

ANALYSIS OF THE LEVEL OF PASSENGER SATISFACTION IN THE BANDUNG RAYA LOCAL TRAIN ON THE PADALARANG - CICALENGKA ROUTE AND CONVERSELY WITH THE SERVICE QUALITY METHOD

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Abstract

*Trains are an alternative mode of mass transportation interested by the people of Indonesia. PT Kereta Api Indonesia (Persero) is a State-Owned Enterprise in charge of regulating, managing, and providing transportation services in Indonesia, one of which is PT Kereta Api Commuter Indonesia which is a subsidiary of PT Kereta Api Indonesia (Persero) which is tasked with managing commuter rail transportation and local trains in Indonesia. Commuter Line Bandung Raya is one of the services managed by KAI Comuter Region II Bandung. Seeing the enthusiasm of service users with rail transportation, so the authors are interested in observing passengers on the Bandung Raya Local Train Route Padalarang - Cicalengka and conversely to find out how satisfied passengers are with the services provided during train travel and what service attributes must be improved in order to maximize service in the Bandung Raya Local Train Trip Padalarang - Cicalengka Route and conversely. This research method uses descriptive research with a quantitative approach and primary data collection techniques by means of interviews (interviews), questionnaires (questionnaires) filled out by respondents, observation (observation) to analyze data using comparative methods, and a combination of the three. Then the validity and reliability tests were carried out to determine the suitability of the questionnaires distributed, then the calculation of service quality, calculation of service quality gaps, analysis of the level of conformity (Tki) with the Importance Performance Analysis (IPA) method, and calculation of the Costumers Satisfaction Index (CSI). The results of this study, users of Bandung Raya Local Train services on the Padalarang - Cicalengka Route and conversely are **QUITE SATISFIED** with the services or performance provided by PT Commuter Indonesia, with a Costumers Satisfaction Index (CSI) value of 55.81%.*

Keywords: service quality, customer satisfaction, customer expectations, PT Kereta Commuter Indonesia.

1. INTRODUCTION

Railways is a unified system consisting of infrastructure, facilities, and human resources, as well as norms, criteria, requirements, and procedures for the implementation of railway transportation. Railways as a mode of transportation has special characteristics and advantages, especially in its ability to transport both people and goods in bulk, save energy, save space usage, have a high safety factor, have a low level of pollution, and are more efficient than road transportation modes for long distance transportation and for areas with heavy traffic, such as urban transportation. Trains are an alternative mode of mass transportation that is in demand by the people of Indonesia.

PT Kereta Api Indonesia (Persero) is a State-Owned Enterprise in charge of regulating, managing, and providing transportation services in Indonesia, one of which is PT Kereta Api Commuter Indonesia which is a subsidiary of PT Kereta Api Indonesia (Persero) which is tasked with managing commuter rail transportation and local trains in Indonesia. Commuter *Line* Bandung Raya is one of the services managed by KAI *Comuter* Region II Bandung. *Commuter Line* Bandung Raya serves train travel routes across Purwakarta - Cicalengka, Padalarang - Cicalengka, Padalarang -

Kiaracondong, and Kiaracondong - Cicalengka. The route and stops of the Bandung Raya *Commuter Line* Train start from Padalarang in West Bandung Regency to Cicalengka in Bandung Regency and stop at the center of Cimahi City and Bandung City. Stopping stations include Cicalengka Station, Haurpugur, Rancaekek, Cimekar, Gedebage, Kiaracondong, Cikudapateuh, Bandung, Ciroyom, Cimindi, Cimahi, Gadobangkong, and Padalarang. There is also a longer route from Cicalengka to Purwakarta, although with less frequency than the Padalarang - Cicalengka route.

Based on data from BPS West Java Province, it is known that the population according to the Regency / City through which the Bandung Local Train passes has increased every year from 2018 to 2022. Of course, with population growth increasing from year to year, it causes the need for transportation to facilitate daily activities. And from the passenger volume data of PT KAI Daop 2 Bandung, it is found that public interest in using train transportation, especially using the Bandung Raya Local Train, is high. In addition, the volume of Local Train passengers in the period 2016 to 2019 continues to increase and in the period 2020 and 2021 has decreased due to the *Corona Virus Disease 2019 (COVID-19)* pandemic and has increased again in the period 2022. Seeing the enthusiasm of service users with rail transportation transportation, so the authors are interested in observing passengers on the Bandung Raya Local Train Padalarang - Cicalengka Route and vice versa to find out how satisfied passengers are with the services provided during train travel and what service attributes must be improved in order to maximize service in the Bandung Raya Local Train Padalarang - Cicalengka Route and vice versa.

