The customer satisfaction towards the service quality of Tawang Alun Malang-Banyuwangi Train

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Abstract. Service sector which has quiet vital role in supporting people’s daily activities is transportation service. Transportation is one of the important and strategic developments in improving economy sector. One of the alternative ways to overcome people’s need of transportation is by providing trains. This research was conducted on the weekend that has objectives to analyze the work performance of Indonesian Railway Company towards the service quality that can determine the customers’ satisfaction of TawangAlun Malang-Banyuwangi train and to analyze the customers’ satisfaction itself towards the service quality of TawangAlun Malang-Banyuwangi train. This research used quantitative descriptive as the research method. There are two kinds of data that were used in this research; the first one is the primary data taken from questionnaire’s results and interview meanwhile the second one is the secondary data taken from literature and internet. The sample used in this research is nonprobability sampling using convenience sampling technique. Data analysis used in this research is Importance Performance Analysis (IPA) and Customer Satisfaction index (CSI). The results are the Indonesian Railway Company should make a new innovation to buy the ticket from the ticket machine and add more exhausts in every railway coach.

1. Introduction
Transportation is an important and strategic improving sector in order to expediting people’s economy, unite many people and affect all the aspects of life. This condition forces people to be able to work and do many activities efficiently and on time [1]. The importance of transportation reflects to the increasing number of transportation service of mobilization for people and goods since there are growing populations and housings. To fulfil this kind of need, the transportation service needs to be provided more including the numbers and the qualities (safety, comfort, on time schedule and efficiency). One of the alternative ways to overcome people’s need of transportation is by providing trains. Trains are kind of transportations with many advantages compare to the other kinds of transportation including the less fuel, less energy used, less pollution, no traffic jam and it is a mass transportation.

As the demand of transportation service has been growing, it also effects to the competitiveness among people who are getting involved in this business. Every company in that kind of business must have effective and efficient strategy to survive and always be number one among the other competitors. Keeping up the customers’ satisfaction is one of the good ways to be applied by companies to keep competing and dominating the market. In order to make it happens; Indonesian Railway Company is expected to maintain its good qualities which are the efficiency and effectiveness in providing its best products and services, so it can gain customers’ trust and they can be more comfortable using the service.
Indonesian Railway Company is also expected to be more aware of what factors that can raise customers’ satisfaction and also to evaluate and fix those factors. Some of those factors are including the fixed departure schedule sometimes has delay, the lack of comfort and the safety either in the rain station or the train, the availability of the staffs to help customers and the lack of information and the other supporting services.

These factors need to get more attention from the company to be solved with the best solution, so in the end, it can have better performance to serve its customers. Indonesian Railway Company also needs to do measurement of the level of customers’ satisfaction periodically, by having feedbacks from them to maintain staffs’ work performance and the level of the customers’ satisfaction itself. [2] This perception is the experience towards objects, tourism or something taken by collecting information and suggestions.

This research was done with objectives: analyzing the work performance of Indonesian Railway Company towards the service quality that can determine the customers’ satisfaction of TawangAlun Malang-Banyuwangi Train, as well as analyzing the customers’ satisfaction towards the service quality given in TawangAlun Malang-Banyuwangi Train. Service quality can be measured by using theories by [3] expressing five dimensions which are reliability, responsiveness, assurance, empathy and tangible.

2. Research Methodology
This research used descriptive quantitative research method. The sample taken for this research is nonprobability sampling using convenience sampling technique. The data acquisition was done by doing direct observation and interview and spreading questionnaires to get the primary data, meanwhile for the secondary data came from the references. The method to pick the samples used is non-probability sampling method using convenience sampling technique. The number of respondents in this research was determined by using Slovin formula [4] which is:

\[ n = \frac{N}{N(e)^2 + 1} \]  

Information:
n = the number of samples  
N = the measurement of population  
e = the percentage of inaccuracy because of sampling error that can be tolerated 10%

The number of people who used Tawang Alun Train is more than 300 people on the weekends, so based on the formula, the respondents are 75 respondents.

