

## EXPLORING THE IMPACT OF DELIVERY SPEED AND DAMAGED PACKAGES IN E-COMMERCE SHOPEE STANDARD EXPRESS SERVICES ON CUSTOMER SATISFACTION IN NORTH BEKASI-WEST JAVA

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**Abstract:** This research aims to improve the performance of Shopee Standard Express in running the delivery of goods to make sure its punctuality, as well as to find out the level of damaged packages that affect the customer satisfaction. This research used quantitative approach. The analysis methods used are the validity test, reliability test, multiple linear regression test, F test, T test, and determination coefficient  $R^2$  test. The research analysis technique is assisted by the SPSS application version 26 to analyse the results of data from the questionnaire that was distributed using online forms. The results of the T test show that Delivery Speed has a positive and significant effect on Customer Satisfaction. Damaged Packages have a negative and significant effect on Customer Satisfaction.

**Keywords:** *Delivery Speed, Damaged Packages, Customer Satisfaction, Logistics, Express Delivery Service*

### Introduction

The development of the internet in Indonesia has had a great effect on the business field, such as how to advertise, how to buy and sell, etc. E-commerce is an online shopping platform that is mainly used for buying and selling activities. E-commerce Shopee Indonesia is one of the online shopping platforms in Indonesia. Shopee has succeeded in becoming the most popular online shopping platform in Indonesia in 2021 (IPrice, 2021). Shopee scored the first position with a total monthly active user visit on the IPrice report page on June 2021 to August, Shopee prints an average of 961.51 million visits, from web 126.99 million, and app 834.52 million (antaranews.com, 2021).

The progress of E-commerce in Indonesia is very fast. Thus, another related business also growing, which is the logistics business. Due to the rapid growth of logistics, several major obstacles arise when delivering goods, such as delayed delivery times, damaged and lost goods, etc. This could make customer satisfaction declining in a logistics company. Seeing this problems,

one of the E-commerce companies, Shopee started to build its own logistics service, a logistics service named Shopee Standard Express in the year of 2018 which is relatively new (Rizki et al., 2021).

Shopee Standard Express is an expedition service created by Shopee. Regular delivery service provided by Shopee to various cities and districts in Indonesia. Shopee Standard Express has the advantage of relatively cheap delivery costs (Khalid, 2022). Shopee Standard Express was established to optimize services expeditions to the maximum and reduce errors in logistics companies, which can negatively impact Shopee, as an online shopping platform provider (Jozuna & Dewi, 2020). In serving Shopee delivery services, Shopee Standard Express is facing the same obstacles and challenges as mentioned above. In order to examine its services to customers, this study analysed the speed of its delivery and a level of damaged packages in affecting customer satisfaction.

### **Delivery Speed**

According to (Zhong et al., 2022) the delivery speed reflects the elapsed time (or lead time) from receiving to successfully delivering a customer order. Another definition stated (Handoko, 2010) that delivery speed is the accuracy and guarantee of the goods ordered by customers safely to their destination. Delivery Speed is the period of ordering goods until the goods arrive in the hands of customers (Mahfudz & Jaya Sakti, 2018). Delivery speed is the time interval between placing the order and delivery to the location the customer wants (Riley & Klein, 2019), and delivery speed is an accommodation that reveals the time between placement and delivery to the customer's location, the delivery speed indicator indicates the timeliness of shipping goods to be sent and the timeliness of the arrival of the goods, assemble, transport, and distribute products according to the specified schedule (Arroffi et al., 2021; Ertz, 2022)

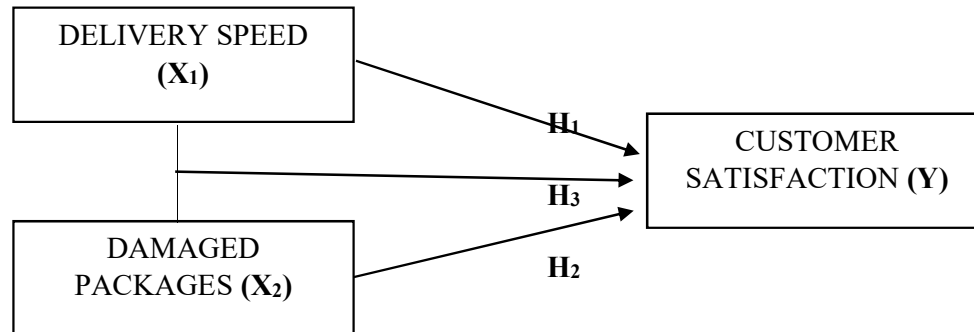
### **Damaged Packages**

According to (Shastri et al., 2009) damaged to packages is the main reason for claims related to the transportation of goods. Damaged Packages can