2. METHODOLOGY

The research was conducted on Urban Railway Transportation of Bandung Raya Local Train on Padalarang - Cicalengka Route and vice versa from Cicalengka - Padalarang.

2.1. Data Collection Technique

In terms of data collection methods or techniques, data collection techniques can be carried out by interview (interview), questionnaire (questionnaire), observation (observation), and a combination of the three (Sugiyono, 2017). In this study there are two types of data collected, namely primary data and secondary data.

a. Primary data

Primary data is data that is collected and processed by the researcher directly from the object. Primary data collection is carried out by field observations related to people's transportation services by train on the way either through surveys by distributing questionnaires and interviews.

b. Secondary data

Secondary data is data obtained in a finished form, already collected and processed by other parties. In this study, secondary data collection was carried out by contacting relevant agencies such as PT Kereta Api Indonesia (Persero) Operating Area 2 Bandung and PT Kereta Api *Commuter* Indonesia in the form of Data on the Number of Local Train Passengers Daop 2 Bandung Year 2016-2022, Map of Railway Lines and Bandung Raya Local Train Information, West Java Provincial Statistics Agency in the form of Population Data by Regency / City in West Java Province (thousand) in 2018 - 2022 in areas traversed by Bandung Raya Local Trains, KAI Access Application in the form of data on departure and arrival schedules for Bandung Raya Local Trains Padalarang - Cicalengka Route and Cicalengka - Padalarang Route, as well as literature studies to obtain the necessary references.

2.2. Sampling Technique

The research sampling technique uses the slovin formula, calculating the total population of a specific object with uncertain characteristics. This slovin formula is often used to study certain populations with large populations. From the calculation results obtained the number 99.60 and to facilitate the calculation the number is rounded to 100. So, the sample to be used is 100 respondents.

2.3. Data Analysis Technique

a. Analysis of Existing Conditions

The analysis of existing conditions aims to determine the problems of existing conditions in train travel related to facilities and passenger services for Bandung Raya Local Train

transportation during travel by comparing based on the Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 63 of 2019 concerning Minimum Service Standards for Transportation of People by Train in Travel.

b. Analysis of Passenger Satisfaction with Service Facilities

This analysis is needed to determine the level of satisfaction of Bandung Raya Local Train passengers on the Padalarang - Cicalengka Route and vice versa with the available passenger service facilities. In conducting this analysis using the data validity and reliability test method, *Service Quality*, *Service Quality Gap*, *Importance Performance Analysis (IPA)*, and *Customers Satisfaction Index (CSI)*.

3. RESULTS AND DISCUSSION

The research was conducted on Urban Transportation of Bandung Raya Local Train on Padalarang - Cicalengka Route and vice versa from Cicalengka - Padalarang.

3.1. Analysis of Existing Conditions

The results of the Analysis of the Existing Conditions of Passenger Service Facilities on the Bandung Raya Local Train Route Padalarang - Cicalengka and vice versa in accordance with the Minimum Service Standards for the Transport of People by Train on Urban Train Trips regulated in the Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 63 of 2019 concerning Minimum Service Standards for the Transport of People by Train, The results obtained from 6 aspects of SPM analyzed, namely aspects of safety, security, reliability / regularity, comfort, convenience, and equality consisting of 27 (twenty-seven) types of sub-services obtained for the percentage of service conformity in the Bandung Raya Urban Railway Local Train Trip Padalarang - Cicalengka Route of 65.74% and Cicalengka - Padalarang Route of 70.37%.

