

THE EFFECT OF SERVICE QUALITY ON REDPACK LABELED CARGO DELIVERY SERVICES ON CUSTOMER SATISFACTION OF PT. PELNI(PERSERO) HEAD OFFICE IN 2024

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ABSTRACT

This research aims to find out how much influence and what factors most influence customer satisfaction in the quality of service for cargo labeled Redpack at PT PELNI (Persero) Head Office. With a quantitative method, sampling was carried out on RedPack cargo customers using a saturated sampling technique, taking the entire population as a sample, namely 70 respondents. The data obtained through the questionnaire was analyzed using simple linear regression and correlation to find out how much influence the variables have, while to find out the factors that most influence customer satisfaction in service quality using the results of respondents' answers to service quality distributed through the questionnaire. The results of simple linear regression analysis show that there is a positive and significant influence between service quality and customer satisfaction, and the correlation results show that the influence of service quality on customer satisfaction is 53.7%. The results of the questionnaire show that the factor that most influences customer satisfaction is the quality of service at the Redpack labeled goods delivery service at PT. Pelni (Persero) in 2024 is reliability or greatness of service. From the results of the partial T test hypothesis testing, it is known that the significant level is $0.001 < 0.05$, it is stated that H_0 is rejected and H_a is accepted, which means that service quality has a significant effect on customer satisfaction with RedPack cargo at PT. Pelni (Persero).

Keywords: Service Quality, Customer Satisfaction, RedPack Load

INTRODUCTION

Currently, freight forwarding services have a great influence on society. The needs of the community and the ease of shipping goods between regions or countries can be met because of the presence of Freight Forwarder (Expedition) companies (Kunaka & Carruthers, 2014; Thompson & Taniguchi, 2017). PELNI's logistics services increased by 85% in 2021, from 171,424 kg in 2020 to 317,698 kg the following year (Fitri & Winarto, 2021). One of the companies that provides freight forwarding services in Indonesia is PT. Indonesian National Shipping (PELNI). PT Pelayaran Nasional Indonesia or known as PELNI, offers goods delivery services to meet the needs of the community, in the form of *RedPack* Labeled Goods, which was launched on August 15, 2018 in the form of red bag packaging. Redpack is a cargo consisting of various types of goods and not dangerous goods such as moving goods, consignment services, clothing, and others (Reonaldy, 2022). Which are packaged in standard bags labeled Redpack with a maximum *load volume* of length x width x height 50x50x100cm with a weight of 3 kg - 50 Kg in 1 (one) bag/sack and a maximum weight of 50 kg and a minimum charge rate of 3 kg, determination of tariffs from weight or volume.

There is a phenomenon that exists in the object, where every year PT PELNI experiences an increasing number of delivery targets, behind the excellent service provided by PT. PELNI, the researcher found that there are several things that are not satisfactory for service users. Things that make customers feel dissatisfied so they cause losses for customers are damage to customer goods by

6%, delay in delivery of goods by 21%, or loss of customer goods and difficulty in claiming insurance by 13%. The problem was discovered when researchers carried out fieldwork practices in 2022.

Previous research has shown that service quality has a significant influence on customer satisfaction in various sectors (Annisa & Munas Dwiyanto, 2021; Islam et al., 2021). Nanincova (2019) on Noach Cafe and Bistro shows that service quality dimensions such as reliability, responsiveness, assurance, empathy, and tangible contribute 32% to customer satisfaction.

This research uses the theory of service quality which is a behavior that arises from comparing the expectations of a customer to the quality of service with the way an industry works as perceived by customers. Tjiptono (2017) divide service quality into five dimensions: tangible (physical evidence), empathy (empathy), responsiveness (responsiveness), reliability (reliability), and assurance (guarantee). In addition, the theory of customer satisfaction which states that satisfaction is a comparison between expectations and perceived reality by customers is also used as a theoretical foundation. This study aims to find out how much influence and what factors affect customer satisfaction the most in the quality of service on Redpack labeled cargo at PT PELNI (Persero) Head Office.

