

CUSTOMER PERCEPTION ON KA COMMUTER LINE SERVICE QUALITY (STUDY CASE ON CONNECTING PASSENGERS OF KA COMMUTER LINE BEKASI TIMUR – MANGGARAI CONNECTING TO TANAH ABANG)

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Abstract. Commuter Line is a type of transportation that is large, fast and efficient. It can carry many passengers, has its own lane so it does not cause congestion. In addition, it uses environmentally friendly (non-fossil fuels) However, Commuter Line needs to increase its service quality. This research was conducted to know customer perception about the Service Quality of KA Commuter Indonesia. The research used variables of Service Quality (SERVQUAL) namely Tangible, Reliability, Responsiveness, Assurance, and Empathy. This research used 100 samples, taken from passengers of the Commuter Line who took connecting train from Manggarai station to Tanah Abang station. The result of Customer Perception can be concluded with an analysis of respondent's perception research assessment variable on Service Quality of KA Commuter. The results of this research contribute to the service quality of KA Commuter services for passengers so that they can be used as input or consideration in improving the quality of services provided by KA Commuter.

Keywords: Commuter line, service quality, customer's perception, SERVQUAL

1. Introduction

Kereta Commuter Indonesia (KCI) is a company of PT. Kereta Api Indonesia (Persero) which manages the *Jabodetabek* Train and its surroundings. The establishment of subsidiary started with the stakeholders of PT. Kereta Api Indonesia who wanted to focus more on providing quality services and be a part of the solution to the increasingly complex urban transportation problems. The company was established officially as a subsidiary of PT. Kereta Api Indonesia (Persero) on 15 September 2008.

Train is a type of transportation that is large, fast and efficient. It can carry many passengers, has its own lane, so it does not cause congestion and uses environmentally friendly (non-fossil) fuels. Train transportation services need to be improved and get special attention from the government. Therefore, Complaints from passengers such as train delays, AC off and train accident will not occur in the future, so that railroad transportation services will be the first choice for land transportation in Indonesia. (Indonesia, n.d.)

KCI began the modernization of transportation of the Commuter Line in 2011 by simplifying the existing routes to five main roads, by eliminating the express commuter rail track, implementing a female carriage, and changing the name of economy-AC KRL to Commuter Line. The project will continue with the renovation, rearrangement also sterilization of facilities and infrastructure, including the train and train stations, which will be carried out by PT. KAI (Persero) with the Government.

Until December 2019, KCI has already had 1.100 units and will continue to grow. In 2019, KCI added 168 units of its cars. The addition of cars was to handle the growing passenger demands. In 2019, the average number of KRL users in a day reached 979.853 users on weekdays and a record number of users served in one day reaching 1.154.080 users. As a facility operator, the Commuter Line which is operated by KCI, currently serve around 80 stations throughout Jabodetabek, Banten, and Cikarang with a route coverage of 418.5 Kilometers. (Indonesia, n.d.)

1.1 Customer Perception

According to (Suryani, 2008), perception is a process by which a person can choose, classify, and interpret impulse into meaning. A consumer is someone who can appreciate the quality of service (Kotler, 2009). Perception is information received to understand the environment presented. It is also made by the recipient for learning, memory, expectations, and attention.

1.2 Customer Satisfaction

According Kotler and Keller (2012), customer satisfaction occurs when customer expectations can be fulfilled. Customer satisfaction is an effort made by a company or individual to attract customer to buy or use products or services from the company or individual. Customer satisfaction also depends on the result of the company's performance, if the result is good enough, it can provide good value for customer expectations. However, if it appears the otherwise it can cause customers to be dissatisfied with their performance.

1.3 Service Quality

This research aims to determine the users perception of the Commuter Train Line about the Quality of Services provided by PT. Kereta Commuter Indonesia. The approach used to measure service quality is the SERVQUAL method developed by Parasuraman et al. (1994:207). It has several dimensions, namely Tangible, Reliability, Responsiveness, Assurance, and Empathy.

2. Research Methods

2.1 Research Location

This research was conducted at Bekasi Timur station and Manggarai station to measure the service quality of Commuter Line passengers from Bekasi Timur station and transit through Manggarai station to Tanah Abang station.

2.2 Types and Sources of data

This research used a quantitative method with a rationalistic approach based on facts and supported by theories, and literature studies. Data were obtained through a questionnaire given to respondents. The focus of this research is limited to the problem of the service quality of Commuter Line based on passengers' perception. The quantitative method is one type of research that is systematic, planned, and structured from the beginning to making research design.

2.3 Data Collection Method

Data were collected through survey methods. The survey used a primary survey, which was a questionnaire that was asked directly to respondent and distributed to Commuter Line passengers, questionnaires were determined using Likert scale of 1 to 5, answers were measured by research instrument and determined from "Strongly Disagree" to "Strongly Agree".

