QUALITY ANALYSIS OF GOODS DELIVERY SERVICE USING SIX SIGMA APPROACH IN PT. KAMADJAJA LOGISTICS SURABAYA

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Abstract
Complaints within the company are often found in service companies because of the complexity of the activities in the service company. Speed and accuracy are important for freight forwarding companies. The purpose of quality control is to reduce complaints (defects) and even achieve zero defects. The focus of this research is to analyze the service attributes that need to be developed by PT Kamadjaja Surabaya with the Six Sigma method. The results of this study indicate that the quality of service has not been maximized which is still far from the level of 6 sigma with DPMO 3.4 for that service needs to be improved. This is indicated from the results of measurements with the six sigma method showing an average performance score of 3.74; expectation score of 4.90; gap -1.16; satisfaction level is 76.37%, DPMO value is 251733, and sigma level is 2.25. It becomes the dominant attribute that causes customer dissatisfaction.

Keywords: Quality, Consumer satisfaction, Six Sigma, Kamadjaja Surabaya

I. INTRODUCTION
PT. SPIL (Salam Pasific Indonesia) is one of the largest shipping companies in Indonesia which used to only operate in the shipping sector, but currently has opened a subsidiary engaged in the EMKL (Sea Cargo Expedition) field. To maintain existence and be able to compete with new entrants, companies must improve the quality of service so that customers do not switch to other companies. According to (Nugroho and Priarta, 2011), one way to win the competition is that companies must be able to provide satisfaction to their customers, for example by providing better quality products, cheaper prices, and better services than competitors.

The meaning of satisfaction itself, according to Kotler and Keller (2013) is someone's happy or disappointed feelings that arise after comparing the performance (or results) of the product thought to the expected performance (or results). If performance fails to meet expectations, resulting in consumers feeling dissatisfied, if performance is in line with expectations, then consumers will be satisfied, and if performance exceeds expectations, then consumers will feel very satisfied.

In the face of competition, companies must be able to provide quality products or services, both in terms of price and speed of service. Consumers who are satisfied with the services provided will have implications for the creation of customer loyalty, so they will not switch to competitor service products. However, if this is not fulfilled, their loyalty will be lost so that they will switch to buy competitors' products or services. Dissatisfaction will have implications for the decline in sales, thereby reducing profits or even losses for the company.

PT. Kamadjaja Surabaya, which has several business branches in the city of Surabaya, seems to still have shortcomings in terms of service. This is evidenced by complaints from consumers such as delays in picking up goods, delays in delivery of goods, time of moving goods from containers to the
recipient warehouse for a long time, due to lack of unloading labor, the number of items damaged in moving from container to warehouse, lack of employee attention, to the inability of employees to provide satisfying answers to customers.

Based on these problems, the researchers tried to find the main problems and the solution at Klog Surabaya which is one of the business branches of PT. Kamadjaja Logistics. The focus of this research is to analyze the service attributes that need to be developed by PT. Kamadjaja Surabaya with the Six Sigma method. Six Sigma was chosen because it is a quality improvement analysis method oriented to world class quality, namely with level 6 sigma or 3.4 DPMO (Defect per Million Opportunity). Here the author also cites scientific papers from Prasetyo (2018) who have helped PT TIKI JNE Bandar Lampung city, in finding what factors can improve the quality of their services.

The purpose of this study is to find out what factors most influence the decline in service quality, as well as screening the quality of the company as a whole.

II. LITERATURE REVIEW

This research will really be emphasized to discuss about quality because it is the key to winning competition in the market. If the company is able to provide quality products, indirectly they also have built a foundation of customer satisfaction values.

Sunyoto (2012) states that quality is a measure to assess that a product or service has a use value as desired or in other words a product or service is deemed to have quality if it functions or has a use value as desired.

1. Definition of Service

Service is an activity offered by service providers to consumers, can be in the form of objects and other objects, this was written by Lovelock and Wirtz (2011: 37) which states, Services are economic activities offered by one party to another party. According to Sunyoto (2012) there are several definitions of services including those services as deeds (actions, procedures, activities); intangible processes and performance. Services are intangible (such as comfort, entertainment, speed, pleasure, and health) and perishable (services may not be stored as supplies that are ready to be sold or consumed when needed) services are created and consumed simultaneously.

