

# The Effect of Logistics Service Quality On Customer Satisfaction and Customer Loyalty For Shopee Users Indonesia

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## ABSTRACT

This study aims to examine the effect of timeliness, availability, condition, return, order accuracy and order discrepancy handling on customer satisfaction and customer loyalty in Shopee users. Respondents in this study were users of Shopee in Indonesia. The data taken for this study were 185 respondents in Surabaya who had made transactions more than 3 times in the last 3 months on the Shopee application and respondents who had used the return and customer service feature. The data that has been collected is then analyzed with the Structural Equation Modeling (SEM) measurement model using IBM SPSS version 24 and Smart PLS 4 software. After the data processing process, the results show that the condition and return variable does not have a significant effect on customer satisfaction. Meanwhile, the variables of timeliness, availability, order accuracy and order discrepancy handling have a positive and significant effect on customer satisfaction and the variable timeliness, availability, condition, return, and customer satisfaction have a positive and significant effect on customer loyalty in Shopee users in Indonesia.

**Keywords:** Return, Order Accuracy, Order Discrepancy Handling, Customer Satisfaction, Customer Loyalty

## 1. INTRODUCTION

The advancement of internet technology in the current digitalization era continues to grow very rapidly by following the development of an increasingly advanced era. In January 2024 there were 185 million individual internet users in Indonesia, equivalent to 66.5% of the total national population of 278.7 million people, internet users in Indonesia at the beginning of 2024 were recorded to have increased by around 1.5 million people, an increase of 0.8% compared to January 2023 (Rizaty, 2024). This data also shows that the number of internet users in Indonesia has continued to increase in the last decade. When compared to January 2014, the number has now increased by around 141.3 million users. In the past 10 years, the highest growth rate was recorded in January 2017, where the number of national internet users jumped 28.4%. Meanwhile, the slowest growth was recorded in January 2023, which only increased by 0.6%. Even so, there are still many Indonesians who are not connected to the internet. According to We Are Social, the number could reach 93.4 million people by early 2024 and is the 7th largest globally. It can be seen that as the years go by, the development of the times continues to change people's habits of using the internet. This greatly affects all sectors including the business world and the economic sector, one of which is the digital-based business sector, e-commerce. A good logistics service from a company if it is able to create value adding for consumers. If consumers feel the value, they will become loyal customers. The company will have a competitive advantage over its competitors, if it is able to maintain the performance of its logistics services (Novika Widjaja, 2011).

When it comes to shopping for household needs, people used to go to offline stores in malls or markets. However, with the development of technology today, there is no need to shop outside the home anymore, only with a cellphone and download various e-commerce applications, humans can already shop and only within 2-4 days the order you bought has arrived at home. Nowadays, there are more and more other e-commerce that want to provide the best possible service in order to compete with each other. Good service starts from 24-hour customer service to guaranteeing goods arrive safely in the hands of consumers and guarantees if the item is lost on the road or other reasons.

The topic raised in this research is logistics service quality on customer satisfaction and customer loyalty in e-commerce because there are still not many who examine how the relationship between logistics service quality in the delivery service of goods at Shopee can have an impact on customer satisfaction and customer loyalty. Cotarelo et al. (2021) explain that logistics service quality in the context of three different purchasing scenarios with four dimensions (timeliness, availability, condition, and return) and to assess its impact on customer satisfaction and loyalty. Akil & Ungan (2022) explain that logistics service quality in e-commerce will have an impact on customer satisfaction and

there is a relationship between e-commerce customer satisfaction and customer loyalty. Uvet (2020) explains that explains the relationship between customer satisfaction and logistics service quality factors: condition, timeliness and ordering discrepancy handling in logistics services on customer satisfaction.

Based on the data found, Shopee is one of the most widely used e-commerce platforms in Indonesia and the number of Shopee users continues to increase every year. This is supported by data from Databoks which states that from January to December 2023, Shopee cumulatively received 2.3 billion visits, far exceeding its competitors. On the other hand, Tokopedia reached 1.2 billion visits, Lazada reached 762.4 million visits, Blibli reached 337.4 million visits and Bukalapak reached 168.2 million visits. Shopee also achieved the highest growth rate of visits, from January to December 2023 the number of visits to Shopee was recorded to increase by 41.39 and Blibli increased by 25.18% while Tokopedia was recorded to have decreased by 21.08%, Lazada decreased by 46.72%, and Bukalapak decreased by 56.5% (Ahdiat, 2024) So from these data it can be concluded that Shopee is the only e-commerce that is most widely used in Indonesia.