engender negative consumer reactions that shape subsequent attitudes and behaviors in ways that are not always objectively justified (Katherine White, Lily Lind, Darren W. Dahl, 2016). It is also propounded that in the transit a few packages might get damaged or even lost during in the delivery of goods (Fernandes et al., 2017). Damages in package delivery can be caused by many reasons such as lack of skilled human resource to handle packages including couriers who deliver them, hasty delivery, bad quality of packaging, lack of proper care and attention in packaging goods, goods are rocked during traveling, limited number of fleets used, expensive transportation costs, and lack of training and SOP. It is stated that problems like damages caused during the transportation process not only can create a negative effect on the relationship between logistics service providers and shippers (Denizhan & Konuk, 2013) but it also affects the customer satisfaction (Gupta et al., 2019).

### **Customer Satisfaction**

Customer Satisfaction is a customer's feeling that a company has efficiently prepared products or services that meet customer needs (Emrah Cengiz Ph, 2010). Customers are satisfied with the product or services (Kiran, 2016), and Customer Satisfaction is a metric that measure the extent to which customers feel happy and satisfied with related products and services (Bernazzani, 2022; Hill & Brierley, 2003). It is also propounded by (Johnson, 2015) the indicator of customer satisfaction is a feeling of satisfaction in the sense of satisfaction with the service, always using the services of Shopee Standard Express expedition, and recommending them to others. As well as the fulfilment of customer expectations after using the Shopee Standard Express expedition Services.

**Framework and Hypothesis****Figure 1. Research Model**

H<sub>1</sub> : Delivery speed positively affects Customer Satisfaction.

H<sub>2</sub>: The quality of damaged packages negatively affects Customer Satisfaction.

H<sub>3</sub> : Delivery Speed and Damaged Packages simultaneously affect Customer Satisfaction.

**Method**

This research used with a quantitative approach. The primary data was taken from questionnaire filled out by customer of Shopee Standard Express services and we obtained 100 respondents using online forms. We used Likert scale ranging from 1 point Strongly Disagree (SD) to 5 point Strongly Agree (SA) for independent and dependent variables. The data was analysed using multiple regression analysis and assisted with SPSS application version 26 to analyse data from questionnaire results.

### Population and Sample

The population in this research is customers of Shopee Standard Express in North Bekasi, West Java. The population used in this research is not known for a certain number, then the formula used in sampling according to RaoPurba, (1996) is as follows:

$$n = \frac{Z^2}{4(Moe)^2}$$

$$n = \frac{Z^2}{4(Moe)^2}$$

$$n = \frac{1,96^2}{4(0,1)^2}$$

$$n = \frac{3,8416^2}{0,4^2}$$

$$n = 96,04 \sim 100$$

From the calculation above, the resulting number of samples is 96,04 and rounded up to 97 respondents. However, in this research 100 respondents were used to facilitate the calculation.

### Discussion and Result

The results related to customer satisfaction with Shopee Standard Express services obtained through questionnaire of 100 specified respondents, based on age criteria with 75% results most of the Shopee Standard Express customers aged 20-25 years, gender with 58% results most customers are women, the last of education level with a results of 59% of most customers with the last senior high school education, profession with 70% of most customers being students, and monthly income with 33% of most customers having an income of Rp. 1.000.000–Rp. 5.000.000. From the data we can assume that most of the buyers on ecommerce platform are adults which are relatively young.

**Validity and Reliability Test**

Table 1 presents the result of the validity and reliability of the research.