METHOD

This research uses a quantitative method (Koyan, 2014; Rukin, 2019; Wakarmamu, 2022), which is based on scientific characteristics, namely rational, empirical, and systematic to obtain data with specific purposes and uses. In the service quality variables, the dimensions used are tangible (physical evidence), empathy (empathy), responsiveness (responsiveness), reliability (reliability), and assurance (guarantee), while the customer satisfaction variables (customer expectations), perceived quality (perceived quality), perceived value (perceived value), customer satisfaction (customer satisfaction), and customer loyalty (customer loyalty).

Data collection in this study was through a questionnaire distributed to respondents using Google Form, with measurements using the Likert Scale to assess the respondents' perception of service quality and customer satisfaction. The sampling technique used was saturated sampling, where all members of the population were sampled (Sugiyono, 2014). The population in this study is customers who use RedPack Labeled Cargo at PT. PELNI Head Office, with a total of 70 respondents.

The data obtained through the questionnaire was analyzed using simple linear regression and correlation to find out how much influence there was between variables, while to find out the factors that most affected customer satisfaction in service quality using the results of respondents' answers to the quality of service disseminated through the questionnaire. This research was carried out on June 12 – July 12, 2024, located at the office of PT. PELNI (Persero), Jl. Gajah Mada No. 14 Central Jakarta, DKI Jakarta.

RESULTS AND DISCUSSION

The research uses two variables X (Service Quality) and Variable Y (Customer Satisfaction), The author distributes a questionnaire through *Google Forms* to respondents in the process of analyzing research data. The following is an overview of the respondents and the description of each variable:

a. Characteristics of Respondents

Respondent characteristics play a role in clarifying the respondent's personal perspective through a sample from a study that has been conducted previously.

1) Gender

In table 1, the authors can conclude that the respondents who are male are 51 people or 72.9% and the respondents who are female are 19 people or 27.1%. So most respondents are male.

In table 2, data is obtained with the results of the questionnaire of respondents aged 17-22 years are 26 people or 37.14%, respondents aged >23 years are 44 people or 62.86%. then it was concluded that most respondents were at the age of >23 years. In table 3, data was obtained with the results of the questionnaire of respondents from the time of using services <1 month was 9 people or 12.9%,

respondents from the time of using services for 2-6 months were 20 people or 28.6%, respondents from the time of using services for 7-11 months were 22 people or 31.4%, respondents from the time of using services >1 year was 19 people or 27.1%. So the respondents with the most time to use services are 7-11 months of service use time.

Table 1. Characteristics of Respondents by Gender

Gender	Frequency (People)	Presented (%)
Man	51	72,9%
Woman	19	27,1%
Sum	70	100%

Source: Primary (2024)

2) Age of Respondents

Table 2. Characteristics of Respondents by Age

Age	Frequency (People)	Presented (%)
< 17 Years	0	0%
17-22 Years	26	37,1%
>23 years	44	62,9%
Sum	70	100%

Source: Primary (2024)

3) Respondent Service User Time

Table 3. Characteristics of Respondents Based on Service User Time

Service Usage Time	Frequency (People)	Presented (%)
< 1 Month	9	12,9%
2-6 Months	20	28,6%
7-11 Months	22	31,4%
>1 Year	19	27,1%
Sum	70	100%

Source: Primary (2024)

b. Frequency of Research Respondent Data

Based on the results of the study, 70 respondents were divided into 35 respondents for the Service Quality variable and 35 respondents for the Customer Satisfaction variable. Through distributing questionnaires in order to get a trend in respondents' responses to the answers from each variable in the study and will be described in a range of answer points.