2. Service Characteristics

Kotler (2013) suggests that services have four main characteristics, namely:

a. Intangibility: is an act, action, experience, process, performance (performance) or business that is abstract, cannot be seen, felt, smelled, heard or touched before being bought and consumed.

b. Inseparability: Goods are usually produced first, then sold, then consumed. While services are generally sold first, then produced and consumed at the same time and place.

c. Variability: Service varies greatly. Quality depends on who provides them and when and where quality of service is provided. Temporary demand makes it difficult to deliver consistent products.

d. Perishability: service or service is a commodity that is not durable, cannot be stored for future reuse, resale or return.

3. Customers Satisfaction

The definition of customer satisfaction according to Brierley & MaDougall cited by Tjiptono (2011) is a measure of an organization's "total product" performance compared to a series of customer requirements. The basic principle underlying the importance of measuring customer
satisfaction is "doing best what matters most to customers" (doing the best aspects, most important for customers "Kotler, Et, Al - quoted by Tjiptono (2011), four methods for measuring customer satisfaction:

a. Complaints and suggestions system
b. Hire several ghost shopper who act as potential customers
c. Lost customer analysis, contacting consumers who have stopped buying to make it an evaluation.
d. Consumer satisfaction survey

4. Service Quality Method

According to Fitzsimmons (2014: 166) argues that "Service quality can be known by comparing the perception of customers for services that are actually expected". Meanwhile, if the reality is less than expected, the service can be said to be of less quality, and if the reality is the same as expected, the service is satisfactory. Servqual consists of two parts, namely the Expectation and Perception Section. The expectations section expresses expectations within the buyer and that is what the standard guarantees to assess the quality of the company's services. while the Perception section, states the assessment of the services it receives.

Expectations and perceptions are measured by a scale consisting of 5 degrees of importance. Where the value of 1 states "strongly disagree" and number 5 states very much agree.

5. Six Sigma

Six Sigma is an organizational approach to eliminate irregularities and reduce waste in the process by using a statistical science approach. Six Sigma is defined as a business improvement strategy to eliminate waste, reduce costs due to poor quality, and improve the effectiveness of all operations, so as to meet the needs and needs of consumers (Anthony and Banuelas in Syukron and Kholil, 2013).

The goal of Six Sigma is to reduce the number of customer experiences to three in a million (for the six sigma level). The six-sigma methodology is used to obtain factual information about customer satisfaction (Dewi and Widiyanto, 2015). Whereas the measurement steps of the service quality improvement process are as follows:

a. Definition Phase: defines process improvement and keeps the focus on customers and the company's strategy.

b. Measurement phase: aims to measure current performance so that it can be compared with targets that have been set.

- Measurement of expectations

\[ E_{ij} = \frac{\sum_{i=1}^{n} T E}{N} \]

\[ E_{ij} = \text{expectation score on dimension j} \]

\[ T E_{ij} = \text{customer expectation score of attribute i} \]

\[ N = \text{number of respondents} \]

- Performance Measurement

\[ E_{ij} = \frac{\sum_{i=1}^{n} T E}{N} \]

\[ E_{ij} = \text{expectation score on dimension j} \]

\[ T E_{ij} = \text{customer expectation score of attribute i} \]

\[ N = \text{number of respondents} \]

- Gap

\[ \text{Gap} = P_{ij} - E_{ij} \]

- Satisfaction Level

\[ \text{satisfaction level} = \frac{P_{ij}}{E} \times 100\% \]
- Measurement of DPMO (Defect per Million Opportunity):
  \[ D = \left( 1 - \frac{F}{T \times K} \right) \times 100000 \]

- Sigma level:
  \[ \sigma = \left( \frac{D}{100000} \right) + 1.5 \]

c. Analyze Phase: try to understand why the deviation occurs and look for reasons that cause the deviation or error.

d. Improve Phase: make a design solution (action plan) in improving, and improving the quality of sigma in processes that require improvement.

e. Control Phase: maintain the design of improvements that have been made so that it does not return to the original condition before the repair.

6. Previous Research

In 2018, Nokta made scientific works with the theme of improving the quality of services. He identified factors that influence the quality of services, among others: lack of employees in communication with customers, the layout of service rooms is less comfortable, lack of employee speed in responding to complaints from customers, the number of employees lacking to respond to customers, work tools still need renewal, and company SOPs need renewal in a better direction.