**Table 1. Validity and Reliability Result**

| Variable                                | No | r Count | R Table 5% | Description | Cronbach's Alpha | N of Item | Conclusion |
|-----------------------------------------|----|---------|------------|-------------|------------------|-----------|------------|
| <i>Delivery Speed (X<sub>1</sub>)</i>   | 1  | 0,846   | 0,1966     | Valid       | 0,913            | 5         | Reliable   |
|                                         | 2  | 0,854   | 0,1966     | Valid       |                  |           |            |
|                                         | 3  | 0,882   | 0,1966     | Valid       |                  |           |            |
|                                         | 4  | 0,865   | 0,1966     | Valid       |                  |           |            |
|                                         | 5  | 0,873   | 0,1966     | Valid       |                  |           |            |
| <i>Damaged Packages (X<sub>2</sub>)</i> | 1  | 0,834   | 0,1966     | Valid       | 0,904            | 5         | Reliable   |
|                                         | 2  | 0,848   | 0,1966     | Valid       |                  |           |            |
|                                         | 3  | 0,846   | 0,1966     | Valid       |                  |           |            |
|                                         | 4  | 0,874   | 0,1966     | Valid       |                  |           |            |
|                                         | 5  | 0,850   | 0,1966     | Valid       |                  |           |            |
| Customer Satisfaction (Y)               | 1  | 0,675   | 0,1966     | Valid       | 0,605            | 5         | Reliable   |
|                                         | 2  | 0,717   | 0,1966     | Valid       |                  |           |            |
|                                         | 3  | 0,729   | 0,1966     | Valid       |                  |           |            |
|                                         | 4  | 0,798   | 0,1966     | Valid       |                  |           |            |
|                                         | 5  | 0,610   | 0,1966     | Valid       |                  |           |            |

Validity test results from the questionnaire are declared valid. A validity test is declared valid if  $r \text{ Count} > r \text{ Table}$ . Where the  $r \text{ Table}$  is obtained from the number of samples as much as  $100 = 0,1966$  with significant level of 5%. From the results of data processing, the authors can conclude that all statements are Valid because  $r \text{ Count} > r \text{ Table}$  with a significant level of 5%, so that all statements can be used in research devices.

Reliability test results on variables (X<sub>1</sub>) Delivery Speed, variables (X<sub>2</sub>) Damaged Packages, and variables (Y) Customer Satisfaction can be categorized as reliable. This shows that all statements obtained from the results of Cronbach's Alpha are greater than the Alpha value ( $X_1 = 0,913 > 0,6$ ,  $X_2 = 0,904 > 0,6$ ,  $Y = 0,605 > 0,6$ ). Thus, all statements for each variable in this research are reliable.

**Multiple Linear Regression and T Test****Table 2. Multiple Linear Regression and T test Results**

|       |                  | <b>Coefficients<sup>a</sup></b> |            |                           |        |      |
|-------|------------------|---------------------------------|------------|---------------------------|--------|------|
|       |                  | Unstandardized Coefficients     |            | Standardized Coefficients |        |      |
| Model |                  | B                               | Std. Error | Beta                      | t      | Sig. |
| 1     | (Constant)       | 7.867                           | 2.121      |                           | 3.709  | .000 |
|       | Delivery Speed   | .545                            | .078       | .586                      | 6.994  | .000 |
|       | Damaged Packages | -.024                           | .061       | -.033                     | -3.392 | .001 |

a. Dependent Variable: Customer Satisfaction

The analysis data above can be obtained from the regression coefficient with the formula  $Y = a + \beta_1 X_1 + \beta_2 X_2 + e$  or  $Y = 7,867 + 0,545 X_1 - 0,024 X_2 + e$ . from the regression equation above, it can be seen that there is a relation between independent variables ( $X_1$  and  $X_2$ ) and dependent variables ( $Y$ ). It can be concluded that the constant value of 7,867 means that if there is no effects of delivery speed and damaged packages, the customer satisfaction will remain constant as many as 7,867.

Also, delivery speed has a positive effect on customer satisfaction, namely the coefficient of delivery speed ( $X_1$ ) regression with coefficient of 0,545, which means that if the delivery speed increases by 1 unit, the value of customer satisfaction ( $Y$ ) will increase by 0,545 units. This result shows that delivery speed should be a variable that is seriously maintained in a good performance so that the company can create customer satisfaction.