1. Respondents' Response to Service Quality Variables (X)

Kotler in (Pertiwi, 2021:68) states that service quality is the performance of a person to another person which can be in the form of intangible actions and does not lead to the ownership of an item or to anyone. In table 4, the respondents' responses to the quality of service in the statement of employees provide fast and appropriate service, as well as employees are responsive and agile In helping customer complaints, they had a low response value, namely 31.4% of respondents answered very much in agreement. Meanwhile, the process of ordering cargo labeled RedPack is easy and fast and has the highest response value, namely 42.8% of respondents answered that they strongly agree. In table 5, it is explained that the respondents' responses to the quality of service in the statement that the services received are proportional to the price paid, and the company's products or services are very beneficial to users have a low response value, namely 25.7% of respondents each answered that they strongly agree. Meanwhile, the statement of the cargo sent safely to the destination had the highest response value, namely 45.7% of respondents answered that they strongly agreed.

Table 4. Recapitulation of Respondents' Answers to Variable X

NO	Statement	Answer					Weight	Aver age grad e	Respon ds -the
		SS (5)	S (4)	R (3)	TS (2)	ST S (1)			
1	The office or warehouse has sufficient waiting space	15	11	6	3	0	143	4,08	35
2	The office or warehouse has ample parking lot	17	12	5	1	0	150	4,28	35
3	Officers are ready to help if there is a difficulty	12	15	6	1	1	141	4,02	35
4	Hospitality and decency Officer hour Providing services	12	15	5	2	1	140	4	35
5	The process of ordering RedPack labeled loads is easy and fast	15	14	6	0	0	149	4,25	35
6	Desire and employee capabilities to give information about Existing Services	12	15	6	1	1	141	4,02	35
7	Employee give Fast and Precise Service	11	16	6	2	0	141	4,02	35
8	Employees are responsive and agile in help Complaints customer	11	14	7	2	1	137	3,91	35
9	Give warranty or warranty for damaged or missing items	14	13	5	2	1	142	4,05	35
10	Taking responsibility for damaged and lost items	14	13	5	3	0	143	4,08	35
Sum		133	138	57	17	5	1.427		350
Average		13,3 %	13,8 %	5,7 %	1,7 %	0,5 %			

Source: Primary (2024)

2. Respondents' Response to the Customer Satisfaction Variable (Y)

Table 5. Recapitulation of Respondents' Answers Variable Y

NO	Statement	Shoes					Bo - bot	Aver age grad e	Respond s -the
		SS (5)	S (4)	R (3)	TS (2)	ST S (1)			
1	Existing service promise appropriate With given	12	16	3	4	0	141	4,02	35
2	Services Provided has been very much in line with customer expectations	12	15	4	3	1	139	3,97	35
3	The cargo is sent safely to the destination	16	12	3	3	1	144	4,11	35
4	Parcel thing which is delivered until appropriate with estimates	13	14	4	3	1	140	4	35
5	Service which Accepted Comparable Price paid	9	20	4	2	0	141	4,02	35
6	Product or Corporate Services very useful for users	9	21	4	1	0	143	4,08	35
7	Customer satisfied with the service before which given by PT. Peln	12	16	4	3	0	142	4,05	35
8	Customer satisfied With schedule timely departure of the ship	13	14	6	2	0	143	3,94	35
9	Customer will continue Using Our services in the future	13	15	7	0	0	146	4,17	35
10	Customer will recommend our services to people other	15	13	7	0	0	148	4,22	35
	Sum	124	156	46	21	3	1.327		350
	Average	12,4 %	15,6 %	4,6 %	2,1 %	0,3 %			

Source: Primary (2024)

C. Instrument Testing

Before hypothesis testing is carried out, it is necessary to carry out an instrument test or validity and reliability test is carried out using the moment product coefficient using SPSS version 29.0 software.

1) Validity Test

The author conducted a validity test of Service Quality with spss Veri 29.0, it can be said to be valid if the $R_{cal} > R_{table}$ then it can be said to be a questionnaire.