The data analysis used in this research is Importance Performance Analysis (IPA) and Customer Satisfaction Index (CSI). The Importance and Performance Analysis is used to get information about the level of customers’ satisfaction towards certain service by measuring its importance and implementation level. IPA is an implementation method to measure attribute based on the importance and work performance or satisfaction level which is useful to improve the market strategy for the company to be more effective [5]. In this technique, the respondents was asked to assess the importance and implementation level, and then the average value of importance and implementation level were analyzed with Importance Performance Matrix, in which the x axis represents perception or work performance meanwhile y axis represents hopes or importance. And later, the result of the x and y value (from each variable) in the four quadrant on Kartesius diagram can be drawn. There is also interpretation from squared which is quadrant I (Keep up the Good Work); quadrant II (Possible Overkill); quadrant III (Low Priority) and quadrant IV (Concentrate Here).

The measurement towards customer satisfaction index is needed because the result from the measurement can be used as the reference to determine targets in the next few years. According to [6] the measurement towards the CSI is needed because the result from the measurement can be used as the reference to determine targets to improve the service quality towards the level of overall respondents’ satisfaction which can be seen from the criteria of customers’ satisfaction level. The steps to count the customer satisfaction index are as follows:
1. Counting Weighting Factors (WF)
   The function from the median importance score or median score of the importance level from each variable in a form of % from total median importance score or median score of the importance level from overall attributes that are being tested.

2. Counting Weighted Score (WS)
   The function from the median satisfaction score of median score of the importance level from each attribute is multiplied with Weighting Factors (WF) from each variable.

3. Counting Weighted Median Total (WMT)
   The total from overall Weighted Score (WS) value.

4. Customer Satisfaction Index
   The counting from Weighted Median Total (WMT) is divided in maximum scale or high test scale which is multiplied by 100%. The level of overall respondents’ satisfaction can be seen from criteria of the level of customers’ or consumers’ satisfaction with the criteria as follows:
   - a. 0.81-1.00 Fair
   - b. 0.66-0.80 Very good
   - c. 0.51-0.65 Fair
   - d. 0.35-0.50 Poor
   - e. 0.00-0.34 Very poor

   CSI can be taken from \( \frac{T}{5Y} \times 100\% \) where \( T \) divided by 5Y is the maximum value which is used on the measurement scale. The CSI formula which is:

   \[
   CSI = \frac{T}{5Y} \times 100\% 
   \]

   Information:
   - CSI : Customer Satisfaction Index
   - T : Overall numbers of S variable
   - Y : Overall numbers of P variable
   - S : Multiplication from I and P value (each variable)
   - I : The average of satisfaction or Work Performance (each variable)
   - P : The average of the importance (each variable)

   The level of overall respondents’ satisfaction can be seen from the criteria of the customers’ or consumers’ satisfaction level, with the criteria as follows:

   | No. | CSI Value | Customer Satisfaction Index |
   |-----|-----------|-----------------------------|
   | 1.  | 0.81 - 1.00 | Very Excellent              |
   | 2.  | 0.66 - 0.80 | Excellent                   |
   | 3.  | 0.51 - 0.65 | Good                       |
   | 4.  | 0.35 - 0.50 | Poor                       |
   | 5.  | 0.00 - 0.34 | Very poor                  |

3. Result

3.1. Importance Performance Analysis (IPA)
   The analysis of Important Performance Analysis (IPA) in this research used to analyze the factors related to importance and people’s satisfaction in using TawangAlun Malang-Banyuwangi Train. The result will be presented in a form of Kartesius Diagram, in which the diagram has quadrants contains of Keep Up the Good Work (quadrant I), Possible Overkill (quadrant II), Low Priority (quadrant III) and Concentrate Here (quadrant IV). There is also aKartesius Diagram of TawangAlun Malang-Banyuwangi Train as follows:
In interpreting the quadrant on the Kartesius Diagram as follows:

1) Keep Up the Good Work
   In this quadrant, the variable is considered as the important factor or it is expected to be maintained because the consumers feel satisfied. There is also variable that needs to be maintained which is the ease to reach the location of the station, the availability of the information related to the train schedule, the accuracy of train schedule, the ability to give the best service to the customers, the ease to get clear information, the speed to respond emergency either in the train or station, the capability of the staffs to do their job, the comfort when the passengers get off from the train, the availability of insurance or the safety guarantee, the price ticket offered and the cleanliness in the station.

