The Influence of Delivery Service Quality on J&T Express Customer Loyalty in North Jakarta During the Covid-19 Pandemic

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ABSTRACT: The purpose of this study was to analyze and prove the effect of Delivery Service Quality on J&T Express Customer Loyalty in North Jakarta during the Covid-19 pandemic. This study uses an online survey method with a sample of 100 spread across the city of North Jakarta.

The data analysis method used is simple linear regression test, T test, correlation coefficient test, and coefficient of determination test. The results obtained in the simple linear regression test is that the X value of 0.489 is positive. This shows that any increase in the quality of delivery service (X) will be followed by an increase in customer loyalty (Y) of 0.489. From the results of the t test with a t count of 10.281 > t table 1.98 with a significance of 0.000, it shows that the delivery service quality variable has a significant effect on customer loyalty for J&T express in North Jakarta during the Covid-19 pandemic. The results of the correlation coefficient with a correlation value of 0.720 can be concluded that the quality of delivery services with customer loyalty J&T express in North Jakarta during the Covid-19 pandemic has a strong relationship. Then the results of the coefficient of determination with an R Square value of 0.519 can be concluded that the effect of delivery service quality on J&T express customer loyalty in North Jakarta during the Covid-19 pandemic was 51.9% while 48.1% customer loyalty was influenced by other variables that not researched.

Keywords: Quality of Delivery Service, Customer Loyalty, Covid-19

INTRODUCTION

With the very rapid development of technology and in line with current economic developments. These technological advances result in increasing productivity in a business. The development of online trading businesses currently urges business actors to be able to distribute their products to customers. Entrepreneurs need companions in the product distribution industry, namely couriers and goods delivery. Without this goods delivery service, trade development cannot continue to grow. As the market continues to grow, many industries need courier services so that business people can develop their businesses. and with current developments, goods delivery services in

Indonesia are also developing rapidly. Competition in the transport sector remains fierce as all forms of companies and the private sector are free to enter the transport industry.

The basic aim of a service company is to provide maximum quality and service in accordance with customer expectations in order to increase customer satisfaction, so that goods delivery service providers have good relationships with customers, in this case customers can trust the service company. Quality of service for customers is an important part of the company which is reflected in the company's vision and mission. So that companies are able to provide superior service to customers which will later create satisfaction and grow customer loyalty, Fortuna et al. (2020)

Starting in December 2019, almost the entire world is being hit by the Covid-19 pandemic which has an economic and social impact on a country. This pandemic is caused by an outbreak of Coronavirus disease which is a respiratory tract infection (SARS-CoV-2). The steps that have been taken by the government, especially in Indonesia, include social distancing, locking down, industrial restrictions, closing businesses that are felt to result in the spread of this virus, and self-quarantine. In the field of goods delivery logistics, due to the lock down, the logistics system became hampered, Biswas & Das (2020).

The Covid-19 pandemic has caused customer behavior patterns during this pandemic to change so that to maintain service quality and customer loyalty, goods delivery service providers must evaluate improvements in service in accordance with customers' wishes in order to increase customer loyalty to delivery service providers in the future. covid-19 pandemic, Indriani (2021).
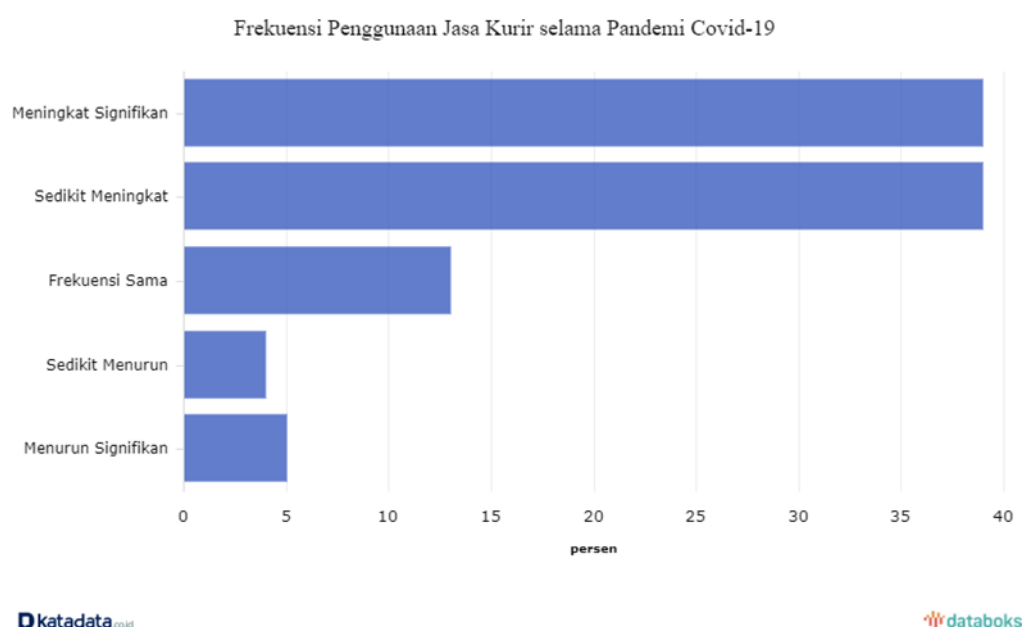