This research refers to the research of Cotarelo et al. (2021) with 6 variables, namely timeliness, availability, condition, return, customer satisfaction, and customer loyalty and there are 2 additional variables from Akil & Ungan's research (2022), namely order accuracy and order discrepancy handling. The results obtained are that condition is not supported by customer satisfaction, while in the research of Akil & Ungan (2022) and Uvet (2020) the results obtained are supported. The research results of the order discrepancy handling variable on customer satisfaction are not supported, while in Akil & Ungan's research (2022) the results are supported. So that in this study a replication research model was carried out and 2 variables were added.

## 2. RESEARCH METHODS

This research is an associative research that aims to determine the relationship (clause) between two or more variables. The type of research used in the research is basic research, because the research aims to develop previous research. This study uses quantitative research methods by identifying the extent to which the independent variable (X) consisting of the dimensions of timeliness, availability, condition, return, order accuracy, order accuracy handling affects the dependent variable (Y), namely customer satisfaction and customer loyalty.

The target population in this study is the use of Shopee in Indonesia. The characteristics in this study are those who have the Shopee application and have made purchases in the Shopee application for more than 3 transactions in the last 3 months with a minimum of using the application for 1 year of use, and are Indonesian citizens. Sampling using non-probability sampling techniques, namely sampling techniques that provide equal opportunities for all members of the population to become samples. The method of determining the sample using purposive sampling. This study has criteria in determining the sample, as follows: Respondents are Shopee users in Indonesia, they have used Shopee and made purchases 3 times within the last 3 months in the Shopee application and used the customer service and return features.

The minimum total respondents that must be collected are 185 people. The research must collect a minimum number of respondents that must be obtained as many as 185 respondents. So the minimum size of respondents that must be met is 185 people. Research uses 8 constructs, namely, timeliness, availability, condition, return, order accuracy, order discrepancy handling, customer satisfaction, and customer loyalty. This study uses primary research data because the data is obtained directly from respondents who have used the Shopee application. Data collection in this study used a questionnaire, which was distributed using google form. The research will include respondents' identities such as name, gender, age, latest educational background, occupation, total spending and how often respondents make transactions. This data measurement uses the SEM (structural equation modeling) analysis method with Smart PLS software version 4 and SPSS version 24. This measurement is adapted from previous research and is rated on a five-point Likert scale, where number 1 indicates that the respondent strongly disagrees, number 3 indicates that the respondent is neutral, and number 5 indicates that the respondent strongly agrees with the statements contained in the questionnaire.

## 3. RESULTS AND DISCUSSIONS

This study uses data collected through a questionnaire distributed online using google form and at the stage of 30 respondent data that has met the research criteria. After obtaining the 30 data, the validity and reliability tests were then carried out. In collecting these respondents, researchers collected as many as 345 respondents. In this study, validity and reliability testing was carried out, in the validity test a significant value  $\leq 0.1$  ( $\alpha = 10\%$ ) and a pearson correlation value  $\geq 0.5$  or an asterisk can be declared valid and in the reliability test the composite reliability value  $\geq 0.7$  and the Cronbach's alpha value  $\geq 0.6$  can be declared reliable  $\geq 0.6$  can be declared reliable. This test is carried out with the algorithm procedure and bootstrapping procedure.

From the respondent data, there were 195 respondents who were female, the age range was 17-21 years old as many as 167 respondents, domiciled in Java Island as many as 188 respondents, the last education was at Strata 1 as many as 148 respondents and the respondents' jobs were as students. The convergent validity test has a standard average variance extracted (AVE) value of  $AVE \geq 0.5$  and R-Square value is used to explain the effect of the independent variable on the dependent variable. The r-square for the customer loyalty variable is 0.887 and the customer satisfaction variable is 0.871 so that the two variables fall into the moderate category because they have an r-square value  $> 0.50$ . This test is carried out to see the significance of the influence between variables through the bootstrapping procedure. This significance value is seen from the results of the path coefficients table by looking at the t-statistics value  $\geq 1.645$  and the p-value, which is  $\leq 0.1$ . The following is a table of path coefficients test results:

**Table 1** Path Coefficients

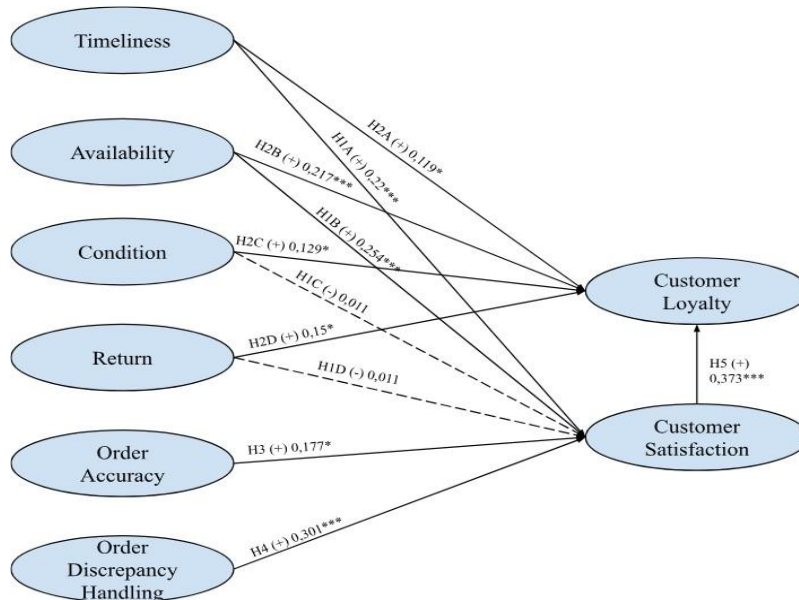
	Relationship Between Variables	Original Sample	Sample Mean	Standard Deviation	T-Statistics	P-Values	Description
H1A	T -> CS	0,22	0,218	0,069	3,203	0,001***	Supported
H1B	A -> CS	0,254	0,253	0,076	3,333	0,001***	Supported
H1C	C -> CS	0,011	0,016	0,073	0,148	0,882	Not Supported
H1D	R -> CS	0,011	0,013	0,065	0,177	0,86	Not Supported
H2A	T -> CL	0,119	0,117	0,071	1,673	0,094*	Supported
H2B	A -> CL	0,217	0,217	0,07	3,102	0,002***	Supported
H2C	C -> CL	0,129	0,133	0,071	1,82	0,069*	Supported
H2D	R -> CL	0,15	0,152	0,062	2,424	0,015*	Supported
H3	OA -> CS	0,177	0,174	0,078	2,266	0,023*	Supported
H4	ODH -> CS	0,301	0,3	0,078	3,879	0***	Supported
H5	CS -> CL	0,373	0,369	0,089	4,205	0***	Supported

The test results in table 3 show that hypotheses 1a, 1b, 2a, 2b, 2c, 2d, 3, 4, and 5 are supported because they have t-statistics values  $\geq 1.645$  and p-values that are  $\leq 0.1$ . Meanwhile, hypotheses 1c and 1d are not supported because the t-statistics value  $\leq 1.645$  and the p-value is.

Timeliness has a significant effect on customer satisfaction so that this hypothesis is supported. It can be said that this hypothesis is supported. This is in line with research conducted by Cotarelo et al., (2021), Akil & Ungan (2022), Uvet (2020), Xing et al. (2011), Murfield et al. (2017), and Esmaeili et al. (2015) which shows that the effect of timeliness on customer satisfaction is supported. This is also supported by the research of Esmaeili et al. (2015) which states that timelines have a significant effect on customer satisfaction. Availability has a significant effect on customer satisfaction so that it can be said that this hypothesis is supported. This is different from the research conducted by Cotarelo et al. (2021) which states that the influence between availability on customer satisfaction is not supported by each other. This is due to the increase in service features which are the current top priority for e-commerce in Spain, especially in the application of self-service technologies (SST) features to meet increasing consumer demand so that availability in LSQ is no longer a top priority for e-commerce. However, research conducted by Tandon & Ertz (2024), Giovanis & Tsoukatos (2013) and Esmaeili et al. (2015) shows the availability that the effect on customer satisfaction is supported. Research conducted by Tedjakusuma et al. (2024) also said that the effect of availability on customer satisfaction is supported, and which states that fulfillment of product availability can speed up the delivery time of goods ordered by consumers. So it can be concluded that the speed in processing shipments with product availability can form very high customer satisfaction. Lin et al. (2014) also stated that the effect of availability has a significant effect on customer satisfaction. Shopee always provides the best service.

