Relationship between Service Quality and the Students’ Loyalty in Using Railway Services of Sribilah Medan in Indonesia

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Abstract: Customer satisfaction is one of the keys in creating customer loyalty. There are several factors that affect the loyalty to the consumers to keep using the services the same, they are concern, trust, protection and quality of service. Customer loyalty is a behavioral impulse to make repeated purchases and to build a customer loyalty to a product or service generated by the business entity that takes a long time through a repeat purchase process. The calculation of r product moment correlation, it is known that there is a positive relationship between the service quality and customer loyalty on the college students who are the train service users = 0,517 with p <0,05. This means that the higher the service quality, the higher the customers loyalty. In general, the results of this study indicate that the relationship of service quality with the customer loyalty on the college students who are the train service users is high where the average value of empirical mean is above the average value of hypothetica mean in the normal curve. The average value of empirical service quality = 169,3 meanwhile the average value of hypothetical mean = 105, then the value of empirical mean for customer loyalty = 162,3 meanwhile the average value of hypothetical mean = 105.

Keywords: service quality; loyalty; customer satisfaction; railway service

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I. INTRODUCTION

Customer satisfaction is one of the keys in creating customer loyalty. There are many benefits received by the company with the achievement of a high level of customer satisfaction, which besides improving the customer loyalty, it is also preventing the occurrence of customer turnover, reducing the customer sensitivity to the price. In addition to the customer satisfaction there are several factors that affect the loyalty to the consumers to keep using the services the same, they are concern, trust, protection and quality of service (Tjiptono, 2005). According to Zeithaml (in Fandy and Gregory, 2011), service quality is the level of excellence to meet the consumer expectations. The service quality is shaped by a level of excellence to meet the consumer expectations. It is shaped by the comparison between ideal and perception of the quality performance (Oliver, 2000). Furthermore, Oliver (2000) also explains that the service quality can be seen from the consumer's confidence in the company's promise. Specifically, the importance of improving the service quality is to create customer satisfaction by making customers the main focus. The issue of service quality and customer satisfaction is now becoming increasingly important and critical for service companies. Therefore, companies need to build a service quality management system, identifying gaps that may occur, as well as its impact on the consumer satisfaction and consumer loyalty (Setyani, 2011). The level of service quality cannot be judged from the company's point of view. But it should be viewed from the customer's point of view. In this case, the company determines the quality standard of service, while the rate is the customer. Therefore, in formulating the marketing strategy, it must be oriented to the customer needs (Adriana, 2010).

According to Gronroos (in Ratminto and Atik, 2005) service is an invisible (intangible) activity or series that occurs as a result of interaction between the consumer and the employee or the things provided by the service delivery company intended to solve consumer or customer issues. PT KAI, which is one of the state-owned enterprises, is still in a system of supervision and rules related to the existing bureaucracy in Indonesia. As an institution in transportation services to the public, human resource management becomes a key component to enhance the competitive advantage in the company. Only a strong and resilient company can manage an organization that will survive in many situations. In general there are many factors that affect the service quality in maintaining the customer loyalty in the field of service. The customer confidence in the brand also affects the quality of service provided by the company. Tjiptono (2005) says: Service Quality as a powerful competition tool to retain the customers and build the excellence quality standard. Customers are increasingly critical and smart in selecting a brand that provides the service quality. This condition forces companies to be
more alert in delivering fast and efficient services, and of course the increasingly advanced technological developments challenge the company to analyze the customer demand and needs in the future. But in reality it is not easy to retain the customers in the form of providing services in accordance with the wishes of the customers of these services.

PT. Kereta Api of Regional Division I North Sumatra which becomes the center of rail transportation in Medan should pay more attention to the services quality provided to the customers, especially for certain travel routes such as the route of Medan - Rantau Prapat and vice versa by using Sribilah train. Many things have to be improved and added to make Sribilah rail service users comfortable during the trip. So that it makes the customers keep using the train and do not switch to other transportation.

Based on the above description, the researchers are interested to examine in the research title of Relationship between Service Quality and the Students’ Loyalty in Using Railway Services of Sribilah Medan.