In accordance with the validity test in the 10 variable X (Service Quality) questionnaire statements above, it has a calculation value greater than the r_{table} at a significant level of 5% with a total of 30 respondents. Based on these results, it can be said that all statements in this study are declared valid. In accordance with the validity test in the 10 Y variable questionnaire statements (Customer Satisfaction) above, it has a calculation value greater than the r_{table} at a significant level

of 5% with a total of 30 respondents. Based on these results, it can be said that all statements in this study are declared valid.

Table 6. Results of Validity Test of Variable X (Data Processed Personally, 2024)

Variable	Question Items	Corrected Item Total (R-Count)	R-Table	Information
Quality of Service (X)	1	0,799	0,306	Valid
	2	0,824	0,306	Valid
	3	0,900	0,306	Valid
	4	0,889	0,306	Valid
	5	0,869	0,306	Valid
	6	0,740	0,306	Valid
	7	0,553	0,306	Valid
	8	0,772	0,306	Valid
	9	0,828	0,306	Valid
	10	0,854	0,306	Valid

Source: Primary (2024)

Table 7. Results of Variable Y Validity Test

Variable	Question Items	Corrected Item Total (R-Calculate)	R-Table	Information
Customer Satisfaction (Y)	1	0,854	0,306	Valid
	2	0,907	0,306	Valid
	3	0,862	0,306	Valid
	4	0,809	0,306	Valid
	5	0,811	0,306	Valid
	6	0,677	0,306	Valid
	7	0,851	0,306	Valid
	8	0,751	0,306	Valid
	9	0,727	0,306	Valid
	10	0,788	0,306	Valid

Source: Primary (2024)

1) Reliability Test

It is said to be reliable if the Alpha > Tables are at a significance of 0.05 and vice versa it is not reliable if the alpha < Tables are not reliable.

Table 8. Reliability Test Results of X and Y Variables

Variable	Cronbach's Alpha	Ordinances	Information
Quality of Service	0,937	0,60	Reliable
Customer Satisfaction	0,937	0,60	Reliable

Source: Primer (2024)

According to the results of the reliability calculation using SPSS in table 8, it shows that the level of reliability in the variables of Service Quality and Customer Satisfaction is quite high, with a *Cronbach's Alpha* value of 0.978. Where the value is greater than r (0.60). So the conclusion is that the variable is Reliable.

c. Prerequisite Test (Classic Assumption)

1) Normality Test

Sugiyono (2014:114) Shapiro-Wilk normality test is a test carried out to determine the random data distribution of a small sample using data simulations of no more than 50 samples. According to Singgih Santoso (2016:393), the basis for decision-making can be based on probability (Asymptotic Significant), namely if the significant value > 0.05 then the distribution of the population is normal.

Table 9. Normality Test Results

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Quality	.148	35	.052	.950	35	.112
Satisfaction	.157	35	.029	.940	35	.058

a. Lilliefors Significance Correction

Source: Primary (2024)

table 9 shows the significance value of the Service Quality variable (X) 0.112, and the significance value of the Customer Satisfaction variable (Y) 0.058. In both variables, the significance value is > 0.05 , so it can be said that the residual value is normally distributed.

2) Homogeneity Test

The homogeneity test is a test of the similarity of two or more variations of distributions. The basis for decision-making in the homogeneity test is that if the significant value < 0.05 , then it is said that the variants of two or more groups of the data population are not the same.

Table 10. Homogeneity Test Results

Test Results		
Box's M		3.291
F	Approx	3.244
	df1	1
	df2	13872.000
	Sig.	0.72

Source: Primary (2024)

Based on table 10 showing the results of the Bartlett homogeneity test, it can be seen that the Service Quality (X) to Customer Satisfaction (Y) has a significance value of $0.072 > 0.05$, which means that the populations come from the same variance or the data variance is homogeneous.

3) Linearity Test

Linearity test to find out whether two or more variables tested have a significant linear relationship or not. This test is commonly used as a requirement in correlation analysis or linear regression. The basis for decision-making in the linearity test is if the value of sig. *Deviation From Linearity* > 0.05 , then the relationship between variables (X) and (Y) is linear or there is a relationship.

