

Analysis of Customer Satisfaction on Quality of Air Export Service in Pt. XYZ using Service Quality (Servqual) and Diagram Importance Performance Analysis (IPA) Methods

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Abstract:- PT. XYZ is a company engaged in services as a freight forwarder. In an effort to serve the needs of consumers in the process of air exporting goods, PT. XYZ wants to improve the quality of its services, because in recent months there has been a decrease in the number of shipping instructions accompanied by the inclusion of several complaints from customers. For this reason, companies need to approach consumers to find out where quality improvements must be made. The approach with consumers can find out the behaviour and factors that influence consumers' perceptions and expectations related to service quality.

Service Quality (SERVQUAL) method is a method used to measure service quality of each dimension attribute, through a questionnaire with a Likert scale that is used to measure service quality so that a gap value can be obtained between the expectation of consumer perceptions of each dimension service received. Then the GAP from the SERVQUAL method is processed using the Importance Performance Analysis (IPA) method to sort the priority of service quality improvement that will be done through the Cartesian diagram. Based on the order of priority, improvements are made using the 5W + 1H method.

Keywords:- Service Quality, Importance Performance Analysis (IPA), 5W+1H (What, When, Where, Who, Why and How), Service Improvement.

I. INTRODUCTION

Consumer satisfaction is the most important factor for the company concerned, so that this company which is engaged in the service sector can continue to stand and develop. One way that can be taken in improving the quality of services is by trying to know and understand consumer desires. With the feedback from consumers, the company can improve the quality of its services. And based on knowledge about customer characteristics, better service quality can be developed that can increase customer satisfaction.

PT. XYZ is a company engaged in services as a freight forwarder. Within the last 6 months PT. XYZ has decreased the number of shipping instructions, namely letters made by the shipper (Goods Owner or shipping company) to receive and load the contents stated in the letter. Then accompanied by the existence of several letters of complaint submitted from consumers.

MONTH	SI	WEIGHT
MAR	294	161,886
APR	271	131,728
MAY	287	149,851
JUNE	270	138,374
JULY	214	95,049
AUG	186	87,641
TOTAL	1228	602,643

Tabel 1:- Company Revenue Data Mar-Aug 2018

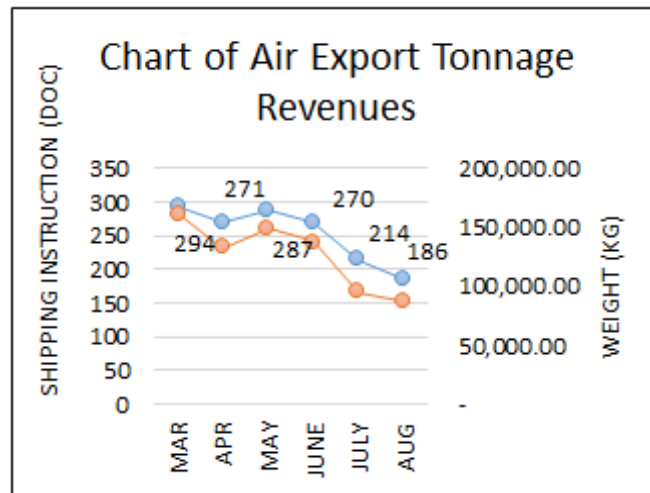


Fig 1:- Chart of Air Export Tonnage Revenues of PT. XYZ March-August 2018

The objectives of this study are as follows:

- Obtain the order of priority for repairs to services on the air exports of PT. XYZ uses Service Quality (ServQual) and IPA (Importance Performance Analysis) methods.
- Propose improvements using the 5W + 1H method (What, Where, When, Why, Who and How).

II. REVIEW OF LITERATURE

According to the Council of Logistics Management (Ballou, 1992) logistics is defined as the process of planning, implementing, and controlling efficiency, effective cost flow and storage of raw materials, intermediate materials, finished goods and related information from the origin of consumption points in order to fulfill consumer needs.

A freight forwarding business is a business activity aimed at managing all activities needed for the delivery and receipt of goods through transportation either by land, sea or air.

In this case freight forwarding activities can include activities in the form of: receipt, storage, sorting (grouping), packing, measurement, weighing, document management, issuance of transport documents, transportation costs and insurance claims for shipping goods, and settlement of bills and fees others relate to the delivery of the goods until they are received by the party ordering the goods.

The Servqual service quality model conducts research based on customer perceived quality. The Servqual method defines service quality as the difference between reality and expectations of services that customers receive (Parasuraman, et.al, 1990).