II. LITERATURE REVIEW

2.1 College Students

The definition of college students according to Kamus Lengkap Bahasa Indonesia (Kamis, 1997) states that college students are individuals who study in college. Montgomery in Papalia et al (2007) explains that college or university can be a means or place for an individual in developing intellectual ability, personality, especially in practicing verbal and quantitative skills, critical thinking and moral reasoning. According to Anisyah (2000), college students are students in college, whereas according to Marhijanto (1995), college students are students of higher education. So it can be concluded that college student is a person who is studying at a college. Those enrolled in college students can automatically be referred to as college students. College students are a group of people who have two traits, namely young man and intellectual candidate, and as an intellectual candidate, the student must be able to think critically about social reality, while as a young man, students often do not measure the risk that will happen to him (Djojodibroto, 2004).

2.2 Understanding Customer Loyalty

According to Griffin (2002) loyalty refers more to the behavior of decision-making units to make a continuous purchase of goods or services of a company. The definition of a customer comes from a custom word that is defined as making something into a habit or habitual practice. Customer loyalty according to Tjiptono (2005) is a behavioral impulse to make repeated purchases and to build a customer loyalty to a product or service generated by the business entity that takes a long time through a repeat purchase process.

Meanwhile, according to Wood (2009) loyalty is as a manifestation of the fundamental needs of humans to have, support, get a sense of security and build attachment and create emotional attachment. Meanwhile loyalty in the Oxford English Dictionary is: “a strong feeling of support and allegiance; a person showing firm and constant support”. From the definition there is a strong feeling, meaning the depth of human feelings towards a thing, whether family, friends, organization or brand. This feeling is the main ingredient and determines customer closeness and loyalty. According to Griffin (2005) loyalty refers more to the behavioral form of decision-making units to make a continuous purchase of goods or services of a selected company.

Meanwhile, according to Kotler (2002), customer loyalty is an in-depth customer commitment to re-subscribe or re-purchase a consistent product or service consistently in the future even if the influence of the situation and marketing efforts has the potential to cause behavioral changes.

Based on the above description, it can be concluded that customer loyalty is a form of customer attitude which form the desire to come back and transact in a company and in this case is a company in the form of services. According to Lupiyoadi (2001) there are five factors related to the customer loyalty, namely:

a. Product Quality: Customers will be satisfied and loyal when their evaluation results indicate that the products they use are qualified. The product is said to be qualified for someone, if it can meet their needs. There are two product qualities, external and internal. One of the product qualities from external factor is brand image.

b. Quality of Service: service quality is very influential on customer satisfaction and loyalty and profitability of the company. Consumers will feel satisfied when getting good service or in accordance with expectations, so that it will move towards loyalty.

c. Emotional: Customers will be proud and gain confidence that others will be amazed when someone uses a branded product and is likely to have higher satisfaction.

d. Price: Products that have the same quality but set a relatively cheap price will provide a higher value to its customers.

e. Cost: Customers who do not need to incur additional costs or to waste time to get a product or service tend to be satisfied with the product or service.
2.3 Definition of Service Quality
Before the researcher explains the meaning of service quality, it will first be explained briefly from the word *quality* and *service* itself. Quality can be seen from the aspect of the results. The concept of quality is regarded as a relative measure of the good of a product or service consisting of the quality of design and quality of conformity. Quality design is a function of product or service specification, while the quality of conformity is a measure of how far a product or service is able to meet the requirements or specifications of the quality set. The outcome aspect is not the only aspect of quality. In total quality marketing the quality is considered wider where not only the aspects of the results are emphasized but also the process, the environment and the human (Goesta and Davis in Tjiptono, 2005). Tjiptono (2005) defines quality as a dynamic condition associated with products, services, people, processes and environments that meet or exceed expectations.

III. RESEARCH METHODOLOGY
The research method determines a research because it concerns the correct way in data collection, data analysis and decision making research results (Hadi, 2000). Discussion in research methods includes (A) Identification of Research Variables, (B) Operational Definition of Research, (C) Population and Sampling Technique, (D) Data Collection Method, Validity and Reliability of Measuring Instruments, and (E) Data Analysis Method. This research is a research with quantitative approach that aims to see the relationship between service quality and loyalty of students who use rail service Sribilah Medan.