3.2. Service Quality Calculation

It can be concluded a sequence of average values of reality and expectations. The average value of reality for service attribute criteria starting from the smallest, namely CCTV in the train with an average of 2.03 and the largest value of the seat attribute on the train with an average of 3.69. This shows that the level of passenger satisfaction with the performance of the CCTV attribute on the train is still less than satisfied. However, the reality value with a large average value does not necessarily guarantee respondent satisfaction with these indicators because respondent satisfaction is not only seen in terms of satisfaction or reality of the service but also seen from the value of expectations or interests for each of these service attributes.

As for the average value of expectations or interests for each indicator of service attributes starting from the smallest, namely the service attribute of seating on the train with an average value of 3.96 and the largest value is the service attribute of air circulation (air conditioning, fan) with an average of 4.79. This shows that the greater the average level of importance, the more priority in terms of improvement and improvement of service quality.

3.3. Service Quality Gap Calculation

The gap value if it is positive indicates that the performance of passenger service facilities in the Bandung Raya Local Train Trip Padalarang - Cicalengka Route and vice versa has met the expectations of service users. Meanwhile, if it is negative, the performance of passenger service facilities on the Bandung Raya Local Train Padalarang - Cicalengka Route and vice versa has not met the expectations of service users. And it is found that the gap value of all service attributes is negative, which means that the performance of passenger service facilities on the train journey provided has not met the expectations of service users/passengers.

To find out the tolerance limit included in the normal gap, the results obtained from the total value of the *gap* divided by the number of service attributes, namely $\sum \text{gap} = -24.01$ divided by the total service indicators, which amounted to 13, the minimum gap tolerance limit is -1.85. From the results of the analysis, 5 facility items were obtained with a gap smaller than the minimum gap of -1.85, namely Security officers, Accuracy of train schedules, Seating on the train, Passenger luggage racks, and Cleanliness in the train. While other items are greater than the minimum gap and indicators with gaps from largest to smallest include CCTV service attributes in the train, First Aid Sets in the train, Special wheelchair places for those who use

wheelchairs, Seats for passengers with special needs, Air circulation (air conditioning, fans), Name/Relation of Trains, Audio information on the train (having a *Public Address System (PA)* or *Passenger Information System (PIS)* notification system), and in visual form in the form of *Passanger Information Display (PID)*, lighting, security officers, cleanliness in the train, accuracy of train schedules, passenger luggage racks, and seats on the train. Of course, it is necessary to take steps to improve the quality of service services carried out from the service attributes with the largest *gap* or gap.

3.4. Level of Conformity Analysis (Tki) with *Importance Performance Analysis (IPA)* Method

There are several service attributes in the Bandung Raya Local Train Trip Padalarang - Cicalengka Route and Conversely Cicalengka - Padalarang Route with a low level of conformity including the attributes of First Aid Sets in the train, CCTV in the train, Lighting, Audio information in the train (having a *Public Address System (PA)* or *Passenger Information System (PIS)* notification system), and in visual form in the form of *Passanger Information Display (PID)*, Air circulation (air conditioning, fan), Train Name/Relation, Seats for passengers with special needs, and special wheelchair places for those who use wheelchairs. For service attributes with a moderate level of suitability including the attributes of security officers, accuracy of train schedules, passenger luggage racks, and cleanliness in the train. As for service attributes with a high level of conformity, namely the attribute of seating on the train.

3.5. Calculation of *Customer Satisfaction Index (CSI)*

It is known that the CSI value or the overall level of customer satisfaction with the services of the Bandung Raya Local Train Travel Padalarang - Cicalengka Route and Conversely the Cicalengka - Padalarang Route by considering the level of importance of the service quality attributes used is 55.81% and according to the criteria used based on the visitor satisfaction survey guide (Rustina, 2008), which is in the table below, it falls into category 3, which is between 51% - 65.99% **QUITE SATISFIED**.