The model of quality of service creation Parasuraman et al. Identifies the reasons for creating a gap between consumer perceptions and expectations. There are five gaps (Gap) and it should be known in advance that Gap 5 is a product of Gap 1, 2, 3, and 4. If Gap 1 to Gap 4 can be

closed, Gap 5 will automatically be closed. SERVQUAL scale includes five dimensions of service quality, namely: 1. Tangibles 2. Reliability 3. Responsiveness 4. Assurance 5. Empathy.

- a. Determine the average perception value (\bar{p}) for each variable.

$$\bar{p} = \frac{\sum_{i=1}^n p_i}{n}$$

- b. Determine the average expectation value (\bar{E}) for each variable.

$$\bar{E} = \frac{\sum_{i=1}^n E_i}{n}$$

- c. Determine the Servqual Score (S) for each variable

$$S = \bar{p} - \bar{E}$$

Where:

P_i = Value of perception given by the customer for question i

n = Number of respondents

E_i = Expectation value given by customer for question i

Each dimension has several questions and is answered in a range of values 1 to 5, where number 1 represents a feeling of strongly disagree (strongly disagree) and number 5 represents a feeling of strongly agreeing (strongly agree).

Importance Performance Analysis (IPA) is conceptually a multi-attribute model. This technique identifies the strengths and weaknesses of market offerings using two criteria, namely the relative importance of attributes and customer satisfaction. The application of this technique begins with identifying the attributes that are relevant to the chosen situation of interest. In this technique, respondents were asked to assess the level of importance and performance of the company. Based on the results of these assessments, a calculation will be made regarding the level of conformity, namely the comparison of company performance scores (performance) with importance scores. This level of suitability will later determine the order and priority of the factors that will affect customer satisfaction (Nasution, 2005: 63).

III. RESULT AND DISCUSSION

The population that the author uses as the object of research is consumers of air export services at PT. XYZ is 130 consumers. Samples for correspondents of research questionnaires were obtained using the Slovin formula:

$$n = \frac{N}{1 + N (d)^2}$$

$$n = \frac{130}{1 + 130 (0,05)^2}$$

$$n = \frac{130}{1.325} = 98.11$$

Then for the research questionnaire correspondents were 98 people. While 32 other people we used as correspondents for the preliminary questionnaire.

No	Attributes
Reliability	
1	Marketing ability in offering products according to customer needs
2	Accuracy and accuracy of time in export shipments
3	Processes and procedures for resolving claims or problems
Assurance	
4	The ability of employees to guarantee the integrity of quality and quantity of cargo
5	The ability and skills of employees in serving customer complaints
6	Communicate effectively and efficiently with customers
Responsiveness	
7	Ease of contacting employees.
8	The ability of employees to be responsive in dealing with problems that arise.
9	The ability of employees to be responsive in managing export documents
Tangible	
10	Cleanliness of office space and comfort.
11	Completeness and readiness of tools used to handle export shipments.
12	Neat and professional employee appearance
Empathy	
13	Hospitality of employees towards customers.
14	Responsible for the security of export documents.
15	Ethics communicates with customers

Table 2

Pearson product moment correlation numbers obtained are compared with critical r numbers obtained from r Pearson product moment table. With the number of respondents 32 people, and the level of accuracy used α 5%, obtained a critical r value = 0.349. The following are

the results of the validity test of customer expectations regarding service services to the reality of service perceived by the customer (gap 5) and perceptions of the service provider on customer expectations (gap 1) using the calculation results of SPSS Version 24

No	Attributes	r hit ekspetasi	r hit persepsi	r hit table	Keterangan
Reliability					
1	Marketing ability in offering products according to customer needs	0,472	0,379	0,349	valid
2	Accuracy and accuracy of time in export shipments	0,694	0,468	0,349	valid
3	Processes and procedures for resolving claims or problems	0,743	0,79	0,349	valid
Assurance					
4	The ability of employees to guarantee the integrity of quality and quantity of cargo.	0,503	0,391	0,349	valid
5	The ability and skills of employees in serving customer complaints	0,394	0,63	0,349	valid
6	Communicate effectively and efficiently with customers	0,664	0,446	0,349	valid
Responsiveness					
7	Ease of contacting employees.	0,704	0,606	0,349	valid
8	The ability of employees to be responsive in dealing with problems that arise.	0,506	0,429	0,349	valid
9	The ability of employees to be responsive in managing export documents	0,443	0,428	0,349	valid
Tangible/BuktiFisik					
10	Cleanliness of office space and comfort.	0,404	0,746	0,349	valid
11	Completeness and readiness of tools used to handle export shipments.	0,489	0,468	0,349	valid
12	Neat and professional employee appearance	0,782	0,822	0,349	valid
Empathy					
13	Hospitality of employees towards customers.	0,382	0,414	0,349	valid
14	Responsible for the security of export documents.	0,486	0,566	0,349	valid
15	Ethics communicates with customers	0,446	0,388	0,349	valid

Table 3:- Hasil Uji Validity

After the validation testing is done, it turns out that all variables are declared valid because $r_{hits} > r_{table}$.