3.1 Identification of Research Variables
a. Dependent variable : Customer Loyalty
b. Free variable : Service Quality
c. Control variables : Students

3.2 Operational Definition of Research Variables
a. Customer Loyalty
Customer Loyalty is the customer’s perception of using a product or service. Customer loyalty is expressed by using a scale that is based on aspects of customer loyalty proposed by Schiffman and Kanuk, (2004) namely, cognitive, affective, conative, action.

b. Service Quality
Quality of service is an activity undertaken by the company to provide what the consumer needs in achieving the customer satisfaction by providing the best service and quality. The quality of service will be measured by using the service quality scale based on the aspects of service quality by Zeithaml, Parasaruraman and Berry (in Ranminto and Atik, 2005) that is physical evidence, tangibles, reliability, responsiveness, assurance , and empathy.

c. Student
A student is a person continuing education, who uses the services of trains as a means of transportation

3.3 Population and Sample Research
According to Arikunto (2003) population is the entire subject of research that will be subject to generalization of research results. The population is the entire population that is intended to be investigated. The population is limited as a number of residents or individuals who have at least the same characteristics (Hadi, 2000). Scientific population is almost always conducted only for a part of the things that really want to be researched (Suryabrata, 2000). The researcher's conclusions about the sample can be generalized to the population. The population used in this study is the college students who reside outside Medan City and take a lecture trip by transporting the Sribilah train from Rantau Prapat - Medan. And the number of students is unlimited.

According to Arikunto (2003) the sample is representative of the population under study. Similarly, Hadi (2004) pointed out that the sample is a number of subjects that are part of a population that has the same properties and this sample will be subject directly in the study. The results of the research on the sample are expected to be generalizable to the entire population. Furthermore, according to Hadi (2004) the main requirement for generalization is that the samples used in the study should be able to reflect the state of the population.

The sample is said to be representative from the population when the chosen subject has a character that reflects all the characters possessed by the population (Arikunto, 2003). In this study, the researcher used the technique of sample collection is the exidental technique .. Where everyone has equal opportunity to be the subject of research, with the number of samples in this study 50 people, the sample in question is the student rail service users. The data collection method in this research is conducted by using scale method. Hadi (2004) defines the scale as a research method that uses a list of statements to be answered or a list of fields that must be
filled by a number of subjects and based on the answers or fields, the researchers draw conclusions about the subject under investigation. The assumptions held by researchers in using this method are:
1. That the subject is the person who knows best about himself
2. That what the subject states to the researcher are true and reliable.
3. That the subject's interpretation of the statements submitted to him is the same as that of the researcher (Hadi, 2004).

The scale used in this research there are two scales namely; the scale of customer loyalty and the scale of service quality. The service quality in this research is based on the aspects of service quality proposed by Zeithaml, Parasuraman and Berry (in Ranminto and Atik, 2005) are tangible, reliability, responsiveness, assurance, and empathy. Furthermore, the item distribution of the service quality scale in detail can be seen in table 1.

| Table 1: Blue Print Service Quality Scale (Before Trial) |
|---------------------------------|-----------------|-----------------|----------|
| No                             | Aspects         | Item Number     | Total   |
| 1.                             | Tangible        | 1,2,4,6,10      | 3,5,7,8,9| 10       |
| 2.                             | Reliability     | 11,14,17,18,20  | 12,13,15,16,19| 10       |
| 3.                             | Responsiveness  | 22,24,26,28,29  | 21,23,25,27,30| 10       |
| 4.                             | Assurance       | 33,35,37,39,40  | 31,32,34,36,38,| 10       |
| 5.                             | Empathy         | 41,44,46,47,49  | 42,43,45,48,50| 10       |
| Total                          |                 | 25              | 25       | 50       |

In filling the scale, the sample is asked to answer the question by selecting one answer from several available alternative answers. In this scale 4 (four) alternative answers is given, they are Very Relevant (SS), Relevant (S), Not Relevant (TS) and Very Unrelevant (STS). The statements in this scale consist of favorable and unfavorable statements. The items which are favorable, the answer for Very Relevant will be given a score of 4, the answer for Relevant is given 3, Not Relevant is given a score of 2, and the answers for Very Unrelevant will be given a score 1. The unfavorable items is that each answer for Very Relevant will be given a score of 2, the answer for Relevant is given 1, Not Relevant is given a score of 3, and the answers for Very Unrelevant will be given a score 4.