Table 11. Linearity Test Results
ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Satisfaction * Quality	Between Groups	(Combined)	1006.543	14	71.896	4028	.002
		Linearity	732.807	1	732.807	41.054	<.001
		Deviation from Linearity	273.736	13	21.057	1.180	.359
	Within Groups		357.000	20	17.850		
		Total	1363.543	34			

Source: Primary (2024)

In table 11, the results of the second linearity test can be seen that the significance value (*Value Sig.*) in each line of *Deviation from Linearity* shows a significance of 0.359 which means a linear relationship between the Service Quality variable (X) and the Customer Satisfaction variable (Y). Linear regression analysis is a statistical method used to determine how much the Service Quality (X) variable affects Customer Satisfaction (Y).

d. Simple Linear Regression Analysis

Table 12. Linear Regression Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 ^a	.537	.523	4.372

a. Predictors: (Constant), Quality

Table 13. Anova Test Result

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	732.807	1	732.807	38.340	<.001 ^b
	Residual	630.736	33	19.113		
	Total	1363.543	34			

Source: Primary (2024)

Based on table 13, it is stated that the value of F Count = 38,340 with a significance level of $0.001 < 0.05$, then the regression model can be used to predict the participation variable or in other words there is an influence between the variable Service Quality (X) on Customer Satisfaction (Y). The magnitude of the correlation value or relationship (R) is 0.733 from the output obtained the determination coefficient as in the table 12. (R Square) of 0.537 which means that the influence of the independent variable of Service Quality on the bound variable of Customer Satisfaction is 53.7%.

e. Correlation Analysis

The correlation coefficient is a value that proves whether or not the linear relationship between two variables is strong. To see the direction of the relationship, it is described as in the table 14.

According to the table 14, the analysis of the correlation coefficient above has a significant influence, which is close to the real level (Alpha) far below 5% or 0.05, in this case it proves that Customer Satisfaction (Y) is influential, because the r value of 0.733 means between 0.61 – 0.799 (Strong), there is a positive correlation between the variables of Service Quality (X) and Customer Satisfaction (Y).

Table 14. Correlation Coefficient Test Result

Interval	Relationship Level
0,00 – 0,199	Very Low
0,20 – 0,399	Low
0,40 – 0,599	Keep
0,60 – 0,799	Strong
0,80 – 1,000	Very Strong

Source: Sugiyono (2017)

Correlations			
		Quality	Satisfaction
Quality	Pearson Correlation	1	.733 ^{^^}
	Sig. (2-tailed)		<.001
	N	35	35
Satisfaction	Pearson Correlation	.733 ^{^^}	1
	Sig. (2-tailed)	<.001	
	N	35	35

Source: Primary (2024)

f. Determination Analysis

The determination coefficient (R^2) is used to measure how far the model is able to explain dependent variables (Ghozali, 2016; 95). A value close to one means that the independent variables provide almost all the information needed to predict the variation of the dependent variable. Based on data analysis using the calculation of the determination correlation coefficient, the following results were in table 15.

Table 15. Results of the Determination Coefficient Test

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 ^a	.537	.523	4.372

a. Predictors: (Constant), KUALITAS

Source: Primary (2024)

By processing the data in the table above, the results of the determination coefficient value are results that can show the contribution of the independent variable (service quality) to the bound variable (customer satisfaction). The results of the calculation of *SPSS Ver. 29.0* shows that the value of R Square determination coefficient of 0.537 states that the influence of service quality on customer satisfaction is 53.7% and the remaining 46.3% is influenced by other factors that are not studied by the author.

g. Partial T Test

The t-test is used to partially test the hypothesis to find out the greater influence of each independent variable on the bound variable, namely whether or not there is an influence between Service Quality (X) and Customer Satisfaction (Y). With the provision that if $t_{count} > t_{table}$, H_0 is rejected and H_a is accepted, meaning that the influence of X and Y is significant or if the value of Sig. < 0.05.