In this study reliability testing was carried out using the Cronbach Alpha method.

Case Processing Summary			
		N	%
Cases	Valid	32	100,0
	Excluded^a	0	0,0
	Total	32	100,0
a. Listwise deletion based on all variables in the procedure.			
Reliability Statistics			
Cronbach's Alpha		N of Items	
0,824		15	

Table 4:- Customer Expectations Reliability Test Results

Case Processing Summary			
		N	%
Cases	Valid	32	100,0
	Excluded^a	0	0,0
	Total	32	100,0
a. Listwise deletion based on all variables in the procedure.			
Reliability Statistics			
Cronbach's Alpha		N of Items	
0,810		15	

Table 5:- Customer Perception Reliability Test Results

From the results above using the Cronbach's Alpha method, it can be declared reliable. This condition is determined by a measuring instrument that can be said to be reliable if the minimum reliability coefficient value that must be met is 0.7 (Kaplan and Saccuzzo, 1993).

The following is the average value of customer expectations regarding service services to the reality of service perceived by customers (gap 5) to the variable service quality statement.

NUMBER OF CORRESPONDENTS: 98 people					
ATTRIBUTES	EKSPEKTATION		PERCEPTION		GAP
	TOTAL	AVERAGE	TOTAL	AVERAGE	
1	380	3,88	384	3,92	0,04
2	364	3,71	364	3,71	0,00
3	371	3,79	346	3,53	-0,26
4	387	3,95	357	3,64	-0,31
5	370	3,78	371	3,79	0,01
6	389	3,97	343	3,50	-0,47
7	338	3,45	373	3,81	0,36
8	382	3,90	324	3,31	-0,59
9	363	3,70	309	3,15	-0,55
10	337	3,44	331	3,38	-0,06
11	297	3,03	294	3,00	-0,03
12	358	3,65	338	3,45	-0,20
13	360	3,67	382	3,90	0,22
14	369	3,77	322	3,29	-0,48
15	355	3,62	321	3,28	-0,35

Table 6:- The Average Value of the Gap is 5 for the Variable Service Quality Statement

The following is the result of calculating the average value of a gap of 5 (five) based on five servqual dimensions.

DIMENSIONS	Average number of expectation dimensions	Average number of perception dimensions	GAP
Reliability	3,79	3,72	-0,07
Assurance	3,90	3,64	-0,26
Responsiveness	3,68	3,42	-0,26
Tangible	3,37	3,28	-0,10
Empathy	3,69	3,49	-0,20

Table 7:- The Average Gap Value of 5 is based on Five Dimensions of Servqual

The interpretation of the results of the calculation is as follows:

- If the average expectation is greater than the average perception, it means that customers are less satisfied with the service received;
- If the average expectation is the same as the average perception, it means that the customer is satisfied with the service received;
- If the average expectation is smaller than the average perception, then it means that customers are more satisfied with the service received or experiencing ideal conditions.

To find out the attributes that are priorities for improvement by PT. XYZ, it is necessary to analyze the importance of attributes with the help of the IPA Cartesian diagram. This analysis uses data on the level of importance (expectation) and level of performance (perception) of each attribute. The Cartesian diagram of IPA in the image will show the location of the attributes whether it enters Quadrant I, Quadrant II, Quadrant III, or Quadrant IV.

$$\bar{X} = \frac{X}{n} = \frac{52.64}{15} = 3.51$$

$$\bar{Y} = \frac{Y}{n} = \frac{55.31}{15} = 3.69$$

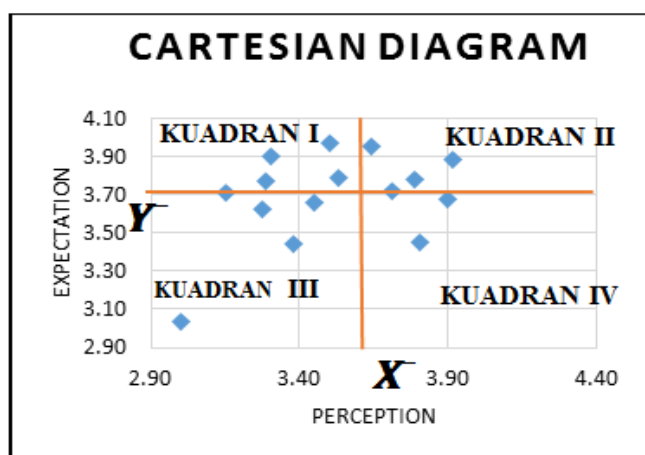


Fig 2:- Cartesian Diagram of Importance Performance Analysis (IPA)

Quadrant 1 (Concentrate These) This is an area that contains factors that are considered important by the customer, but in reality these factors are not yet in line with customer expectations (the level of satisfaction obtained is still low). The variables included in this quadrant must be increased. Attributes that enter into Quadrant I are: Attributes 6, 8, 9 and 14.