Whereas in 2018, Prasetyo, who analyzed the quality of the shipping service with six sigma, identified factors that influenced, among other things: timeliness of delivery of goods, the condition of goods received in good condition according to the order, timeliness of service in accordance with the time given, JNE guarantees the security of transactions and the delivery of goods to customers, JNE is willing to accept criticisms and suggestions, Information on goods arrives (Prasetyo, 2018), convenient operating time and facilitate customers, speed of delivery of goods.
III. Research Methodology

The steps of the research to be carried out are as follows:

![Flowchart of research methodology]

Variable measurements are performed using 5 Likert scales, for expectation and perception categories. And the following is a Likert scale that is used to measure the variables expectation and perception categories.

| Table 1. Likert scale expectation category |
|-------------------------------------------|
| Answer Choice                            | Score |
| Very unimportant                         | 1     |
| Not important                            | 2     |
| Quite important                          | 3     |
| Urgent                                   | 4     |
| Very important                           | 5     |

| Table 2. Likert scale for performance or perception categories |
|---------------------------------------------------------------|
| Answer Choice                                               | Score |
| Very Dissatisfied                                           | 1     |
| Not satisfied                                               | 2     |
| Quite satisfied                                             | 3     |
| Satisfied                                                  | 4     |
| Very satisfied                                              | 5     |

The reason the Likert scale is used is because the Likert scale has some merit compared to other types, namely besides being relatively easy it is also...
reflected in the diversity of scores (variability of score) as a user of a scale of 1 to 10. In general the Likert scale is used to measure the attitude or response of someone expected to an object. This is because in addition to being practical, a well-designed Likert scale generally has satisfactory reliability.

The following are indicators of the research variables used as questionnaire questions.

Table 3. Indicator of the research variable used

| Variable   | Dimension Variable | Definition                                                                 | Indicator of Service                   | Variable |
|------------|--------------------|---------------------------------------------------------------------------|---------------------------------------|----------|
| Service Quality | Tangible (D1)      | Physical facilities, equipment and personnel appearance (van Iwarden et al., 2003 in Dehghan, 2012: 5) | Comfortable office and supporting facilities | V₁       |
|            |                    |                                                                           | Neat looking employees                 | V₂       |
|            |                    |                                                                           | Modern equipment                       | V₃       |
| Reliability (D2)|                | The ability to perform promised services directly and accurately (van Iwarden et al, 2003 in Dehghan, 2012: 5) | The ability of employees to deal with problems faced by customers | V₄       |
|            |                    |                                                                           | Delivery the goods on time             | V₅       |
|            |                    |                                                                           | The condition of goods received by customers is good and appropriate | V₆       |
|            |                    |                                                                           | Pick up goods on time                  | V₇       |
| Responsiveness (D3)|            | Willingness to help customers and provide fast service (van Iwarden et al, 2003 in Dehghan, 2012: 5) | Goods information arrived              | V₈       |
|            |                    |                                                                           | Fast service process                   | V₉       |
|            |                    |                                                                           | Employees are ready to respond to customer requests | V₁₀      |
| Assurance (D4)|                   | Knowledge and respect from employees and their ability to inspire trust and confidence (including competence, courtesy, credibility, and security) (van Iwarden et al, 2003 in Dehghan, 2012: 5) | Transaction security guarantee          | V₁₁      |
|            |                    |                                                                           | Employees are always polite and friendly | V₁₂      |
|            |                    |                                                                           | Employees are able to answer customer questions | V₁₃      |
| Empathy (D5)|                   | Individual attention given by the company to its customers (including access, communication, customer understanding) (van Iwarden et al, 2003 in Dehghan, 2012: 5) | Willing to accept criticism and suggestions | V₁₄      |
|            |                    |                                                                           | Operating time is convenient and makes it easy for customers | V₁₅      |

Population and research sample

1. Population

The population used in this study is the number of corporate service users from January 2018 to August 2019.