Condition does not have a significant effect on customer satisfaction so it can be said that this hypothesis is not supported. This is in line with research conducted by Akil & Ungan (2022) because the results of research showing that the effect of conditions on customer satisfaction is not supported. Return does not have a significant effect on customer satisfaction, so it can be said that this hypothesis is not supported. However, this is not in line with research conducted by Cotarelo et al. (2021) because the results of the study show that the effect of return on customer satisfaction is supported. However, research conducted by Hasan et al. (2021) which states that returns have no significant effect on

customer satisfaction. this is because the return policy applied to e-commerce in Pakistan does not have clarity that is fixed and strong. This is also supported by research conducted by Ali & Bhasin (2019) which states that returns do not have a significant effect on customer satisfaction due to the handling that is considered still not good and return services that are complicated to do. Timeliness has a significant effect on customer loyalty so that it can be said that this hypothesis is supported. However, this is not in line with research conducted by Cotarelo et al. (2021) because the results showed that the effect of timeliness on customer loyalty was not supported. However, research conducted by Murfield et al. (2017) and Giovanis & Tsoukatos (2013) state that timeliness has a significant effect on customer satisfaction.



**Figure 1. Research Model Result**

Description :

- The number listed is the original sample value
- Unsupported hypotheses are shown by dotted lines
- \* Significant coefficient with p-value  $\leq 0,1$
- \*\* Significant coefficient with p-value  $\leq 0,05$
- \*\*\* Significant coefficient with p-value  $\leq 0,01$

Condition does not have a significant effect on customer satisfaction so it can be said that this hypothesis is not supported and this is in line with research conducted by Akil & Urgan (2022). Return does not have a significant effect on customer satisfaction, so it can be said that this hypothesis is not supported. However, this is not in line with research conducted by , which states that the main factor in customer satisfaction is the return feature, which is also the main factor why respondents tend to ignore the condition of the goods when they arrive. However, research conducted by Hasan et al. (2021) which states that returns have no significant effect on customer satisfaction. This is also supported by research conducted by Ali & Bhasin (20190). Timeliness has a significant effect on customer loyalty so that it can be said that this hypothesis is supported. However, this is not in line with research conducted by Cotarelo et al. (2021) because the results showed that the effect of timeliness on customer loyalty was not supported. This is because the effect of timeliness on LSQ service user loyalty in e-commerce in Spain is not a factor that can directly affect customer loyalty, but this influence can influence through customer satisfaction. However, research conducted by Murfield et al. (2017) and Giovanis & Tsoukatos (2013) state that timeliness has a significant effect on customer satisfaction. In research conducted by Giovanis & Tsoukatos (2013) one of the factors of customer loyalty to the use of e-commerce and logistics services is the speed of handling carried out, so loyalty can influence customers to keep shopping and using their services. In research conducted by Murfield et al. (2017) states that the main and most important factor in the logistics service element is timeliness which results in customer loyalty.

Availability has a significant effect on customer loyalty so it can be said that this hypothesis is supported. However, this is not in line with research conducted by Cotarelo et al. (2021) because the results showed that the effect of availability on customer loyalty was not supported. But in research conducted by Giovanis & Tsoukatos (2013) state that Availability on customer loyalty has a significant effect. Condition has a significant influence on customer loyalty so that it can be said that this hypothesis is supported. However, this is not in line with research conducted by Cotarelo et al. (2021) because the results showed that the effect of conditions on customer loyalty was not supported, the study

stated that this was because the condition relationship only affected the level of customer satisfaction and could only properly influence customer loyalty. However, research conducted by Xiao et al. (2018) and Giovanis & Tsoukatos (2013) show that Condition on Customer Loyalty has a significant effect.