Figure 1

Frequency of Use of Courier Services during the Covid-19 Pandemic

Sourced from the information in the image above obtained from 122 respondents in Indonesia. As many as 59.8% of respondents came from Jabodetabek and 41.2% from non-Jabodetabek. The

results of this information show that the use of courier services to deliver goods has increased during the Covid-19 corona virus pandemic. In detail, there were 39% of respondents who admitted that the frequency of using courier services had increased significantly during the Covid-19 pandemic. As many as 39% of respondents reported that the use of courier services had increased slightly.

Apart from that, 13% of respondents said that the frequency of using couriers during the pandemic had not changed compared to before. As many as 4% of respondents admitted that the use of courier services decreased slightly during the pandemic. Meanwhile, 5% of respondents reported that use of courier services had decreased significantly during the Covid-19 pandemic.

During this pandemic, online purchases continue to increase, and with the many e-commerce options available, it makes it easier for many people to shop from home and be able to buy the products they want, therefore J&T Express optimizes its services to attract consumers to use delivery services by delivering free on-site pick-up service with no minimum limit, 24 hour call center service, 24 hour 365 day operation, regular premium service prices and can reach all regions in Indonesia without third parties.

From these services, J&T Express will be optimized to produce and improve the quality of service by improving the e-tracking service system to make it easier for customers to review updates on goods sent via J&T Express, focusing on efforts to meet the needs of J&T Express in creating a breakthrough that creates a tracking system that In real time, customers are able to see where and who is processing the goods being sent.

There is almost the same research conducted by Indriani (2021). This research discusses the influence of delivery service quality on customer satisfaction and customer loyalty during the Covid-19 pandemic and Kansei engineering as a method for determining service quality indicators(Indriani, 2021). With this, researchers want to conduct an analysis of how service quality affects J&T Express customer loyalty during the Covid-19 pandemic, so that they can provide customer loyalty during the Covid-19 pandemic to the J&T Express company.

Scope

This research has a scope for people who have used J&T Express delivery services. but only focuses on one place or location in the big city in DKI Jakarta, namely North Jakarta City. Researchers chose this city because there is limited space for movement at this time considering that there are several things happening. This research uses 2 (two) variables, namely delivery service quality and customer loyalty.

Formulation of the problem

The formulation of the problem of this research is, "How much influence does delivery service quality have on J&T Express customer loyalty in North Jakarta during the Covid-19 pandemic?"

The aim of this research is to determine and analyze the influence of the quality of J&T Express delivery services in increasing customer loyalty during the Covid-19 pandemic.

Quality of Delivery Service

Martua & Djati (2018) defines service quality as the expected level of excellence and control over the level of excellence to fulfill consumer desires(Martua & Djati, 2018).

Customer loyalty

According to Hasan (2013: 121) states "Customer loyalty is behavior related to the brand of a product, including the possibility of renewing the brand contract in the future, what is the possibility of customers changing their support for the brand, what is the possibility of customer willingness aimed at improving a good image for the product" (Hasan, 2013).