Table 4. Number of shipping containers

| No | Month     | Shipment Amount |
|----|-----------|-----------------|
|    | January   | 2018            | 2019            |
| 1  | January   | 1503            | 1048            |
| 2  | February  | 1546            | 1264            |
| 3  | March     | 1604            | 1191            |
| 4  | April     | 1571            | 954             |
| 5  | Mei       | 1511            | 779             |
Sample Determination of the sample size in this study was taken using the Slovin formula (Sugiono 2013):

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

Information:
- \( n \) = sample size
- \( N \) = population mount
- \( e \) = fault tolerance limit

Based on the formula above, the following calculation is obtained:

\[
\begin{align*}
1189 &= \frac{N}{1 + N \cdot e^2} \\
&= 92.24 \approx 100
\end{align*}
\]

Sampling is done randomly without regard to strata of the population presented. Members of PT. Kamadjaja Logistik surrounds the same opportunities because it has (had experience) interacting directly with service providers.

Research result

Validity test is performed on the results of the questionnaire to calculate the correlation coefficient between the scores of each attribute for each respondent and the total answers of each respondent. And the results of the validity test of all dimensions using the SPSS 20.0 application found that all the questions are valid so that further data processing can be done.

From the calculations obtained, the correlation value between the question score with the total score. This value is then compared with the value of \( r \)-table at 0.05 significance and the amount of data is 100 questionnaires, then the \( r \)-table is 0.195, if \( R \) arithmetic > \( r \)-table then the question item is declared valid, whereas if \( R \) arithmetic < \( r \)-table then the question item is declared invalid, here are the results of the calculation of the validity test per data dimension using SPSS 20.0.

Expectations

a. Tangible

Tabel 5. Validity Results of SPSS Data Processing for Tangibles Expectation Dimensions

|   | \( r \)-value | \( r \)-table | Significance |
|---|---------------|---------------|-------------|
| X1 | 0.31          | 0.195         | 0.05        |
| X2 | 0.18          | 0.195         | 0.05        |
| X3 | 0.24          | 0.195         | 0.05        |

*Correlations (r) significant at 0.01 level (2-tailed)
Table 6. Summary of Tangible Expectation Validity Test

| Question | r count | r tab | Information |
|----------|---------|-------|-------------|
| X1       | 0.664   | 0.195 | Valid       |
| X2       | 0.535   |       | Valid       |
| X3       | 0.565   |       | Valid       |

b. Reliability

Table 7. Validity Test Results if the SPSS data is the Reliability Expectation dimension

Table 8. Summary of validity reliability test

| Question | r count | r tab | Information |
|----------|---------|-------|-------------|
| X4       | 0.512   |       | Valid       |
| X5       | 0.369   | 0.195 | Valid       |
| X6       | 0.261   |       | Valid       |
| X7       | 0.222   |       | Valid       |

c. Responsiveness

Table 9. Validation Test Results Responsiveness dimension
Table 10. Summary of the validity of the responsiveness of expectations

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| X8       | 0.593   | 0.195   | Valid       |
| X9       | 0.709   |         | Valid       |
| X10      | 0.539   |         | Valid       |

d. Assurance

Table 11. Validity Test Results for SPSS data if the Assurance Expectation dimension

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| X11      | 0.538   |         | Valid       |
| X12      | 0.646   |         | Valid       |
| X13      | 0.566   |         | Valid       |

Table 12. Summary of the validity assurance test

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| X11      | 0.538   |         | Valid       |
| X12      | 0.646   |         | Valid       |
| X13      | 0.566   |         | Valid       |

e. Empathy

Table 13. Empathy dimension validity test results

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| X14      | 0.608   | 0.195   | Valid       |
| X15      | 0.738   |         | Valid       |

Table 14. Empathy dimension validity test results

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| X14      | 0.608   | 0.195   | Valid       |
| X15      | 0.738   |         | Valid       |
Performance or Perception

a. Tangible

Table 15. Tangible Dimension Validity Test Results

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| Y1       | 0.642   | 0.195   | Valid       |
| Y2       | 0.609   |         | Valid       |
| Y3       | 0.624   |         | Valid       |

Table 16. Summary of the validity test of tangible perception

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| Y1       | 0.642   | 0.195   | Valid       |
| Y2       | 0.609   |         | Valid       |
| Y3       | 0.624   |         | Valid       |

b. Reliability

Table 17. Validity Test Results if SPSS data on the Perception Reliability dimension.