Table 16. Partial T Test Results

Type	Unstandarded Coefficients		t	Sig
Constant	-216	6.647	-.032	.374
Quality	1.003	.162	.733	6.192

Source: Primary (2024)

Based on the partial testing of the table, it can be obtained that the influence of the Service Quality variable on Customer Satisfaction, it is known that the significant level is $0.001 < 0.05$ and the calculation is $6.192 > \text{table } 1.668$, then it can be concluded that the Service Quality variable (X) has an influence on the Customer Satisfaction variable (Y). so that the result of H_0 is rejected and H_a is accepted.

Therefore, it is said that there is a significant and positive influence of service quality testing on Customer Satisfaction in the delivery service labeled RedPack PT. Pelni (Persero). Positive means that the higher the quality of service, the higher the customer satisfaction, and vice versa, if the lower the quality of service, the lower the customer satisfaction.

a. Discussion

1. How Much Does Service Quality Affect Customer Satisfaction

Based on the results of the analysis that has been obtained that the Service Quality variable (X) has a significant effect on the Customer Satisfaction variable (Y), this is shown from the results of the product-moment pearson correlation analysis of 0.733 and includes the level of "strong correlation" relationship. The results of the analysis showed that the significance between the Service Quality (X) variable and Customer Satisfaction (Y) was 0.001. Based on the decision rule of the hypothesis, the probability value of 0.05 is greater than or equal to the probability of significance, then H_0 is rejected and H_a is accepted, meaning significance. This shows that there is an influence of Service Quality with Customer Satisfaction. The value of the termination coefficient (R Square) tested using Spss Ver.29.0 and manual is 0.537 which shows that the influence of the independent variable (Service Quality) on the dependent variable (Customer Satisfaction) is 53.7%.

2. The Factors That Most Affect Customer Satisfaction on Service Quality

Based on the results of the research conducted, it was found that the factors that most affect customer satisfaction in the quality of service at Redpack labeled cargo delivery services at PT. Pelni (Persero) in 2024 is the *reliability* of the service, with a statement that the process of ordering loads labeled RedPack is easy and fast as well as the willingness and ability of employees to provide information about existing services (Rustina et al., 2022). The results of the questionnaire showed that most of the respondents gave a high assessment of the *Reliability* variable of 42.8%. Reliability includes the ability to deliver the promised service accurately and reliably. This shows that customers highly value reliability in terms of timeliness (Kaligis et al., 2024), accuracy of information, and trust in the services provided (Tjendana & Pranitasari, 2024; Yang et al., 2024). Loh et al., (2024) on his research result that digital trust was shown to be the most significant factor in determining customer satisfaction for both the rapid spot quotation procedure and the blockchain bill of lading. Perceived usefulness and convenience of use were the next most important factors. Additionally, there was a substantial association between perceived utility and ease of use, as well as between perceived ease of use and digital trust.

CONCLUSION

From the results of Simple Linear Regression and Coefficient of Determination obtained R Square of 0.537 which means that the influence of service quality on customer satisfaction is 53.7%., The factor that most affects customer satisfaction in service quality in Redpack labeled cargo delivery services at PT. Pelni (Persero) in 2024 is the *reliability* of the service, with a statement that the process of ordering loads labeled *Redpack* is easy and fast, the willingness and ability of employees to provide information about existing services. The results of the questionnaire showed that most of the respondents gave a high assessment of the *Reliability* variable of 42.8%. In line with the results of the research that has been carried out, there is a recommended suggestion, for companies to be able to improve the packaging of the cargo so that the goods are not easily damaged in transit, in perishable goods should be able to use wooden packing first before being put into the RedPack pocket and hold a tracking system or goods tracker so that the sender knows the location of the goods being sent and confirms and gives the customer a reason that the cargo is will experience delays, the company can increase the maximum load load in the delivery of RedPack labeled cargo services.

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