The scale of customer loyalty in this research is based on the aspects of the students’ loyalty proposed by Schiffman and Kanuk (2004) that is, cognitive, affective, conative, action. Furthermore, the distribution of grains from the scale of student loyalty can be seen in table 2.

| Table 2: Blue Print Customer Loyalty Scale (Before Trial) |
|---------------------------------|-----------------|-----------------|----------|
| No                             | Aspects         | Item Number     | Total   |
| 1.                             | Cognitive       | 1,2,3,5,9,10    | 4,6,7,8,11,12| 12       |
| 2.                             | Affective       | 16,17,18,19,20,22| 13,14,15,21,23,24| 12       |
| 3.                             | Conative        | 25,28,30,31,33,35| 26,27,29,32,34,36| 12       |
| 4.                             | Action          | 37,39,40,42,44,46,49| 38,41,43,45,47,48,50| 12       |
| Total                          |                 | 25              | 25       | 50       |

In filling the scale, the sample is asked to answer the question by selecting one answer from several available alternative answers. In this scale 4 (four) alternative answers is given, they are Very Relevant (SS), Relevant (S), Not Relevant (TS) and Very Unrelevant (STS). The statements in this scale consist of favorable and unfavorable statements. The items which are favorable, the answer for Very Relevant will be given a score of 4, the answer for Relevant is given 3, Not Relevant is given a score of 2, and the answers for Very Unrelevant will be given a score 1. The unfavorable items is that each answer for Very Relevant will be given a score of 2, the answer for Relevant is given 1, Not Relevant is given a score of 3, and the answers for Very Unrelevant will be given a score 4.
Validity is a measure that indicates the validity or validity levels of an instrument. An instrument is said to be valid if it can reveal data of the variables studied appropriately (Arikunto, 2010).

\[ r_{xy} = \frac{\sum x y - \left( \frac{\sum x^2 \sum y^2}{N} \right)}{\sqrt{\left( \sum x^2 \right) - \left( \frac{\sum x^2}{N} \right) \left( \sum y^2 \right) - \left( \frac{\sum y^2}{N} \right) - 1}} \]

Note:
- \( r_{xy} \): The coefficient correlation between X variable (subject score of each item) with X variable.
- \( \sum xy \): The sum of the multiplication results between Y variable (total subject score from all items) with Y variable.
- \( \sum X \): Total score of each X item.
- \( \sum Y \): The total score of each Y item.
- \( N \): Number of subjects.

Reliability shows one thing that an instrument is trusted enough to be used as a data collection tool because the instrument is good. Reliable means trustworthy, so reliable. The reliability analysis of the attitude scale toward the punishment (fines) and learning discipline can be used Alpha Cronbach's method with the following formula:

\[ r_{11} = \left[ \frac{k}{k - 1} \right] \left[ 1 - \frac{\sum \sigma^2}{\sigma^2_{11}} \right] \]

Note:
- \( r_{11} \): Instrument reliability.
- \( k \): Number of questions.
- \( \sum \sigma \): Number of grain variants.
- \( \sigma^2_{11} \): Total Variant.

Based on the hypothesis proposed in this study, the data analysis is conducted by using Product Moment correlation analysis, with the main purpose of this research is to see whether there is a relationship between the service quality and the customer loyalty. For this purpose, the empirical measurements are performed by using the Product Moment correlation statistic test with the following formula:

\[ r_{xy} = \frac{\sum x y - \left( \frac{\sum x \sum y}{N} \right)}{\sqrt{\left( \sum x^2 \right) - \left( \frac{\sum x^2}{N} \right) \left( \sum y^2 \right) - \left( \frac{\sum y^2}{N} \right) - 1}} \]

Note:
- \( r_{xy} \): The coefficient correlation between X variable (subject score of each item) with X variable.
- \( \sum xy \): The sum of the multiplication results between Y variable y (total subject score from all items) with Y variable.
- \( \sum X \): Total score of each item x.
- \( \sum Y \): The total score of each item y.
- \( \sum x^2 \): The sum of squares of X scores.
- \( \sum y^2 \): The sum of squares of Y scores.
- \( N \): Number of subjects.

Before conducting the data analysis by using Product Moment analysis technique, then first the assumptions are tested:
1. Normality test is to find out whether the data distribution of the research variables that have been spread normally.
2. Linearity test is to find out whether the data independent variables have a linear relationship with the dependent variable.