Customer satisfaction has a significant effect on customer loyalty so that it can be said that this hypothesis is supported. This is in line with research conducted by Akil & Ungan (2022) and Cotarelo et al. (2021). Research conducted by Sheng & Liu, (2010) also says that customer satisfaction has an influence on customer loyalty. Shopee provides excellent service to its customers, thus creating customer satisfaction which makes consumers loyal to Shopee. Research conducted by Chatterjee et al. (2023) also says that customer satisfaction has an influence on consumers who can make consumers loyal. In research by Xiao et al. (2018) the influence of the condition of goods has an influence factor on satisfaction and loyalty if the product arrives in good condition and according to the order. Return has a significant effect on customer loyalty so that it can be said that this hypothesis is supported. However, this is not in line with research conducted by Cotarelo et al. (2021) because the results showed that the return on customer loyalty was not supported. In the research of Cotarelo et al. (2021) the fulfillment of customer loyalty can only be fulfilled if through customer satisfaction, where the direct relationship between return and customer loyalty has no influence between the two relationships. However, research conducted by Xu & Jackson (2019) and Do et al. (2023) states that Return has a significant effect on customer loyalty. Research conducted by Do et al. (2023) states that the existence of a return system on the services provided with effective and efficient conditions that are easy to fulfill is the main factor for Generation Z customers in the study to have high loyalty. In Xu & Jackson (2019) research, customer trust in product return options is the main factor influencing customer loyalty itself. Order accuracy has a significant effect on customer satisfaction so that it can be said that this hypothesis is supported. This is in line with research conducted by Giovanis & Tsoukatos (2013) and Akil & Ungan (2022) because the results of research showing that the effect of order accuracy on customer satisfaction is supported. The accuracy of consumer orders will affect customer satisfaction. Order discrepancy handling has a significant effect on customer satisfaction so that it can be said that this hypothesis is supported. This is in line with research conducted by Giovanis & Tsoukatos (2013) and Akil & Ungan (2022) because the results of the study show that the effect of order discrepancy handling on customer satisfaction is supported. The ease of use of the Shopee application in handling problems faced by customers quickly and professionally. This is evidenced by Shopee which provides a feature to return goods when an item is not suitable. Shopee has a fairly good policy in handling problems experienced by consumers, Shopee is very fast and responsive and professional in handling a problem.

#### 4. CONCLUSION

Based on the results of this research, it can be seen that from the 9 research hypotheses, it shows that 7 hypotheses give results that have a positive influence, namely Timeliness and Availability, Order Accuracy, Order Discrepancy Handling have a significant effect on customer satisfaction with Shopee services. Likewise Timeliness, Availability, Condition and Return have a significant influence on customer loyalty. And Customer Satisfaction has been shown to have an affect on Customer Loyalty. However, the test results prove that Condition and Return is not influenced by Customer Satisfaction. From the results of the research that has been conducted, the relationship between customer satisfaction and customer loyalty has the highest positive effect among other hypothesis testing. Shopee needs to continue to make improvements to the services provided to customers in order to continue to increase customer satisfaction which has an impact on customer loyalty.

#### REFERENCES

- Ahdiat, A. (2024, January 10). 5 E-Commerce dengan Pengunjung Terbanyak Sepanjang 2023.
- Akil, S., & Ungan, M. C. (2022). E-commerce logistics service quality: Customer satisfaction and loyalty. *Journal of Electronic Commerce in Organizations*, 20(1). <https://doi.org/10.4018/JECO.292473>
- Ali, A., & Bhasin, J. (2019). Understanding Customer Repurchase Intention in E-commerce: Role of Perceived Price, Delivery Quality, and Perceived Value. *Jindal Journal of Business Research*, 8(2), 142–157. <https://doi.org/10.1177/2278682119850275>
- Chatterjee, S., Ghatak, A., Nikte, R., Gupta, S., & Kumar, A. (2023). Measuring SERVQUAL dimensions and their importance for customer-satisfaction using online reviews: a text mining approach. *Journal of Enterprise Information Management*, 36(1), 22–44. <https://doi.org/10.1108/JEIM-06-2021-0252>
- Cotarelo, M., Calderón, H., & Fayos, T. (2021). A further approach in omnichannel LSQ, satisfaction and customer loyalty. *International Journal of Retail and Distribution Management*, 49(8), 1133–1153. <https://doi.org/10.1108/IJRDM-01-2020-0013>