Logistics During the Covid-19 Pandemic

Logistical problems during the Covid-19 pandemic are part of emergency management that requires risk mitigation, preparation, emergency response activities and post-pandemic recovery (Yu et al., 2020).

Sacramento, Pisinger, & Ropke (2019) proposed during the Covid-19 pandemic to increase the weight of packages on drones to reduce the number of vehicles and outside activities.

METHOD

The type of research used in this research is explanatory research. According to Sugiyono (2017:6), explanatory research is a research method that aims to explain the position of the variables studied and the influence between one variable and other variables.

The method used in this research is a survey method by randomly interviewing respondents who happen to be found. According to Sugiyono (2018) the survey method is a quantitative research method used to obtain data that occurred in the past or currently, about beliefs, opinions, characteristics, behavior, variable relationships and to test hypotheses about sociological and psychological variables from samples taken from the population. In certain cases, data collection techniques using observation (interviews or questionnaires) are not in-depth, and research results tend to be generalized(Sugiyono, 2018; Sugiyono et al., 2017).

However, if there are some respondents who feel more comfortable filling out the questionnaire, the researcher will give the respondent a list of research statements to fill in while still monitoring if there is an interpretation of the statement that is not understood, or there are multiple interpretations of a statement.

Sampling technique

1. Population

According to Sugiyono (2018:117) what is meant by population is a group consisting of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn. In this research, the population taken is J&T delivery service users whose exact number is not yet known.

2. Sample

According to Sugiyono (2018:18) the sample is part of the number and characteristics of the population, the sample taken from the population must be truly representative or representative of the population being studied.

Apart from that, determining the maximum sample size for SEM according to Hair et al., (1995) depends on the number of research indicators multiplied by 5 to 10. In this study, 21 indicators were used and the multiplier was 6, so the number of samples for this study was as follows. following:

Jumlah Sampel = 21 x 6 = 126 sampel / responden

The number of variables in this research is 3 variables consisting of 1 exogenous variable, 1 intervening variable, and 1 endogenous variable with 21 indicators. Referring to the calculation of the minimum number of samples, the sample in this study was 126 samples. Cluster technique or Area Proportional Random Sampling and Accidental sampling, is the technique used in sampling in this research. From the specified number of samples, namely 126 samples, the distribution will use a semi-proportional pattern.

RESULT AND DISCUSSION

1. Data Analysis Test Results
    a.   Research Instrument Validity Test Results

In this research, the researcher carried out a validity test on the research instrument, which was to test and find out whether the answers from 100 respondents were valid or not. Items from the research instrument can be declared valid if they meet the requirements, namely the value or score of the Pearson Correlation (Correlation Coefficient) has a value of ≥ 0.30. Apart from that, a research instrument can be said to be reliable or have consistent answers if the value or score from Cronbach's Alpha is ≥ 0.60 Sugiyono (2012). The complete results of testing the validity and reliability of research instruments using SPSS version 23 statistical software can be seen in the attachment, but in summary can be seen in Table 4.9 below:

Table 1

Validity Test Results

Variable	Indicator	Code	Correlation coefficient	Is
X **Quality of Delivery Service**	Reliability	X.1	0,648	*Valid*
	Employee equipment	X.2	0,692	*Valid*
	Clear service standards	X.3	0,611	*Valid*
	Employee expertise	X.4	0,796	*Valid*
	Provide positive responses to customers	X.5	0,820	*Valid*
	Providing proper & fast service	X.6	0,878	*Valid*
	Respond to customer complaints	X.7	0,816	*Valid*
	Guarantee on time service	X.8	0,747	*Valid*
	Guaranteed security of goods & customer data	X.9	0,771	*Valid*
	Put the customer's interests first	X.10	0,850	*Valid*
	Appreciate and serve well	X.11	0,695	*Valid*
AND **Customer loyalty**	Make a repurchase within a certain time	Y.1	0,797	*Valid*
	Reuse regularly	Y.2	0,858	*Valid*
	Willing to recommend service excellence	Y.3	0,827	*Valid*
	Referring services to other people	Y.4	0,762	*Valid*
	Maintaining company image	Y.5	0,881	*Valid*
	Supports delivery services	Y.6	0,662	*Valid*
	Provide positive comments about the company	Y.7	0,779	*Valid*