### 3.4 Preparation of Research Measurements

The preparation here is to prepare a measuring instrument that will be used for the research, which starts with the preparation of service quality scale, and loyalty scale of students using rail services. The service quality scale in the study is based on the aspects of service quality proposed by Zeithaml, Parasuraman and Berry in...
Ranminto and Atik (2005), namely tangible, reliability, responsiveness, insurance, and empathy. Here is a table 3 distribution of the scale of quality of service before trial:

### Table 3: Item Distribution of Service Quality Scale (Before Trial)

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Favorable</th>
<th>Unfavorable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tangible</td>
<td>1,2,4,6,10</td>
<td>3,5,7,8,9</td>
<td>10</td>
</tr>
<tr>
<td>2. Reliability</td>
<td>11,14,17,18,20</td>
<td>12,13,15,16,19</td>
<td>10</td>
</tr>
<tr>
<td>3. Assurance</td>
<td>22,24,26,28,29</td>
<td>21,23,25,27,30</td>
<td>10</td>
</tr>
<tr>
<td>4. Assurance</td>
<td>33,35,37,39,40</td>
<td>31,32,34,36,38</td>
<td>10</td>
</tr>
<tr>
<td>5. Empathy</td>
<td>41,44,46,47,49</td>
<td>42,43,45,48,50</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
<td><strong>25</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

The customer loyalty scale is based on the aspects Schiffman and Kanuk (2004) have presented, i.e. cognitive, affective, conative, and action. Below is Table 4 for item distribution of customer loyalty scale before trial:

### Table 4: Item Distribution of Customer Loyalty Scale Before Trial

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Favorable</th>
<th>Unfavorable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cognitive</td>
<td>1,2,3,5,9,10</td>
<td>4,6,7,8,11,12</td>
<td>12</td>
</tr>
<tr>
<td>2. Affective</td>
<td>16,17,18,19,20,22</td>
<td>13,14,15,21,23,24</td>
<td>12</td>
</tr>
<tr>
<td>3. Conative</td>
<td>25,28,30,31,33,35</td>
<td>26,27,29,32,34,36</td>
<td>12</td>
</tr>
<tr>
<td>4. Action</td>
<td>37,39,40,42,44,46,49</td>
<td>38,41,43,45,47,48,50</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
<td><strong>25</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

The research results by using the service quality scale can see the validity of 42 items with Corrected Item-Total Correlation technique. From the validity test, it shows the value of validity coefficient from 0.313 to 0.706. Meanwhile the research result of customer loyalty scale of 42 items is with Corrected Item-Total Correlation technique. From the validity test, it shows the value of moving validity coefficient from 0.327 to 0.711. The technique used to find out the reliability of the scale of service quality and the customer loyalty is the Alpha Cronbach technique. From the reliability test, it shows that the value of Alpha Cronbach Quality of Service 0.931 and the value of Alpha Cronbach Customer Loyalty 0.914. Thus both scales can be said, reliable.

Furthermore, from the results of measuring test the service quality amounted to 50 items, it is known that there are 8 items are invalid and 42 items are valid reaching 0.300 and the test results of the measuring the customer loyalty to 50 items, it is known that there are 8 items invalid and 42 is valid that reaches 0.300 and above. The valid service quality items have a validity coefficient between 0.313 to 0.706 with a reliability coefficient of 0.931, and the valid customer loyalty items have a validity coefficient between 0.327 to 0.711 with a reliability coefficient of 0.914. Table 5 and Table 6 illustrate the distribution of items of service quality and customer loyalty after the trial.

Based on the experiment result of measuring the research instrument, it is known that for the invalid service quality item amounted 8 items and the valid is 42 items, and for invalid customer loyalty item is 8 items and the valid item is 42 items. This study only uses the valid items, that is for the service quality that amounted to 42 items and for the customer loyalty is 42 items.