- Do, A. D., Ta, V. L., Bui, P. T., Do, N. T., Dong, Q. T., & Lam, H. T. (2023). The Impact of the Quality of Logistics Services in E-Commerce on the Satisfaction and Loyalty of Generation Z Customers. *Sustainability (Switzerland)*, 15(21). <https://doi.org/10.3390/su152115294>
- Esmacili, A., Kahnali, R. A., Rostamzadeh, R., Zavadskas, E. K., & Ghoddami, B. (2015). An application of fuzzy logic to assess service quality attributes in logistics industry. *Transport*, 30(2), 172–181. <https://doi.org/10.3846/16484142.2015.1046402>
- Giovanis, A. N., & Tsoukatos, E. (2013). On the relationships between logistics service deliverables, customer satisfaction and loyalty in industrial supply chains. *J. for International Business and Entrepreneurship Development*, 7(1), 63. <https://doi.org/10.1504/jibed.2013.052132>
- Hasan, D., Hassan, M., & Ahmed, S. (n.d.). Importance of After Purchase Services in Online Business and Customers Satisfaction: A Study from Pakistan. In *International Journal of Business and Management Sciences* (Vol. 02, Issue 02). <http://www.ijbms.org>
- Lin, Y., Luo, J., Zhou, L., Ieromonachou, P., Huang, L., & Cai, S. (n.d.). *The Impacts of Service Quality and Customer Satisfaction in the e-Commerce Context*.
- Mentzer, J. T., Min, S., & Michelle Bobbitt, L. (2004). Toward a unified theory of logistics. *International Journal of Physical Distribution & Logistics Management*, 34(8), 606–627. <https://doi.org/10.1108/09600030410557758>
- Murfield, M., Boone, C. A., Rutner, P., & Thomas, R. (2017). Investigating logistics service quality in omni-channel retailing. *International Journal of Physical Distribution and Logistics Management*, 47(4), 263–296. <https://doi.org/10.1108/IJPDLM-06-2016-0161>
- Novika Widjaja, F. (2011). *Studi Deskriptif Persepsi Kualitas Layanan Logistik PT Pos Indonesia Surabaya Selatan pada Layanan Paket Pos*.
- Rizaty, M. (2024, February 23). *Data Jumlah Pengguna Internet di Indonesia hingga Januar 2024*.
- Sheng, T., & Liu, C. (2010). An empirical study on the effect of e-service quality on online customer satisfaction and loyalty. *Nankai Business Review International*, 1(3), 273–283. <https://doi.org/10.1108/20408741011069205>
- Tandon, U., & Ertz, M. (2024). Modelling gamification, virtual-try-on technology, e-logistics service quality as predictors of online shopping: an empirical investigation. *Current Psychology*, 43(16), 14289–14303. <https://doi.org/10.1007/s12144-023-05379-2>
- Tedjakusuma, A. P., Harly, K. R., & Andajani, E. (2024). Essential Drivers of Customer Satisfaction in using Shopee Apps: A Perspective of Logistic Service Dimensions. *Journal of Business & Banking*, 13(2), 193–211. <https://doi.org/10.14414/jbb.v13i2.4165>
- Uvet, H. (2020). Importance of Logistics Service Quality in Customer Satisfaction: An Empirical Study. *OPERATIONS AND SUPPLY CHAIN MANAGEMENT*, 13(1), 1–10.
- Xiao, Z., Wang, J. J., & Liu, Q. (2018). The impacts of final delivery solutions on e-shopping usage behaviour: The case of Shenzhen, China. *International Journal of Retail and Distribution Management*, 46(1), 2–20. <https://doi.org/10.1108/IJRDM-03-2016-0036>
- Xing, Y., Grant, D. B., McKinnon, A. C., & Fernie, J. (2011). The interface between retailers and logistics service providers in the online market. *European Journal of Marketing*, 45(3), 334–357. <https://doi.org/10.1108/03090561111107221>
- Xu, X., & Jackson, J. E. (2019). Investigating the influential factors of return channel loyalty in omni-channel retailing. *International Journal of Production Economics*, 216, 118–132. <https://doi.org/10.1016/j.ijpe.2019.03.011>