Table 1. *Customer Satisfaction Index (CSI)* criteria

NO	CSI Value (%)		Description (CSI)
1	81% - 100%	0,81 - 1,00	Very Satisfied
2	66% - 80,99%	0,66 - 0,80	Satisfied
3	51% - 65,99%	0,51 - 0,65	Quite Satisfied
4	35% - 50,99%	0,35 - 0,50	Less Satisfied
5	0% - 34,99%	0,00 - 0,34	Not Satisfied

4. CONCLUSIONS

Based on the results of the analysis that has been carried out, the following conclusions can be drawn:

- Based on the Results of the Analysis of the Existing Conditions of Passenger Service Facilities in Bandung Raya Local Train Travel on the Padalarang - Cicalengka Route and vice versa in accordance with the Minimum Service Standards for the Transport of People by Train in Urban Train Travel regulated in the Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 63 of 2019 concerning Minimum Service Standards for the Transport of People by Train, The results obtained from 6 aspects of SPM analyzed, namely aspects of safety, security, reliability / regularity, comfort, convenience, and equality consisting of 27 (twenty-seven) types of sub-services obtained for the percentage of service conformity in the Bandung Raya Urban Railway Local Train Trip Padalarang - Cicalengka Route of 65.74% and Cicalengka - Padalarang Route of 70.37%.
- In the Analysis of the Level of Passenger Satisfaction in Bandung Raya Local Train Travel on the Padalarang - Cicalengka Route and Conversely with the *Service Quality Gap* Method,

5 facility items were obtained with a gap smaller than the minimum gap tolerance of -1.85, namely:

- 1) Security guards with a gap of -1.25;
- 2) Train schedule accuracy with a gap of -1.16;
- 3) Seats on the train with a gap of -0.27;
- 4) Passenger luggage racks with a gap of -0.96; and
- 5) Cleanliness on the train with a gap of -1.18.

While other items are greater than the minimum gap tolerance of -1.85 between attributes:

- 1) First aid kit on the train with a gap of -2.64;
- 2) CCTV on the train with a gap of -2.72;
- 3) Lighting with a gap of -2.04;
- 4) Audio information inside the train (having a Public Address System (PA) or Passenger Information System (PIS) notification system), and in visual form in the form of Passenger Information Display (PID) with a gap of -2.21;
- 5) Air circulation (air conditioning, fans) with a gap of -2.35;
- 6) Train Name/Relationship with a gap of -2.25;
- 7) Seating for passengers with special needs with a gap of -2.39; and
- 8) Special wheelchair space for those who use wheelchairs with a gap of -2.59.

c. From the analysis results, there are several service attributes in the Bandung Raya Local Train Trip Padalarang - Cicalengka Route and Vice versa, namely:

- 1) With the *Importance Performance Analysis (IPA)* method, several results were obtained including:
 - a) Based on the average percentage category of the level of conformity of service attributes in Bandung Raya Local Train Travel Padalarang - Cicalengka Route and Conversely Cicalengka - Padalarang Route, attributes with a low level of conformity are obtained including: First Aid Set in the train, CCTV in the train, Lighting, Audio information in the train (having a *Public Address System (PA)* or *Passenger Information System (PIS)* notification system), and in visual form in the form of *Passanger Information Display (PID)*, Air circulation (AC, fan), Train Name/Relation, Seats for passengers with special needs; and Special wheelchair places for those who use wheelchairs.
 - b) From the Cartesian Diagram of Importance Performance Analysis (IPA), the service attributes in the Bandung Raya Local Train Trip Padalarang - Cicalengka Route and Conversely Cicalengka - Padalarang Route are included in Quadrant I (Main Priority) where service attributes with a relatively high level of importance with a low level of performance, so that in reality it is not in accordance with user expectations. Service attributes included in this quadrant should immediately improve their performance including attribute 1 (First Aid Set in the train), attribute 2 (CCTV in the train), attribute 4 (Lighting), attribute 6 (Audio information in the train (has a *Public Adress System (PA)* notification system or *Passenger Information System (PIS)*), and in visual form in the form of *Passanger Information Display (PID)*), attribute 8 (Air circulation (air conditioning, fan)), attribute 11 (Train name/relation), attribute 12 (Seating for passengers with special needs), and attribute 13 (Special wheelchair places for those who use wheelchairs).
- 2) From the results of the analysis using the *Costumers Satisfaction Index (CSI)* method or the overall level of customer satisfaction with services in Bandung Raya Local Train Travel Padalarang - Cicalengka Route and Conversely Cicalengka - Padalarang Route by considering the level of importance of the service quality attributes used, a value of 55.81% is obtained and falls into category 3, which is between 51% - 65.99% **QUITE SATISFIED.**

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