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| Y4       | 0.103   | 0.132   | 0.067       |
| Y5       | -0.094  | 0.081   | 0.067       |
| Y6       | 0.012   | 0.008   | 0.008       |
| Y7       | 0.001   | -0.009  | 0.009       |
| Y8       | 0.006   | 0.003   | 0.003       |
| Y9       | 0.004   | -0.002  | 0.002       |
| Y10      | 0.002   | 0.001   | 0.001       |
| Y11      | 0.000   | 0.000   | 0.000       |
| Total    | 0.000   | 0.000   | 0.000       |

** Correlation is significant at the 0.01 level (2-tailed).
Table 18. Summary of the validity test of perception reliability

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| Y4       | 0.493   |         | Valid       |
| Y5       | 0.661   | 0.195   | Valid       |
| Y6       | 0.540   |         | Valid       |
| Y7       | 0.500   |         | Valid       |

c. Responsiveness

Table 19. Test Result of Perceived Responsiveness dimension Validity

|        | Y8          | Y9          | Y10         | Total       |
|--------|-------------|-------------|-------------|-------------|
|        | Pearson Correlation | Sig. (2-tailed) | Sum of Squares and Cross-products | Covariance | N |
| Y8     | 0.612       | 0.000       | 41.000      | 0.414       | 100 |
| Y9     | 0.774       | 0.000       | 24.000      | 0.221       | 100 |
| Y10    | 0.382       | 0.000       | 12.000      | 0.121       | 100 |

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 20. Summarize the validity of perception responsiveness of perception

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| Y8       | 0.612   | 0.195   | Valid       |
| Y9       | 0.774   |         | Valid       |
| Y10      | 0.382   |         | Valid       |
d. Assurance

Table 21. Test Results of Perceived Assurance dimension validity

| Question | r count | r table | Information |
|----------|---------|---------|-------------|
| Y11      | 0.641   | 0.195   | Valid       |
| Y12      | 0.614   | 0.104   | Valid       |
| Y13      | 0.553   | 0.104   | Valid       |

Table 22. Summary of perception assurance validity tests

| Question | Pearson Correlation | Sig. (2-tailed) | Sum of squares and Cross-products | Covariance | N   |
|----------|---------------------|-----------------|----------------------------------|------------|-----|
| Y11      | 1                   | .641*            | 0.195                            | Valid      |
| Y12      | 0.614               | 0.104           |                                  | Valid      |
| Y13      | 0.553               | 0.195           |                                  | Valid      |

** Correlation is significant at the 0.01 level (2-tailed)

e. Empathy

Table 22. Validity Test Results if SPSS data Empathy Perception dimensions

| Question | Pearson Correlation | Sig. (2-tailed) | Sum of squares and Cross-products | Covariance | N   |
|----------|---------------------|-----------------|----------------------------------|------------|-----|
| Y14      | 1                   | .656*           | 0.000                            | 0.339      | 100 |
| Y15      | 0.369               | 0.195           |                                  | 0.420      | 100 |
| Total    | .704                | 0.000           |                                  | 0.420      | 100 |

** Correlation is significant at the 0.01 level (2-tailed)
Table 23. Summary of the validity of empathy perception test

| Question | r Count | r table | Information |
|----------|---------|---------|-------------|
| Y14      | 0.794   | 0.195   | Valid       |
| Y15      | 0.851   |         | Valid       |

IV. Analysis of Service Quality on Customer Satisfaction Service quality method

In the table below, it can be seen that the gap is less than zero (<0), thus indicating a gap between the expectations and perceptions of consumers. Consumers are still not satisfied with the services provided by PT. Kamadjaja Surabaya. This dissatisfaction is caused by consumers’ perceptions when enjoying services not as expected.

Table 24. Value of the gap between the dimensions of perception and the dimensions of hope