2) Possible Overkill
   In this quadrant, the variable is considered as the less important factor, but the implementation in the field is very satisfying. There are variables including the speed and the readiness of the staffs in providing service for customers, the speed and the accuracy in providing information needed by the customers, the speed in responding customers’ complaints and problems, staffs always show confidence and the readiness to serve or help customers, the capability of the staffs to give information to the customers that can be received well and easy to understand, the cleanliness of the rest rooms in the station and the numbers of the seats in the train.

3) Low Priority
   In this quadrant, the variable is considered as the less important factor or least expected by the consumers. The variables are including the hospitality and good manner of the staffs in helping the customers, the politeness of the staffs to respect and to serve as well as make the customers’ need as the priority, the honesty and patience of the staffs in giving service and cleanliness in the train.
4) Concentrate Here
In this quadrant, the variable is considered as the important factor or expected by the consumers but not satisfying yet and there has to be priority to be improved. The variables to be improved are including the safety and comfort either in the station or train, and the 24/7 customer service and the air circulation in the train.

Based on the result of the counting using IPA method, the variables that need to get more attention is the factor in quadrant IV. The result of this analysis shows that the quadrant IV is the factor that is considered important and it’s in bad condition so it needs to be noticed and fixed. The analysis of these factors can be seen on the table.

Table 2. Analysis Factors of Customers’ Satisfaction towards Tawang Alun Train on Quadrant IV.

| No. | Variable | Satisfaction Factors | Analysis |
|-----|----------|----------------------|----------|
| 1   | ASSURANCE| The safety and comfort either in the station or train | The customers’ perception of TawangAlun Train is that the safety and the comfort either they are in the station or train is poor, it is because several stations do not have waiting rooms and do not have enough chairs to sit so many passengers wait for the train uncomfortably. |
| 2   | EMPHATY  | The 24/7 customer service | Not all passengers of Tawang Alun Malang-Banyuwangi Train know and understand how to book ticket online, so the 24/7 customers service needs to be available. |
| 3   | TANGIBLES| The air circulation in the train | The service of Indonesian Railway Company nowadays is already good enough and it pays attention to passengers’ comfort since in every railway coach has air conditioner. But there is a thing to be noticed including the customers’ health whether they have carsick or vomit. This thing can bother the other train passengers because of the smell and since there is an air conditioner in the railway coach, every ventilation or window is closed. |

3.2. Customer Satisfaction Index (CSI))
The result of the customer satisfaction index of TawangAlun-Malang Banyuwangi Train can be seen on this table:

Table 3. Customer Satisfaction Index (CSI).