2.4 Population and Sample of Research

The population is a general area consisting of objects and subjects that have certain qualities and characteristics that have been predetermined by researchers to be studied and then conclusions can be drawn from the results (Sugiyono, 2013). In addition, according to Arikunto (2010), sample is representatives of the population to be researched.

The population in this research were all passengers taking connecting Commuter Line from Manggarai to Tanah Abang station. The sampling technique used in this research was purposive sampling. The calculation of the total population of Commuter Line passengers from Bekasi Timur station to Manggarai station connecting to Tanah Abang station was not certainly known because PT. KCI did not provide total passengers needed by researchers as population data. Therefore, in determining the sample of this research, researchers utilized the Lemeshow formula by Stanley Lemeshow to calculate the number of samples to be tested. The formula for determining the population to be sampled in this research was as follows:

$$n = \frac{Z^2 p(1-p)}{(1)^2}$$

- n = Number of sample
- p = Population proportion
- Z = Degree of trust and a sampling error
- p = always in the range between 0 – ~

In Dhinda Pramuningtyas research, a study of perceptions of factors influencing public demand for ATM + debit cards as a transaction tool, the Lemeshow formula can be simplified as follows:

$$\begin{aligned} \text{If } p &= p(1-p) \\ p &= p - p^2 \\ p \text{ maximum if, } dp &= 0 \\ 1 - 2p &= 0 \text{ then } p = 0.5 \end{aligned}$$

And then the substitution of the p-value in the Lemeshow formula is as follows:

$$\begin{aligned} n &= \frac{Z^2 p(1-p)}{(d)^2} \quad \rightarrow \quad n = \frac{Z^2 0.5(1-0.5)}{(d)^2} \\ n &= \frac{Z^2}{4d^2} \end{aligned}$$

The above equation is a standard formula if the sum population unknown. In this research using a 95% confidence level and errors in sampling is 10% and the number of samples is 1.96 then:

$$n = \frac{Z^2}{4d^2} = \frac{(1.96)^2}{4(0.1)^2} = \frac{3,8416}{4(0.1)^2} = 96.04 = 100$$

2.5 Data Analysis Technique

A technical analysis of Service Quality (Servqual) was used to determine the quality of Commuter Line services, customer satisfaction and see perceptions of Service Quality and Service Quality expected by Commuter Line passengers in Bekasi Timur – Manggarai.

3. Results and Discussion

3.1 SERVQUAL

This research aims to describe the development of several items to measure customer expectations and perceptions, and the gap between the main dimensions of Service Quality.

The SERVQUAL dimensions were identified as Reliability, Empathy, Tangible, Assurance and Responsiveness Parasuraman et al. 1994:207).

1. Tangible
Includes physical facilities, equipment, employees, and means of built networking.
2. Reliability
The ability to provide immediate, accurate and satisfying promised services
3. Responsiveness
The desire of the staff to help customers and provide responsiveness services.
4. Assurance
Covers the knowledge, ability, politeness, and reliable properties owned by the staff, free from danger, risk, or doubt.
5. Empathy
Includes the ease of connection, good communication, personal attention, and understand the needs of the customer.

3.2 Validity Test

According to the American Research Association, the American Psychological Association, and the National Council on Measurement in Education (AERA, APA, and NCME 1999) in Standards for Education and Psychological Testing, validity refers to facts and theories that support the interpretation of test scores result, and is a important consideration in conducting test development.

3.3 Reliability Test

Reliability is the degree of constancy between the two results on the same object, using different measurement scales and also different scales (Mehrens & Lehmann, 1973; Reynold, Livingstone, & Wilson, 2010)

3.4 Validity Test Service Quality Result

Table I
Validity Test Result

Variable	Indicator	r^{Count}	r^{Table}	Conclusion
X1	1	0.603	0.1966	Valid
	2	0.665	0.1966	Valid
	3	0.712	0.1966	Valid
X2	1	0.622	0.1966	Valid
	2	0.705	0.1966	Valid
X3	1	0.728	0.1966	Valid
	2	0.709	0.1966	Valid
X4	1	0.651	0.1966	Valid
	2	0.712	0.1966	Valid

X5	1	0.622	0.1966	Valid
	2	0.696	0.1966	Valid

Source: the results of data processing with SPSS

The results of observations on r^{Table} obtained values from the sample (N) = 100 of 0.1966. Referring to the results of the validity test produced that all instruments of Service Quality variables (X) consisting of X1, X2, X3, X4 and X5 all produce values ($r^{\text{Arithmetic}} > r^{\text{Table}}$), so it can be concluded that all instruments in this research are valid.

