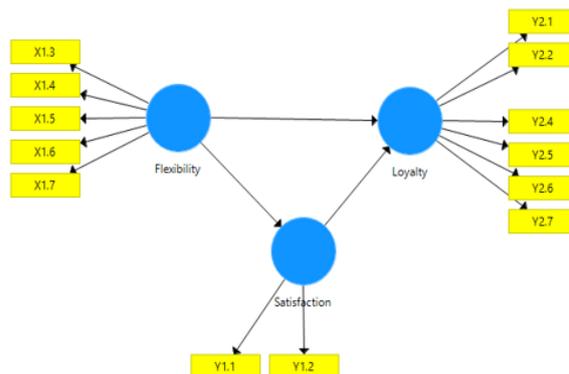

Figure 2. Research Model

Outer Model

If Composite Reliability (CR) score in all variables is greater than 0.7, then a reliable construct. If the Average Variance Extracted (AVE) score in all variables is greater than 0.5, then a valid construct. Table 2 shows CR and AVE scores in all variables.

Table 2. CR and AVE Scores

Variable	Composite Reliability (CR)	Average Variance Extracted (AVE)
Flexibility	0.896	0.632
Satisfaction Level	0.958	0.920
Loyalty	0.907	0.618

Source: data processed (2020)

Table 2 shows that CR scores in all variables are greater than 0.7. AVE scores in all variables are greater than 0.5. So, a construct is valid and reliable. Loading and cross-loading tests are applied in the research to confirm the validity and reliability test. The valid and reliable variable has the loading factor score which is greater than 0.7 against the intended construct and greater than its cross-loading. Table 3 shows the Loadings and Cross Loadings Model.

Table 3. Loadings and Cross Loadings Model

	Flexibility	Satisfaction Level	Loyalty
X1.3	0.83	0.39	0.63
X1.4	0.83	0.28	0.66
X1.5	0.81	0.48	0.58
X1.6	0.74	0.27	0.45
X1.7	0.77	0.46	0.42
Y1.1	0.45	0.96	0.51
Y1.2	0.47	0.96	0.51
Y2.1	0.54	0.50	0.77
Y2.2	0.52	0.36	0.76
Y2.4	0.53	0.44	0.80
Y2.5	0.47	0.44	0.75
Y2.6	0.64	0.45	0.87
Y2.7	0.58	0.30	0.76

Source: data processed (2020)

Table 3 shows that the loading factors are more than 0.7 against the intended constructs and their cross-loading. So that, convergent validity and discriminant validity have been fulfilled. In other words, all indicators are valid.

Inner Model

Chin (1998) in Ghozali (2012) classified the power of the research model with the R-Square test into three groups: 0.67-strong model, 0.33-moderate model, and 0.19-weak model. Table 4 shows the R-Square Model in this research.

Table 4. R-Square Model

	R-Square	R-Square Adjusted
Satisfaction Level	0.23	0.22
Loyalty	0.54	0.53

Source: data processed (2020)

Table 4 shows that R-Square for the satisfaction variable is 0.23. This value indicates that the satisfaction variable can be explained by the construct (flexibility) amounting to 23%. Whereas, the rest is influenced by other variables outside the model. This value shows that the research model for the satisfaction variable is said, weak model.

Table 4 shows R-Square for the loyalty variable is 0.54. This value indicates that the loyalty variable can be explained by the construct (flexibility and Satisfaction) amounting to 54%. Whereas, the rest is influenced by other variables outside the model. This value shows that the research model for the loyalty variable is said to moderate the model. Q^2 predictive relevance is used to evaluate the PLS model. PLS using a blindfolding procedure to adopt this approach (Latan & Ghozali 2012). Table 5 shows that Q^2 predictive relevance.

Table 5. Q^2 Predictive Relevance

	SSO	SSE	$Q^2 (= 1 - SSE/SSO)$
Satisfaction Level	200.00	161.43	0.19
Loyalty	600.00	417.40	0.30

Source: data processed (2020)

Table 5 shows that the Q^2 value for the satisfaction variable is 0.19. Table 5 shows that the Q^2 value for the loyalty variable is 0.30. Because Q^2 value >0 indicates that this research model has predictive relevance.

The significance of the research model was measured by bootstrapping procedures. Table 6 shows that bootstrapping results, path coefficients, and total indirect effect for the research model of 10%.

Table 6. Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ($\|O/STDEV\|$)	P Values
Flexibility→Satisfaction	0.47	0.49	0.07	6.88	0.00
Flexibility→Loyalty	0.58	0.58	0.07	7.76	0.00
Satisfaction→Loyalty	0.26	0.26	0.08	3.09	0.00
Flexibility→ Loyalty (with satisfaction as an intervening variable)	0.12	0.13	0.05	2.56	0.01

Source: data processed (2020)

Based on Table 6, the effect of the relationship of exogenous latent variables to endogenous latent variables can be explained as follows:
1. Between flexibility on satisfaction with a T-statistic value of 6.88 > 1.64 at the significance level alpha = 0.1 (10%). It means that there is a significant effect between flexibility and satisfaction which is equal to 0.47. A positive value on the parameter coefficient means that if flexibility value increases, then satisfaction will increase. It can be concluded that H1 is accepted.
2. Between flexibility on loyalty with a T-statistic value of 7.76 > 1.64 at the significance level alpha = 0.1 (10%). It means that there is a significant effect between flexibility and loyalty which is equal to 0.58. A positive value on the parameter coefficient means that if flexibility increases, then loyalty will increase. It can be concluded that H2 is accepted.
3. Between satisfaction on loyalty with a T-statistic value of 3.09 > 1.64 at the significance level alpha = 0.1 (10%). It means that there is a significant effect between satisfaction and loyalty which is equal to 0.26. A positive value on the parameter coefficient means that if satisfaction increases, then loyalty will increase. It can be concluded that H3 is accepted.
4. Between flexibility on loyalty where satisfaction as an intervening variable with a T-statistic value of 2.56 > 1.64 at the significance level alpha = 0.1 (10%). It means that there is a significant effect between flexibility and loyalty where satisfaction as an intervening variable. It can be concluded that H4 is accepted.

CONCLUSIONS
Based on data analysis and discussion of research results, it can be concluded as follows:
1. Flexibility has a significant positive effect on customer satisfaction at the 10% level.
2. Flexibility has a significant positive effect on loyalty at the 10% level.
3. Customer satisfaction has a significant positive effect on loyalty at the 10% level.
4. There is a significant positive indirect effect between flexibility on loyalty and customer satisfaction as an intervening variable at the 10% level.

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