### Table 5: Item Distribution of Service Quality Scale after Trial

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Favorable</th>
<th>Unfavorable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tangibles</td>
<td>1,2,4,6,10</td>
<td>-</td>
</tr>
<tr>
<td>2. Reliability</td>
<td>11,14,17,18,20</td>
<td>12,13,15,16,19</td>
</tr>
<tr>
<td>3. Responsiveness</td>
<td>22,24,26,29</td>
<td>21,23,25,27,30</td>
</tr>
<tr>
<td>4. Assurance</td>
<td>33,35,37,39,40</td>
<td>31,32,34,36,38</td>
</tr>
<tr>
<td>5. Empathy</td>
<td>41,44,46,47,49</td>
<td>42,43,45,48,50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
<td><strong>4</strong></td>
</tr>
</tbody>
</table>

### Table 6: Item Distribution of Customer Loyalty After Trial

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Favorable</th>
<th>Unfavorable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cognitive</td>
<td>1,2,3,5,9,10</td>
<td>-</td>
</tr>
<tr>
<td>2. Affective</td>
<td>16,17,18,19,20,22</td>
<td>13,15,21,23,24</td>
</tr>
<tr>
<td>3. Conative</td>
<td>28,30,33,35</td>
<td>26,27,29,32,36</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
<td><strong>4</strong></td>
</tr>
</tbody>
</table>
IV. DISCUSSION

The data analysis technique used in this research is r Product Moment Correlation Analysis technique. This is conducted according to the research title and the identification of the variables, where the Poduct Moment Correlation Analysis is used to analyze the relationship between one independent variable with one dependent variable.

But before it is analyzed by r Product Moment Correlation Analysis technique, firstly the assumption test to the variable was conducted which become center of attention, that is variable data bound by customer loyalty and independent variable of service quality, covering test of distribution normality, and test of linearity relation. The test of normality distribution was performed to prove that spreading and research were the center of attention, spreading on the basis of normal curve principles. The distribution normality test was analyzed by using One Kolmogorov-Smirnov test. The distribution is according to the principle of normal curve as the criterion when \( p > 0.050 \) then the distribution is normal, otherwise if \( p < 0.050 \) the distribution is not normal (Hadi and Pamardiningsih, 2004). The following Table 7 is the summary of the results of the distribution normality test.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Average</th>
<th>SD</th>
<th>K-S</th>
<th>p</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Loyalty</td>
<td>162.300</td>
<td>13.317</td>
<td>0.070</td>
<td>0.200</td>
<td>Normal</td>
</tr>
</tbody>
</table>

Note
Average = Average value
K-S = Kolmogorov-Smirnov Coefficient
SB = Standard deviation (Standard Deviation)
p = Opportunity of Error Occurrence

Linearity test is to find out whether the distribution of the research data, namely service quality and customer loyalty variables have a linear relationship. From the results of linearity test, it showed that service quality variables correlated linearly with customer loyalty variable, which is shown by linearity coefficient \( F = 18.596 \) with \( p < 0.050 \). Linearity test is done by using interactive graph technique that produces scatter diagram (plot) and with analysis of Variance (ANAVA) by using SPSS for Windows 18.0.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>( F_{\text{different}} )</th>
<th>( p_{\text{different}} )</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X – Y</td>
<td>18.596</td>
<td>0.000</td>
<td>Linier</td>
</tr>
</tbody>
</table>

Note:
X = Quality of Service
Y = Customer Loyalty
\( F_{\text{different}} \) = Linearity coefficient
\( p_{\text{different}} \) = Proportion of opportunity error

The higher the quality of service, the higher is the customer loyalty. Conversely, the lower the quality of service then the level of customer loyalty is also lower. Based on the results of analysis with r Product Moment Correlation Analysis Method, it is known that there is a significant positive relationship between the service quality with the customer loyalty, where \( r_{xy} = 0.517; p = 0.000 < 0.050 \). This means that the higher the quality of service, the higher the customer loyalty, and the lower the quality of service, the lower the customer loyalty. From the results of this study, the proposed hypothesis is stated, accepted.

The determinant coefficient (\( r^2 \)) of the relationship between the X the independent variable and the Y the dependent variable is equal to \( r^2 = 0.267 \). This shows that customer loyalty is formed by the service quality that amounted to 26.7%. Table 9 below summarizes the results of product moment \( r \) calculations.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Coefficient (( r_{xy} ))</th>
<th>Determinant Coefficient (( r^2 ))</th>
<th>( p )</th>
<th>BE%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Y</td>
<td>0.517</td>
<td>0.267</td>
<td>0.000</td>
<td>26.7%</td>
<td>Signifikan</td>
</tr>
</tbody>
</table>

Note:
X: quality of service
Y: customer loyalty
\( r_{xy} \): The correlation coefficient between variables X to Y
\( r^2 \): Determinant Coefficient of X to Y
Relationship between Service Quality and the Students’ Loyalty in Using Railway Services of...

p: Opportunities for errors
BE%: Effective level of X against Y in percent
S: Significant at a significant level of 5% or p <0.050.

