



The Effect of Logistic Service Quality on Customer Satisfaction of PT. Global Jet Express (J&T Express)

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Abstract. This present study aims to analyze what factors contribute significantly to customer satisfaction of logistic services' users in Indonesia with PT. Global Jet Express (J&T Express) as the research object. The theory used in this research was Logistic Service Quality (LSQ), consisting of timeliness, information sharing, order condition, personnel contact quality, and order discrepancy handling. It used 224 respondents, and Structural Equation Model (SEM) technique using AMOS software was used to analyze the data. The results show that timeliness, information sharing, order condition, and personnel contact quality have a positive and significant effect on customer satisfaction. Only order discrepancy handling has a positive but not significant effect on customer satisfaction. The study results provide input for J&T Express and other logistics companies on the factors influencing customer satisfaction. The results of this study show that information sharing is the most important variable influencing customer satisfaction; therefore, J&T express must regularly perform continuous improvements and innovations related to information sharing with customers to increase customer satisfaction.

Keywords: personnel contact quality · logistic service quality · order condition · timeliness · customer satisfaction

1 Introduction

The e-commerce market is a promising business and is in high demand by Indonesians. In line with the growth of e-commerce, the popularity of online shopping is also increasing every year. People's shopping patterns have shifted to online because it is considered more practical, saves time, and saves costs. Nielsen [1] reveals that since Indonesia implemented large-scale social restrictions (PSBB), around 30% of consumers have moved to online shopping. BPS [2] shows an increase in online shopping activities by 46%. The number of online shopping users will certainly increase the growth of its complementary service industry, especially logistics services in Indonesia. The Indonesian Association of Express, Postal, and Logistics Service Companies (Esperanto) noted that the national average shipping volume during the first semester of 2021 grew by 30% compared to the same period last year [3].

There are several logistics service providers in Indonesia: JNE, J&T Express, Pos Indonesia, DHL, and so on. Based on Popular (a market research platform) research in 2020 about “Consumers’ Preferred Package Delivery Services when Shopping Online” involving 5920 respondents across Indonesia, J&T Express was chosen as consumers’ favorite logistic provider (44%) when shopping online, followed by JNE 28%, Sicepat 10%, Pos Indonesia 3%, and others [4].

J&T Express is chosen as the object of this study as it is consumers’ favorite logistic provider by eliminating other logistics companies such as JNE, Tiki, Pos Indonesia, and DHL. This favorite predicate is due to J&T Express’ fast delivery, low cost, fast delivery, accurate tracking system, and close proximity with J&E Express agent to home and has brought the company to be the second largest startup in Indonesia with a valuation of USD 7.8 billion only in 6 years of its establishment [5].

This study replicates [6], which investigated how logistic service quality factors consisting of timeliness, information sharing, order condition, personnel contact quality, and order discrepancy handling affect customer satisfaction by administering 302 millennial in the United States. The results of Uvet [6] postulate that personnel contact quality, timeliness, order condition, and information sharing have a positive and significant effect on customer satisfaction. While, order discrepancy handling has a positive and but not significant effect on customer satisfaction, signifying that order discrepancy handling has no effect on customer satisfaction in logistics service providers.

2 Literature Review

2.1 Logistic Service Quality

According to Yang et.al. [7] and Fernandes et.al. [8], logistic service quality refers to a set of performance factors measured by the ability to distribute products in accordance with customer requirements. Logistic service quality covers personnel contact quality, order release quantities, information quality, ordering procedures, order accuracy, order condition, order quality, order discrepancy handling, and timeliness [9].

2.2 Personnel Contact Quality

According to Bitner et.al. [10], a good understanding of clients by the contact staff will help companies to adopt customers’ expectations and needs. Service personnel’s important skills, such as experience, ability to empathize with the customers’ situation, desire to solve problems during the delivery process, and good interaction with customers affect clients’ perception of service quality they took. For logistic service providers, better personnel contact quality will increase customer satisfaction.