3.5 Reliability Test Result

Table II
Reliability Test Result

Alpha Cronbach's	N of Items
0.877	11

Source: The results of data processing with SPSS

From the Reliability test results, it obtained all the values from the results of the variable Service Quality (X) produced Alpha Cronbach's values > 0.6. So it can be concluded that all instruments in this study are reliable.

3.6 Figures Analysis of respondents' perception index

Respondents' perception index aims to get the results of respondents' perceptions of the proposed questionnaire item variables. The assessment techniques used in this research are from number 1 to 5, the calculation of the index of respondents' answer using the following formula:

$$\text{Indeks} = \frac{(\%F1 \times 1) + (\%F2 \times 2) + (\%F3 \times 3) + (\%F4 \times 4) + (\%F5 \times 5)}{5}$$

- %F1 = is a percentage of the frequency of respondents who answered strongly disagree.
- %F2 = is a percentage of the frequency of respondents who answered disagree.
- %F3 = is a percentage of the frequency of respondents who answered neutral.
- %F4 = is a percentage of the frequency of respondents who answered agree.
- %F5 = is a percentage of the frequency of respondents who answered strongly agree.

Gap score of respondent ranges from 1 to 5 so that the resulting index numbers ranging from 20 to 100 with a range of 80 so that the calculation using the Three-Box method has a result of the number 80 divided by 3 so that it generates a figure of 26,67, which is used as a basis for interpreting the index value as following (Ferdinand , 2006)

- 20,00 – 46,67 = Low
- 46,68 – 73,34 = Moderate
- 73,35 – 100 = High

3.7 Analysis of the assessment index of respondents' perceptions of service quality variables

Table III
Analysis of respondents' perception index Tangible items

No	Items	Answer percentage	Total	Index	Category
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		STS	TS	N	S	SS			
		1	2	3	4	5			
1	The facilities at Connecting Station are good enough	1.0	6.0	23.0	53.0	7.0	376	65.8	Moderate
2	The environment at Manggarai Station is good enough.	0	8.0	19.0	56.0	17.0	383	76.4	High
3	Officers and employees of KA Commuter pay attention to the neatness of its attributes.	0	3.0	22.0	41.0	34.0	406	85.2	High
Average								74.4	High

Table IV
Analysis of respondents' perception index Reliability items

No	Items	Answer Percentage					Total	Index	Category
		STS	TS	N	S	SS			
		1	2	3	4	5			
1	KRL to Tanah Abang station from Manggara istation is on time.	3.0	8.0	28.0	41.0	20.0	366	73.4	High
2	Commuter Train Officers have good Responsiveness to passengers.	0	3.0	22.0	55.0	20.0	393	78.4	High
Average								75.9	High

Table V
Analysis of respondents' perception index Responsiveness items

No	Items	Answer Percentage					Total	Index	Category
		STS	TS	N	S	SS			
		1	2	3	4	5			
1	Availability of Commuter Train Officers and employees in assisting KRL passengers	0	4.0	16.0	53.0	27.0	404	80.6	High
2	Officers and employees of KA Commuter provide responsive services to passengers.	0	4.0	23.0	53.0	20.0	389	77.8	High
Average								79.2	High

Table VI
Analysis of respondents' perception index Assurance items

No	Items	Answer Percentage					Total	Index	Category
		STS	TS	N	S	SS			
		1	2	3	4	5			
1	PT. Commuter KA provides insurance if passengers' experiences an accident	1.0	2.0	27.0	34.0	37.0	403	81.4	High
2	KA Commuter officers and employees are polite to passengers	0	2.0	16.0	54.0	26.0	409	81.6	High
Average								81.3	High

Table VII
Analysis of respondents' perception index Empathy items

No	Items	Answer Percentage					Total	Index	Category
		STS	TS	N	S	SS			
		1	2	3	4	5			
1	Officers and employees of KA Commuter understand the desires of passengers.	0	2.0	34.0	53.0	11.0	373	74.6	High
2	Communication between officers and passengers went well.	0	2.0	18.0	59.0	21.0	400	79.8	High
Average								77.2	High

Based on the above table, the percentage score obtained is 74.4 in tangible, 75.9 in reliability, 79.2 in responsiveness, 81.3 in insurance and 77.2 in empathy. Perceptions of service quality variables have a tendency for service satisfaction provided by the Commuter Line to customers, and an average percentage of each service quality indicator is obtained at 77.6 or high category.

4. Conclusion and Suggestions

4.1 Conclusion

From the overall result in this study, it was shown that Service Quality variables on Customers Perceptions showed positive perceptions as indicated from the results of the analysis of the research variables of respondents' perceptions of Service Quality.

4.2 Suggestions

1. Suggestions from this research are: Commuter Line should provide better facilities for connecting passengers, such as waiting areas and easier access during transit.
2. Commuter Line should improve Service Quality by increasing the accuracy of Commuter line schedules

3. Commuter Line should give more attention to commuter passengers needing help from officers.

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