| No. | Statement                          | Importance (I) | Satisfaction (P) | Score (S) |
|-----|-----------------------------------|----------------|-----------------|-----------|
|     | RELIABILITY                       |                | Scale 1 - 5     | Scale 1 - 5 | Scale (S) = (I) x (P) |
| 1   | The ease to reach the location of the station | 3.89           | 4.43            | 17.23     |
| 2   | The availability of information related to the train schedule | 3.67           | 4.16            | 15.25     |
| 3   | The accuracy of the train schedule | 3.73           | 4.24            | 15.83     |
| 4   | The capability to give the best service to the customers | 3.83           | 4.29            | 16.43     |
| No. | Statement | Importance (I) | Satisfaction (P) | Score (S) = (I) x (P) |
|-----|-----------|----------------|------------------|-----------------------|
| 5   | The ease to get clear information | 3.77 | 4.07 | 15.34 |
|     | RESPONSENESS |                 |                  |                       |
|     | The speed and readiness of the staffs in giving service to the customers until it’s all clear | 3.72 | 3.77 | 14.04 |
| 6   | The speed and accuracy in giving information that customers need | 3.65 | 3.92 | 14.32 |
| 7   | The speed in responding emergency either in the train or station | 3.79 | 4.08 | 15.45 |
| 8   | The speed in responding customers complaints and problems | 3.65 | 3.85 | 14.08 |
| 9   | Staffs always show confidence and the readiness in serving or helping the customers | 3.65 | 3.92 | 14.32 |
| 10  | ASSURANCE |                 |                  |                       |
|     | The hospitality and politeness in serving the customers | 3.45 | 3.97 | 13.72 |
| 11  | The capability of the staffs in implementing their job | 3.63 | 4.05 | 14.70 |
| 12  | The safety and comfort either in the station or train | 3.44 | 4.11 | 14.13 |
| 13  | The comfort when the passengers get off from the train | 3.76 | 4.11 | 15.44 |
| 14  | The availability of safety insurance or guarantee | 3.73 | 4.36 | 16.29 |
| 15  | EMPHATY |                 |                  |                       |
|     | The capability of the staffs in providing information to the customers that is easy to understand | 3.64 | 4.00 | 14.56 |
| 16  | The manner’s staffs to respect and serve the customers especially the customers’ need | 3.53 | 3.93 | 13.90 |
| 17  | The honesty and patience of the staffs in giving service to customers | 3.48 | 3.91 | 13.60 |
| 18  | The price of the ticket | 3.57 | 4.43 | 15.82 |
| 19  | The 24/7 customer service | 3.29 | 4.13 | 13.61 |
| 20  | TANGIBLES |                 |                  |                       |
|     | The cleanliness in the station | 3.57 | 4.05 | 14.48 |
| 21  | The cleanliness in the train | 3.44 | 3.97 | 13.67 |
| 22  | The cleanliness of the restroom in the station | 3.68 | 3.95 | 14.52 |
| 23  | The air circulation in the train | 3.40 | 4.24 | 14.42 |
| 24  | The device availability to inform the routes | 3.68 | 3.64 | 13.40 |
| 25  | The numbers of the seats in the train | 3.73 | 3.71 | 13.84 |
| 26  | TOTAL | 105.30 |                      | 382.39 |

\[
T = \frac{Y}{n} = \frac{105.30}{26} = 3.98
\]
\[
CSI = \frac{T}{5Y} \times 100\% = \left(\frac{382.39}{5 \times 105.30}\right) \times 100\% = 0.73\%
\]  

(3)

According to the result of the processing data as well as the analysis of Customer Satisfaction Index, they can be concluded that the overall customers’ satisfaction of Tawang Alun Malang-Banyuwangli Train is on the satisfaction assessment with the value of 0.73%. There are several aspects that need to be fixed in order to improve the customers’ satisfaction to use Tawang Alun Malang-Banyuwangli Train.

4. Conclusion and Suggestion

Based on the analysis of Importance Performance Analysis (IPA), there are several attributes that need to be maintained which are the safety and comfort when the passengers are in the station or train, the 24/7 customer service and the air circulation in the train. Related to the comfort and safety in the station, it is better for the station and Indonesian Railway Company to be able to improve the passengers’ comfort more including providing the waiting room or chairs for the passengers to wait for their train comfortably and safely. Meanwhile to be able to provide the 24/7 customer service, Indonesian Railway Company and the station staff should promote it more so that the passengers can use the service to buy the train ticket online. Besides that, the company should make a new innovation for the passengers to buy the ticket from the ticket machine in the station. And for the air circulation in the train, the Indonesian Railway Company can add more exhausts in every railway coach to prevent unpleasant moments especially to overcome bad smell.

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Attachment:

**Table 4.** Average Value User Satisfaction and Interests Railway Tawang Alun Malang-Banyuwangi

| No. | Statement                                                                 | Importance | Satisfaction | Integrity X | Integrity Y |
|-----|----------------------------------------------------------------------------|------------|--------------|-------------|-------------|
|     |                                                                            | Score      | Mean X       | Score       | Mean Y       |
| 1   | The ease to reach the location of the station                           | 292        | 3.89         | 332         | 4.43         | 0.04        | 0.04        |
| 2   | The availability of information related to the train schedule           | 275        | 3.67         | 312         | 4.16         | 0.04        | 0.04        |
| 3   | The accuracy of the train schedule                                      | 280        | 3.73         | 318         | 4.24         | 0.04        | 0.04        |
| 4   | The capability to give the best service to the customers                | 287        | 3.83         | 322         | 4.29         | 0.04        | 0.04        |
| 5   | The ease to get clear information                                       | 283        | 3.77         | 305         | 4.07         | 0.04        | 0.04        |
|     |                                                                            | **RELIABILITY** |              |             |             |             |             |
| 6   | The speed and readiness of the staffs in giving service to the customers until it’s all clear | 279        | 3.72         | 283         | 3.77         | 0.04        | 0.04        |
| 7   | The speed and accuracy in giving information that customers need         | 274        | 3.65         | 294         | 3.92         | 0.04        | 0.04        |
| 8   | The speed in responding emergency either in the train or station        | 284        | 3.79         | 306         | 4.08         | 0.04        | 0.04        |
| 9   | The speed in responding customers complaints and problems                | 274        | 3.65         | 289         | 3.85         | 0.04        | 0.04        |
|     | Staffs always show confidence and the readiness in serving or helping the customers | 274        | 3.65         | 294         | 3.92         | 0.04        | 0.04        |
|     |                                                                            | **RESPONSIVENESS** |              |             |             |             |             |
| 11  | The hospitality and politeness in serving the customers                 | 259        | 3.45         | 298         | 3.97         | 0.04        | 0.04        |
| 12  | The capability of the staffs in implementing their job                  | 272        | 3.63         | 304         | 4.05         | 0.04        | 0.04        |
| 13  | The safety and comfort either in the station or train                   | 258        | 3.44         | 308         | 4.11         | 0.04        | 0.04        |
| 14  | The comfort when the passengers get off from the train                  | 282        | 3.76         | 308         | 4.11         | 0.04        | 0.04        |
| 15  | The availability of safety insurance or guarantee                       | 280        | 3.73         | 336         | 4.36         | 0.04        | 0.04        |
|     |                                                                            | **ASSURANCE** |              |             |             |             |             |
| 16  | The capability of the staffs in providing information to the customers that is easy to understand | 273        | 3.64         | 300         | 4.00         | 0.04        | 0.04        |
| 17  | The manner’s staffs to respect and serve the customers especially the customers’ need | 265        | 3.53         | 295         | 3.93         | 0.04        | 0.04        |
| 18  | The honesty and patience of the staffs in giving service to customers   | 261        | 3.48         | 293         | 3.91         | 0.04        | 0.04        |
| 19  | The price of the ticket                                                 | 268        | 3.57         | 332         | 4.43         | 0.04        | 0.04        |
| 20  | The 24/7 customer service                                               | 247        | 3.29         | 310         | 4.13         | 0.03        | 0.04        |
|     |                                                                            | **EMPATHY** |              |             |             |             |             |
| 21  | The cleanliness in the station                                          | 268        | 3.57         | 304         | 4.05         | 0.04        | 0.04        |
| 22  | The cleanliness in the train                                            | 258        | 3.44         | 298         | 3.97         | 0.04        | 0.04        |
| 23  | The cleanliness of the restroom in the station                          | 276        | 3.68         | 296         | 3.95         | 0.04        | 0.04        |
| No. | Statement                                           | Importance | Satisfaction | Integrity X | Integrity Y |
|-----|----------------------------------------------------|------------|--------------|-------------|-------------|
|     |                                                    | Score      | Mean X | Score | Mean Y |             |             |
| 24  | The air circulation in the train                  | 255        | 3.40   | 318   | 4.24  | 0.04        | 0.04        |
| 25  | The device availability to inform the routes       | 276        | 3.68   | 273   | 3.64  | 0.04        | 0.03        |
| 26  | The numbers of the seats in the train              | 280        | 3.73   | 278   | 3.71  | 0.04        | 0.04        |
|     | **Total**                                          | **7080**   | **94.40** | **7906** | **105.30** | **1.00** | **1.00** |
|     | **Mean**                                           | **3.63**   | **4.05** |          |          |            |            |