2.3 Timeliness

Timeliness refers to whether orders arrive at the customer’s location when promised. More broadly, timeliness refers to the time between order placement and receipt [11]. Hult et.al. [11] adds that cycle time is a competitive weapon that starts from order

placement to completion of delivery. This cycle time, which consists of transportation time and backorder time when products are not convenient, is the most important factor that shows the delivery system's performance. For logistic service providers, more on-time delivery will increase customer satisfaction.

2.4 Order Condition

Bienstock et.al. [12] articulates order condition as damage levels of orders during the delivery and this dimension is considered the most important dimension of logistic service quality. For logistic service providers, the order must be delivered in good condition because broken orders will decrease customer satisfaction, regardless other dimensions are fulfilled beyond expectation.

2.5 Order Discrepancy Handling

Mentzer et.al. [13] defines order discrepancy handling as how logistics firms deal with differences in orders after orders arrive. Mentzer et.al. [14] discloses that the performance of logistics companies to correct discrepancies, such as wrong items and poor quality, has a significant impact on customers' perception about LSQ. Novack et.al. [15] articulates corrective action as "how well the 3PL service providers address any discrepancy in logistics services." For logistic service providers, better order discrepancy handling will increase customer satisfaction.

2.6 Information Sharing

The logistics information systems which are used lately by logistic enterprises enable logistics services to increase their perception of service quality. The logistics information systems consist of internal and external information sharing. While the internal exchange of information in logistics services makes it possible to increase service quality by increasing the timeliness and accuracy of orders in service, external information sharing, which includes real-time information sharing with the customers, makes it possible to close the gap between clients' expected service quality. The service delivery process has great importance in expectations as much as the outcome of a service [16]. Mentzer et.al. [13] stipulates that 'information quality refers to customers' perceptions of the information provided by the supplier regarding products from which customers may choose.' According to Uvet [6], information sharing improves users' perceptions of service quality, timeliness, and delivery accuracy at the company. For logistic service providers, better information sharing will increase customer satisfaction.

2.7 Customer Satisfaction

Customer satisfaction is defined as an overall assessment of the buyer-seller relationship. In particular, satisfaction with transaction-specific relationships can predict the likelihood of additional transactions referring to positive and negative comments about a product, brand, service offered, and the organization itself [17].

2.7.1 Hypothesis Development Personal Contact Quality on Customer Satisfaction

Personnel contact quality refers to the customer orientation of the supplier's logistics contact people. In other words, customers pay attention to whether their service personnel is knowledgeable, empathizes with their situation, and helps them resolve their problems [18]. Uvet [6] stipulates that personnel contact quality positively affects customer satisfaction. Customers are satisfied when the contact person can understand the problem, solve the problem, and has sufficient knowledge regarding the service deficiencies the customer faces. Based on these findings, the following hypothesis can be formulated:

H1: Personal contact quality has a positive and significant effect on customer satisfaction.

2.7.2 Timeliness on Customer Satisfaction

Timeliness refers to whether orders arrive at the customer's location when promised. More broadly, timeliness refers to the time between order placement and receipt [11]. The time it takes to deliver an order can be affected by transportation time, and the time when the ordered product is not in stock. According to Uvet [6], timeliness positively affects customer satisfaction. Indicators of the company's success in meeting timeliness are the time gap between placing a delivery request and receiving goods is short; the goods are received according to the promised time, and the time to order goods that run out is short. Based on these findings, the following hypothesis can be formulated:

H2: Timeliness has a positive and significant effect on customer satisfaction.

2.7.3 Order Condition on Customer Satisfaction

Bienstock et.al. [12] defines order condition as the lack of damage to orders. If the order is damaged, the customer cannot use it and must undergo corrective procedures with the logistics service provider/seller (depending on the source/cause of the damage). According to Uvet [6], order condition positively affects customer satisfaction. Customer satisfaction related to order conditions can be assessed by several things, such as orders received from logistics services not damaged, order damage caused by transportation modes rarely occurring, and order damage caused by handling from logistics services rarely occurring. Based on these findings, the following hypothesis can be formulated:

H3: Order condition has a positive and significant effect on customer satisfaction.