Also, damaged packages have a negative effect on customer satisfaction. The value of the regression coefficient of damaged packages ( $X_2$ ) of -0,024, meaning that if the damaged packages increases 1 unit of the value, then there will be a decrease of -0,024 units of customer satisfaction ( $Y$ ). This result shows that the level of damaged packages is a variable that should be repressed as low as the company can.

**T Test (Analysis of Effect)**

The data from the calculation table above shows that the t-count value of the independent variable delivery speed ( $X_1$ ) is 6,994, which is greater than the t-Table value of 1,984, and the significant level obtained is 0,000, which is less than the significant probability of 0,05, indicating that  $H_1$  is Accepted. This proves that the variable delivery speed ( $X_1$ ) has a positive and significant effect on customer satisfaction (Y).

Independent variable damaged packages ( $X_2$ ) is -3,392, greater than the t-Table value of 1,984, and the significant level obtained is 0,001 less than the significant probability of 0,05, which means  $H_2$  is Accepted. This proves that the variable damaged packages ( $X_2$ ) has a negative and significant effect on customer satisfaction (Y).

**F-Test****Table 3. F Result****ANOVA<sup>a</sup>**

| Model |            | Sum of Squares | Df | Mean Square | F      | Sig.              |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1     | Regression | 6.972          | 2  | 3.486       | 14.565 | .000 <sup>b</sup> |
|       | Residual   | 23.218         | 97 | .239        |        |                   |
|       | Total      | 30.190         | 99 |             |        |                   |

a. Dependent Variable: Customer Satisfaction

b. Predictors: (Constant), Damaged Packages, Delivery Speed

The result of the data from the table presented in the ANOVA above is obtained from the calculating results, that the calculated F value of 14.565 is greater than the F table value of 2.70 at a significant level of 0.000, which means  $H_3$  is Accepted. It is concluded that the Variables Delivery Speed ( $X_1$ ), and Damaged Packages ( $X_2$ ) simultaneously have a significant effect on Customer Satisfaction (Y).

**Determination Coefficient  $R^2$  Test****Table 4. Determination Coefficient  $R^2$  Result**

| Model Summary |                   |          |                   |                            |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model         | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1             | .481 <sup>a</sup> | .231     | .215              | .489                       |

a. Predictors: (Constant), Damaged Packages, Delivery Speed

The result of the data from the table presented is the Coefficient of Determination  $R^2$  above meaning, the value of Adjusted R Square or Coefficient of Determination  $R^2$  is 0.215. This means that the Delivery Speed ( $X_1$ ) and Damaged Packages ( $X_2$ ) variables on Customer Satisfaction ( $Y$ ) have an effect of 21.5%. while the rest of ( $100\% - 21.5\% = 78.5\%$ ) is influenced by other variables independent not included in this research, such as service quality, promotion, and etc.

**Conclusion**

Based on the analysis above, it shows that the independent variables have an influence on the dependent variable. The evidence from the calculation data is obtained from the customer expedition Shopee Standard Express in North Bekasi. There is a significant relation between delivery speed and customer satisfaction. If the delivery speed increases, then customer satisfaction will also increase, meaning that the better delivery speed service provided by Shopee Standard Express the more customer will feel satisfied. The service provided is that goods are sent and arrives by the promised service without exceeding the estimated specified time. However, Shopee Standard Express current delivery operations can still be improved to be able to compete with other express services.

In addition, damaged packages have a negative and significant effect on customer satisfaction on the expedition service Shopee Standard Express in North Bekasi. This shows us that the higher the level of damaged package, the lower customer satisfaction level. On the other hand, if the level of damaged items sent can be reduced, this will increase customer satisfaction.

The customer will feel satisfied and entrust the delivery to Shopee Standard Express because it has met their expectations. Shopee Standard Express service must be responsible if there is damage to the goods sent.

It can be concluded that the independent variables such as delivery speed and damaged packages greatly affects the level of the dependent variable in this study which is customer satisfaction in the case of delivery operated by Shopee Standard Express service in North Bekasi.

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