| No | Atribut                                           | Perception Rate (X) | Expectation level (Y) | Average Perception | Average Expectations | Gap    |
|----|--------------------------------------------------|---------------------|-----------------------|---------------------|----------------------|--------|
| 1  | Comfortable office and supporting facilities      | 384                 | 484                   | 3.84                | 4.84                 | -1     |
| 2  | Neat looking employees                           | 395                 | 487                   | 3.95                | 4.87                 | -0.92  |
| 3  | Modern equipment                                 | 383                 | 489                   | 3.83                | 4.89                 | -1.06  |
| 4  | The ability of employees to deal with problems faced by customers | 351                 | 490                   | 3.51                | 4.9                  | -1.39  |
| 5  | Delivery the goods on time                       | 313                 | 483                   | 3.13                | 4.83                 | -1.7   |
| 6  | The condition of goods received by customers is good and appropriate | 349                 | 485                   | 3.49                | 4.85                 | -1.36  |
| 7  | Pick up goods on time                            | 330                 | 490                   | 3.3                 | 4.9                  | -1.6   |
| 8  | Goods information arrived                        | 400                 | 491                   | 4                   | 4.91                 | -0.91  |
| 9  | Fast service process                             | 374                 | 488                   | 3.74                | 4.88                 | -1.14  |
| 10 | Employees are ready to respond to customer requests | 391                 | 491                   | 3.91                | 4.91                 | -1     |
| 11 | Transaction security guarantee                    | 396                 | 493                   | 3.96                | 4.93                 | -0.97  |
| 12 | Employees are always polite and friendly          | 388                 | 492                   | 3.88                | 4.92                 | -1.04  |
| 13 | Employees are able to answer customer questions   | 382                 | 488                   | 3.82                | 4.88                 | -1.06  |
| 14 | Willing to accept criticism and suggestions       | 389                 | 486                   | 3.89                | 4.86                 | -0.97  |
| 15 | Operating time is convenient and makes it easy for customers | 389                 | 479                   | 3.89                | 4.79                 | -0.9   |

V. Six Sigma

The Six Sigma method is used to determine the quality of service provided to customers, by using Define, Measure, Analyze, Improvement, Control (DMAIC) to make Continuous improvements (Wisnubroto, 2012). The results of the six sigma calculation are shown in the table below.

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### Table 25: Six Sigma Calculation Results

| Attribut | Average level of expect. | Average level of perfor. | Gap | Satisfaction Target | Level of Satisfaction | DPMO | Sigma value |
|----------|--------------------------|--------------------------|-----|----------------------|-----------------------|------|-------------|
| V1       | 4.84                     | 3.84                     | -1  | 100.00%              | 79.34%                | 232000 | 2.27        |
| V2       | 4.97                     | 3.95                     | -0.92 | 100.00%              | 81.11%                | 210000 | 2.29        |
| V3       | 4.89                     | 3.83                     | -1.06 | 100.00%              | 78.32%                | 234000 | 2.27        |
| V4       | 4.9                      | 3.51                     | -1.39 | 100.00%              | 71.63%                | 298000 | 2.20        |
| V5       | 4.89                     | 3.13                     | -1.76 | 100.00%              | 64.01%                | 374000 | 2.13        |
| V6       | 4.93                     | 3.49                     | -1.44 | 100.00%              | 70.79%                | 302000 | 2.20        |
| V7       | 4.96                     | 3.28                     | -1.68 | 100.00%              | 66.13%                | 344000 | 2.16        |
| V8       | 4.91                     | 4                        | -0.91 | 100.00%              | 81.47%                | 200000 | 2.30        |
| V9       | 4.88                     | 3.74                     | -1.14 | 100.00%              | 76.64%                | 252000 | 2.25        |
| V10      | 4.9                      | 3.91                     | -1.02 | 100.00%              | 79.80%                | 218000 | 2.28        |
| V11      | 4.93                     | 3.96                     | -0.97 | 100.00%              | 80.32%                | 208000 | 2.29        |
| V12      | 4.92                     | 3.88                     | -1.04 | 100.00%              | 78.86%                | 224000 | 2.28        |
| V13      | 4.92                     | 3.82                     | -1.1  | 100.00%              | 77.64%                | 236000 | 2.26        |
| V14      | 4.92                     | 3.89                     | -1.03 | 100.00%              | 79.07%                | 222000 | 2.28        |
| V15      | 4.84                     | 3.89                     | -0.95 | 100.00%              | 80.37%                | 222000 | 2.28        |
| Sum.     | 4.90                     | 3.74                     | -1.16 | 100.00%              | 76.37%                | 251733 | 2.25        |

### VI. Conclusion

From the results of research and data processing, it was found that the most influential attribute on service quality and the priority of improvement was atribut Punctuality of delivery of goods. Whereas the most influential dimension is reliability. However, when viewed from the side of consumer satisfaction, the quality of service is not optimal as indicated by the average performance score of 3.74; expectation score of 4.90; gap -1.16; satisfaction level of 76.37%, DPMO value 251733, and sigma level 2.25.

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