Source: Primary data processed, 2022

Based on Table 1 above, it can be seen that the Delivery Service Quality (X) variable has 11 indicators, namely Reliability (X.1), Employee Equipment (X.2), Clear Service Standards (X.3), Employee Skills (X.4).), Providing Positive Responses to Customers (X.5), Providing Proper & Fast Service (X.6), Responding to Customer Complaints (X.7), Timely Guarantee (X.8), Guarantee

of Security of Goods & Customer Data (X.9), Prioritizing Customer Interests (X.10), Respecting and Serving Well (X.11) after carrying out a validity test using SPSS version 23 statistical software.

Shows the results that each item of the research instrument is declared valid because for each item the Pearson Correlation is more than 0.30, namely: Reliability (X.1) the correlation coefficient is 0.640, Employee Equipment (X.2) the correlation coefficient is 0.692, Service Standards What is clear is that (X.3) the correlation coefficient is 0.611, Employee Skills (X.4) the correlation coefficient is 0.796, Providing Positive Responses to Customers (X.5) the correlation coefficient is 0.820, Providing Proper & Fast Service (X.6) the correlation coefficient is 0.878, Responding to Customer Complaints (X.7) the correlation coefficient is 0.816, Timely Guarantee (X.8) the correlation coefficient is 0.747, Security Guarantee of Goods & Customer Data (X.9) the correlation coefficient is 0.771, Prioritizing Customer Interests (X.10) correlation coefficient is 0.850, Respect and Serve Well (X.11) correlation coefficient is 0.695.

Furthermore, for the Customer Loyalty variable (Y) uses 7 indicators consisting of Repurchasing within a Certain Time (Y.1), Reusing regularly (Y.2), Willing to recommend service excellence (Y.3), Referring services to people others (Y.4), Maintaining the Company's Image (Y.5), Supporting J&T Delivery Services (Y.6), and Providing Positive Comments on the Company (Y.7). after carrying out validity and reliability tests using SPSS version 23 statistical software.

The results show that each item of the research instrument is declared valid because for each item the Pearson Correlation is more than 0.30, namely: Repurchase within a certain time (Y.1) the correlation coefficient is 0.797, Reuse regularly (Y.2) correlation coefficient of 0.858, Willing to recommend service excellence (Y.3) correlation coefficient of 0.827, referring services to others (Y.4) correlation coefficient of 0.762, Maintaining Company Image (Y.5) correlation coefficient of 0.881, Supporting Services J&T Delivery (Y.6) has a correlation coefficient of 0.662, and Providing Positive Comments on the Company (Y.7) has a correlation coefficient of 0.779.

b. Research Instrument Reliability Test Results

A research instrument can be said to be reliable or have consistent answers if the value or score from Cronbach's Alpha is ≥ 0.60 Sugiyono (2012). The complete results of testing the validity and reliability of research instruments using SPSS version 23 statistical software can be seen in the attachment, but in summary can be seen in the following table:

Table 2

Reliability Test Results

Variable	Cronbach Alpha	N of Items	Results
Delivery Service Quality (X)	0,927	11	*Reliable*
Customer Loyalty (Y)	0,893	7	*Reliable*

Source: Primary data processed, 2022

Based on the table above, it can be seen that all statements from each variable are reliable. This can be indicated by the Cronbach Alpha value obtained from each variable that has been tested which is >0.60. This shows that each statement used as a measuring tool is reliable and can be used again for further research.

c. Normality Test Results

The normality test is used to see whether the sample data used in research is normally distributed or not. The normality test can use the One Sample Kolmogorov-Sminov Test, according to Ghozali, (2018) data that is normally distributed is seen from the Monte Carlo significance value and will be fulfilled or considered passed if the Monte Carlo Sig value. (2-tailed) above 0.05. The normality test results of this research can be seen in table 2 as follows:

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			100
Normal Parameters[a,b]	Mean		,0000000
	Std. Deviation		,46808030
Most Extreme Differences	Absolute		,128
	Positive		,128
	Negative		-,078
Test Statistic			,128
Asymp. Sig. (2-tailed)			,000[c]
Monte Carlo Sig. (2-tailed)	Sig.		,064[d]
	99% Confidence Interval	Lower Bound	,057
		Upper Bound	,070

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. Based on 10000 sampled tables with starting seed 2000000.