2.7.4 Order Discrepancy Handling on Customer Satisfaction

Novack et.al. [15] articulates order discrepancy handling as "how well the providers of 3PL services address any discrepancy in logistics services". Customers demand corrective action from 3PL service providers if orders received are not in satisfactory condition. How the 3PL service provider company responds to problems will affect customer perceptions of service quality. If order discrepancies can be handled properly and orders

are in the exact condition, good quality, and good condition, then customers will positively perceive the order discrepancy handling procedure. According to Populix [4], order discrepancy handling does not positively affect customer satisfaction. The indicators of order discrepancy handling studied by Uvet [6] are justification for the quality of goods that do not meet customer satisfaction, the process of reporting problems is as easy as possible, and the company's response to problems is satisfactory. Based on these findings, the following hypothesis can be formulated:

H4 Order Discrepancy Handling has a positive and significant effect on customer satisfaction.

2.7.5 Information Sharing on Customer Satisfaction

Mohr and Spekman [18] defines information sharing as the exchange of critical information flows between parties through media tools. The availability of appropriate and sufficient information will help consumers in making decisions. According to [6], information sharing positively affects customer satisfaction. The indicator of information sharing that contributes to customer satisfaction is the effectiveness of information sharing with customers. Service providers must be able to share standardized and specific information with customers. Good information sharing should also consider the availability of accurate, timely, and standardized information. Based on these findings, the following hypothesis can be formulated:

H5: Information Sharing has a positive and significant effect on customer satisfaction.

3 Research Methods

This study used primary data sources obtained from respondents by distributing an online questionnaire using Google forms. Respondents were 224 millennial who have used J&T Express services in the past 6 months. The respondents' characteristics were male and female customers, have used J&T Express services in the past 6 months, have a minimum age of 17, and have a minimum education of high school or equivalent. This study analyzed the effect of the independent variables: Personnel Contact Quality (PCQ), Timeliness (T), Order Condition (OC), Order Discrepancy Handling (ODC), and Information Sharing (IS)) on the dependent variable: Customer Satisfaction (S).

It exercised a non-probability sampling technique with a purposive sampling type, which collects data from the population members in accordance with the specified conditions. Data were analyzed using Structural Equation Model (SEM) technique using AMOS software.

4 Results and Discussion

Table 1 above shows that all parameter results of the measurement model test meet the criteria (CMIN/DF = 2.176, RMSEA = 0.073, GFI = 0.883, CFI = 0.946, and TLI = 0.932). The next stage was to test the constructs' validity and reliability. The constructs'

Table 1. The Goodness of the fit measurement model

No.	Goodness of Fit	Criteria	Results	Remarks
1	CMIN/DF	≤ 3.00	2.176	Good Fit
2	RMSEA	≤ 0.08	0.073	Good Fit
3	GFI	Marginal Fit (0.8–0.9)	0.883	Marginal Fit
4	CFI	Good Fit (≥ 0.90)	0.946	Good Fit
5	TLI		0.932	Good Fit

validity can be reviewed through standardized loading and Average Variance Extracted (AVE), which must have a minimum value of 0.5. Reliability can be seen from Construct Reliability (CR) value above 0.6. As all the results meet the criteria, then the structural model test can be conducted.

Table 2 shows that H1, which examines the effect of personnel contact quality on customer satisfaction, obtains a standardized estimates value of 0.194, a critical ratio value of 2.287, and a p-value of 0.022. Thus, it can be concluded that personnel contact quality has a significant effect on customer satisfaction. These results are in line with [6] that postulates personnel contact quality has a significant effect on customer satisfaction. The results indicate that J&T Express' personnel contact quality will result in customer satisfaction, where the company will be perceived as a company that pays attention and understands customer needs. These results are in line with Zailani et.al. [19] that reveals a positive effect of personnel contact quality on customer satisfaction in the context of halal logistics service quality in Malaysia.