Table 10: Main Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>162,300</td>
<td>13,317</td>
<td>50</td>
</tr>
<tr>
<td>X2</td>
<td>169,300</td>
<td>13,302</td>
<td>50</td>
</tr>
</tbody>
</table>

Note:
X1: customer loyalty
X2: quality of service
Average: Average grade
SD: Standard Deviation

For service quality variable, the number of valid items is 42 that formatted with Likert scale in 4 answer choices, then the hypothetical mean is {[(42 X 1) + (42 X 4)]} / 2 = 105. Then for the customer loyalty variable, the number of valid items is 42 that formatted with Likert scale in 4 answer choices, the hypothetical mean is {[(42 X 1) + (42 X 4)]} / 2 = 105. The total score of the entire subject for the service quality was 8465 which is divided by the number of subjects 50 people, then the empirical mean is 8465 / 50 = 169.3. The overall total score of the subject for customer loyalty was 8115 which divided by the number of 50 people, then the empirical mean is 8115 / 50 = 162.3. In order to know the condition of Service Quality and Customer Loyalty, it is necessary to compare between the average mean/value of empirical with the average mean/value of hypothetical with regard to the magnitude of SB or SD number of each variable. For service quality variable SB or SD value is 13,302, while for Customer Loyalty variable is 13,317. Of the magnitude of SB or SD number, then for the variable service quality, if the value of hypothetical mean < value of average empirical mean, where the difference exceeds the number one SB/SD, it is stated that the quality of individual services is high and if the value of average hypothetical mean > value of average empirical mean, where the difference exceeds the number of one SD/SB, it is stated that the quality of individual services is low.

Table 11: Calculation Results of Hypothetical Mean and Empirical Mean

<table>
<thead>
<tr>
<th>Variable</th>
<th>SB / SD</th>
<th>Average Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Quality</td>
<td>13,302</td>
<td>105</td>
<td>169,3</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>13,317</td>
<td>105</td>
<td>162,3</td>
</tr>
</tbody>
</table>

Based on the comparison of the above average values (hypothetical mean and empirical mean), it can be stated that the railway users have a high service quality and also high customer loyalty. Based on the calculation of Product Moment r correlation, it can be seen that there is a positive relationship between the service quality and the customer loyalty on the college students who are the train service users = 0.517 with p <0.05. This means that based on the results of this study, it can be stated that there is a positive relationship between the quality of service with the customer loyalty on the college students who are the train service users with the result the higher the quality of service, then the higher the customers loyalty. Based on these results, the hypothesis proposed in this study is stated as accepted.

From this research, it is known that the service quality owned by the railway user has an effect on the loyalty, which means that the higher the service quality of the railway user, the higher the customer loyalty. This explains that the college students have found their loyalty in using the train. Good service will lead to the satisfaction for the customers or consumers, and on the next level if customers are more satisfied again, it will be more loyal to PT. KAI as a means of public transportation they use. According to (Caruana, 2002) customer loyalty is the most important part of repeating purchases to customers. The results of this study illustrates that 26.7% customer loyalty is formed by the quality of service. This means that there is a 73.3% contribution from other factors or variables to customer loyalty.

V. CONCLUSION

Based on the calculation of r product moment correlation, it is known that there is a positive relationship between the service quality and customer loyalty on the college students who are the train service users = 0.517 with p <0.05. This means that the higher the service quality, the higher the customers loyalty. In general, the results of this study indicate that the relationship of service quality with the customer loyalty on the
college students who are the train service users is high where the average value of empirical mean is above the average value of hypothetica mean in the normal curve. The average value of empirical service quality = 169,3, meanwhile the average value of hypothetical mean = 105, then the value of empirical mean for customer loyalty = 162,3 meanwhile the average value of hypothetical mean = 105.

REFERENCES

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