Figure 2 Normality test results

You can see in the table above the Monte Carlo Sig value. (2-tailed) or a significance value of 0.064 > 0.05, from these results it can be concluded that the data is normally distributed.

d. Linearity Test Results

The linearity test is used to determine the relationship between visual-spatial intelligence data and students' creative thinking whether it is linear or not. If there is a linear relationship then linear regression analysis is used. Meanwhile, if there is no linear relationship between the two variables, non-linear regression analysis is used. The hypothesis for the linearity test is:

H0 = There is no linear relationship between delivery service quality and customer loyalty

H1 = There is a linear relationship between delivery service quality and customer loyalty

The linear test was carried out with the help of SPSS version 23, the following results were obtained:

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
YR * XR	Between Groups	(Combined)	35,908	24	1,496	12,224	,000
		Linearity	23,397	1	23,397	191,162	,000
		Deviation from Linearity	12,511	23	,544	4,444	,000
	Within Groups		9,180	75	,122		
	Total		45,088	99			

Figure 3 Linearity Test Results

From the table above, a significance value of 0.000 is obtained. The significance level will be compared with 0.05 (using a significance level of 0.05), if the Sig. < 0.05 then H0 is rejected, then if the Sig. > 0.05 then H0 is accepted. In the table above you can see the Sig value. What is obtained is 0.000 < 0.05, so H0 is rejected, meaning there is a linear relationship between the quality of delivery services and customer loyalty. Because the sig value. 0.000 is much smaller than 0.05, so the regression model can be used to predict customer loyalty.

e. Correlation Coefficient Test Results

Correlation analysis to obtain the strength of the relationship between two variables. Where the results can show the strength of the relationship, the importance of the relationship and the direction of the relationship.

Correlations

		XT	YT
XT	Pearson Correlation	1	,720**
	Sig. (2-tailed)		,000
	N	100	100
YT	Pearson Correlation	,720**	1
	Sig. (2-tailed)	,000	
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 4 correlation coefficient test results

Based on the data in the table above, it can be seen that there were 100 respondents who produced a correlation value of 0.720. To interpret the strength of the relationship between two variables, it is done by looking at the correlation coefficient number from the calculation results using the interpretation of the r value which is as follows:

- 0,00 – 0,199   : Very low
- 0,20 – 0,399   : Low
- 0,40 – 0,599   : Currently
- 0,60 – 0,799   : Strong
- 0,80 – 1,00   : Very strong

From this data, it can be concluded that Delivery Service Quality (X) and Customer Loyalty (Y) have a strong relationship because they have a correlation value of 0.720.

f. Coefficient of Determination Test Results

The Coefficient of Determination Test (R-Squared) is a test to explain the proportion of variation in the dependent variable that is explained by the independent variable. Apart from that, the coefficient of determination test can also be used to measure how good the regression line we have is.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,720[a]	,519	,514	3,293

a. Predictors: (Constant), XT

Figure 5 Coefficient of Determination Test Results

Based on the data in the output results above, it is known that the R Square value is 0.519. This value means that the influence of Delivery Service Quality (X) on Customer Loyalty (Y) is 51.9%, while 48.1% of customer loyalty is influenced by other variables not studied.

g. Simple Linear Regression Test Results

To find out how the two variables influence, researchers used the Simple Linear Regression Analysis technique. Simple linear regression analysis is used to determine changes that occur in the dependent variable (variable Y), the value of the dependent variable is based on the known independent value (variable X). The test results obtained using SPSS version 23 statistical software are as follows:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,795	2,197		2,637	,010
	XT	,489	,048	,720	10,281	,000

a. Dependent Variable: YT

Figure 6 simple linear regression test results

Based on the table data above, the constant value at B is obtained. So the following regression equation is obtained:

$Y = a+bX$

a = constant number of unstandardized coefficients. In this research it has a value of 5.795. This constant number means that if there is no Delivery Service Quality (X) then the consistent value of Customer Loyalty (Y) is 5.795

b = regression coefficient number. In this research it has a value of 0.489. The regression coefficient figure means that for every 1% level of Delivery Service Quality (X), Customer Loyalty (Y) will increase by 0.489, so it can be said that Delivery Service Quality (X) has a positive effect on Customer Loyalty (Y). So the regression equation is Y = 5.795 + 0.489X

As for the basis for decision making in regression analysis, by looking at the significance value (Sig.) to find out this, if the Sig. value <0.05 means that there is an influence of Delivery Service Quality (X) on Customer Loyalty (Y). On the other hand, if the Sig. >0.05 means there is no influence of Delivery Service Quality (X) on Customer Loyalty (Y).

Based on the data in the SPSS output table (coefficients) above, it can be seen that the significance value (Sig.) is 0.000 < 0.05, so it can be said that H0 is rejected and H1 is accepted, which means that "There is an influence of Delivery Service Quality (X) on Customer Loyalty (Y)".

h. T Test Results

The T test is used to test the influence of each independent variable used in this research on the dependent variable partially. Statistical tests are used to test whether the independent variable has a significant effect on the dependent variable by comparing tables and calculations obtained based on the significance level ($\alpha = 0.05$).

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,795	2,197		2,637	,010
	XT	,489	,048	,720	10,281	,000

a. Dependent Variable: YT

Figure 7 t test results

Based on the data in the table above, it is known that the calculated t value is 10.281. From these values, the t table value:

Nilai a/2 = 0,05/2 = 0,025

Degrees of freedom (df) = n -2 = 100 – 2 = 98

Value 0.025; 98, then the t table obtained is 1.983

Because the calculated t value is 10.281 > 1.983, it can be said that H0 is rejected and H1 is accepted, so it can be interpreted that "there is an influence of Delivery Service Quality (X) on Customer Loyalty (Y)".

This research uses 2 variables, namely Delivery Service Quality as the independent variable and Customer Loyalty as the dependent variable. With 6 (six) characteristics of respondents with the highest number, namely female gender as much as 64%, age 21-25 years as much as 62%, highest education high school/equivalent as much as 73%, student work as much as 39%, monthly income <1 million as much 32%, and the frequency of using J&T Express delivery services >10 times is 45%. After testing the quality of the instrument and testing classical assumptions, the researcher then carried out the hypothesis test as follows:

1. The influence of delivery service quality on customer loyalty

In this study, we analyzed a simple linear regression test and obtained the results of the regression value   X of 0.489 is positive. This shows that every time there is an increase in the quality of delivery services (X), it will be followed by an increase in customer loyalty (Y) of 0.489.

Based on the results of hypothesis testing, it was found that the quality of delivery services influences customer loyalty significantly and positively. This can be seen from the results of the t test with a calculated t of 10.281 > t table of 1.98 with a significance of 0.000. From these results

it can be concluded that the delivery service quality variable has a significant effect on customer satisfaction.

From this explanation, this research also supports previous research conducted by (Yuniarta et al., 2019), Wardhani et al. (2020), (Erdiansyah et al., 2020; Fortuna et al., 2020), and (Aburayya et al., 2020). The results of these five studies show that the relationship between service quality variables has a significant effect on customer loyalty.

CONCLUSION

Based on the research results, it is stated that the research results show that there is a significant and positive influence and influence between the independent variables, namely the quality of delivery services and the dependent variable, namely customer loyalty. With an influence of 51.9& from the quality of delivery services and the remaining 48.1% influenced by other variables not included in this research.

Based on the conclusions that have been made, the suggestions that can be given are as follows:

1. From the Delivery Service Quality variable, J&T Express North Jakarta is expected to provide training to employees so that they can have the knowledge, abilities and skills according to the work they do.
2. From the customer loyalty variable, J&T Express North Jakarta is expected to be able to create new innovations / new features that are different from other companies so that this can be an advantage for the J&T company.

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