Table 2. The Results of Hypothesis Testing

	Hypothesis	Standardized Estimate.	C.R	P-value	Remarks
H1	Personnel Contact Quality - > Customer Satisfaction	0.194	2.287	0.022	Supported
H2	Timeliness - > Customer Satisfaction	0.223	2.356	0.018	Supported
H3	Order Condition - > Customer Satisfaction	0.156	1.966	0.049	Supported
H4	Order Discrepancy Handling - > Customer Satisfaction	0.028	0.329	0.742	Not Supported
H5	Information Sharing - > Customer Satisfaction	0.132	4.161	***	Supported

Table 2 shows that H2, which examines the effect of timeliness on customer satisfaction, obtains a standardized estimates value of 0.223, a critical ratio value of 2.356, and a p-value of 0.018. Thus, it can be concluded that timeliness has a significant effect on customer satisfaction. These results align with [6] that postulates timeliness has a significant effect on customer satisfaction. J&T Express' services can be improved by paying attention to timeliness. If the customer receives the package on time and the service process is fast, the customer will feel satisfied with J&T Express services. This is because timeliness leads to a company's competitive advantage that can be achieved through the time spent between order placement and order receipt.

Table 2 shows that H3, which examines the effect of order conditions on customer satisfaction, obtains a standardized estimates value of 0.156, a critical ratio value of 0.1966, and a p-value of 0.049. Thus, it can be concluded that order condition has a significant effect on customer satisfaction. These results are in line with Uvet [6] that postulates order condition has a significant effect on customer satisfaction. If the order conditions received by the customer match their expectations, the customer will feel satisfied with J&T Express services. To ensure good order conditions, J&T Express can provide resources such as machines and vehicles that support the safety of customer orders and employees who are experienced and capable of handling customer orders properly.

Table 2 shows that H4, which examines the effect of order discrepancy handling on customer satisfaction, obtains a standardized estimates value of 0.028, a critical ratio value of 0.329, and a p-value of 0.742. Thus, it can be concluded that order discrepancy handling has no significant effect on customer service. These results are in line with Uvet [6] that reveals order discrepancy handling has no significant effect on customer service. Order discrepancy handling has no significant effect on customer service because customers who have experienced order discrepancies in the shipping process will still feel disappointed and dissatisfied with the company even though the company is trying to fix the discrepancy.

Table 2 shows that H5, which examines the effect of information sharing on customer satisfaction, obtains a standardized estimates value of 0.132, a critical ratio value of 4.161, and a p-value of < 0.001 (***). Thus, it can be concluded that information sharing has a significant effect on customer satisfaction. These results align with Uvet [6] that postulates information sharing has a significant effect on customer satisfaction. Effective, accurate, and timely information sharing is very important to customers and will affect respondents' satisfaction with J&T Express. These results are also in line with Dua [20], which reveals the importance of timely and fully available information for e-commerce platforms serving shipments across 81 countries in China. In various contexts, it can be concluded that information sharing will affect consumer satisfaction, especially in logistics companies like J&T Express.

5 Conclusion

The results show that personnel contact quality, timeliness, order condition, and information sharing have a positive and significant effect on customer satisfaction. Only order discrepancy handling has a positive but insignificant effect on customer satisfaction. This is because respondents tend not to consider handling order discrepancies will

increase their satisfaction with the company's services. It is due to customers who have experienced order discrepancies in the shipping process will still feel disappointed and dissatisfied with the company even though the company is trying to fix the discrepancy. Some recommendations to J&E Express are:

- For information sharing, J&T express must perform continuous improvements and innovations to increase customer satisfaction.
- For personnel contact quality, J&T Express may provide experienced and friendly human resources who can solve customer problems.
- For order conditions, J&T Express Indonesia must provide resources such as machines and vehicles that support the safety of customer orders and employees who are experienced and able to handle customer orders properly to minimize order damage.

This research has a limitation on the respondents who were mostly the millennial generation. Future research should consider expanding the respondents' age group so that the results can be appropriately generalized. In addition, this research only used one object of J&T Express, making the results unable to reflect the importance of service quality factors in the logistics industry. For further research, it is recommended to involve several logistics companies with various company sizes to make the research results more objective.

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