Quadrant 2 (Keep Up The Good Work) This is an area that contains factors that are considered important by the customer, and the factors considered by the customer are in accordance with what he feels so that the level of satisfaction is relatively higher. The variables included in this quadrant must be maintained because all of these variables make the product or service superior in the eyes of the customer. Attributes that enter into Quadrant I are: Attributes 1, 2, 3, 4 and 5.

Quadrant 3 (Low Priority) This is an area that contains factors that are considered less important by customers, and in reality the performance is not too special. Increasing variables included in this quadrant can be reconsidered because the effect on the benefits felt by customers is very small. The attributes that enter into Quadrant I are: Attributes 11, 10, 12 and 15.

Quadrant 4 (Possible Overkill) This is an area that contains factors that are considered less important by customers, and are felt to be too excessive. The variables included in this quadrant can be reduced or continue without changes. The attributes that enter into

Quadrant I are: Attributes 7 and 13.

The next step is to propose improvements in air export services at PT. XYZ, so that customer satisfaction can be immediately achieved and realized. Proposed improvements are made in accordance with the results obtained from the Cartesian diagram, where there is only 1 attribute in quadrant A which is a priority, and 1 attribute in quadrant C because the value of satisfaction level is low while the importance level is high. The proposed improvements to the XYZ company are as follows:

Descriptions	Improvement
Atribut 6 (Assurance): Communicate effectively and efficiently with customers	
(WHAT) What are the supporting factors of communication between employees and customers so that it becomes less effective and efficient?	Availability of telephone signals, communication facilities, techniques for delivering employees to customers.
(WHY) Why is communication between employees and customers becoming ineffective and inefficient?	Communication becomes ineffective and inefficient because of the misperception between customers and employees, so that the settlement given by employees is considered unsatisfactory and does not resolve customer complaints.
(WHERE) Where (through what communication media) communication between employees and customers does not work effectively and efficiently?	Via phone, whatsapp, email dan fax.
(WHEN) When did this ineffective and inefficient communication occur?	On workdays.
(WHO) Who are the employees who communicate less effectively and efficiently?	Customer service and operational staff.
(HOW) How can all employees be able to communicate effectively and efficiently?	The company provides periodic training and approaches to employees on how to communicate effectively and efficiently.
Atribut 8 (Responsiveness): The ability of employees to be responsive in dealing with problems that arise.	
(WHAT) What factors influence employees so that they are less responsive to work problems?	Employee workload, and employee understanding of their work.
(WHY) Why do employees become less responsive to work problems?	The overload of work for employees, and lack of understanding of employees to some problems in their work.
(WHERE) Where are the employees when the responsiveness is felt by the customer?	In the office.
(WHEN) When do employees become less responsive to work problems?	When working hours and outside working hours when problems occur.
(WHO) Who are employees who are less responsive to work problems?	Customer service and operational staff.
(HOW) How do you approach employees to be responsive to work problems?	The company provides employee training regarding work systems and problem solving.
Atribut 9 (Responsiveness): The ability of employees to be responsive in managing export documents	
(WHAT) What type of document management makes employees less responsive?	Export permit documents, export notices and import licenses in the destination country.
(WHY) Why do employees become less responsive to repairs and complete export documents?	This is because employees are waiting for a response from a third party: service provider, username and agent in the destination country.
(WHERE) Where does this lack of responsiveness to export documents occur?	In the air export department of PT. XYZ
(WHEN) When did this lack of responsiveness to export documents occur?	When the shipment of goods is in the condition that the goods sender does not have an export permit, or when there is a shipment of goods to the destination country that requires confirmation from the recipient of the goods for goods to be exported.

(WHO) Who are the employees who are less responsive to export documents?	Employee for processing export documents.
(HOW) How can employees in this export document management be more responsive?	There is an advocacy to employees of the export document to notify consumers that at least it takes special time to get confirmation from third parties. And There is negotiation with third parties to be responsive so that employees of the document section can provide a quick response to customers. Adanya negosiasi dengan pihak ketiga agar menjadi cepat tanggap sehingga karyawan bagian dokumen dapat memberikan respon yang cepat terhadap pelanggan.
Atribut 14 (Empathy): Responsible for the security of export documents.	
(WHAT) What documents are the most frequent cases of loss or misappropriation in the delivery of cargo?	House Airwaybill , label, and manifest.
(WHY) Why are employees less responsible for the security of export documents?	This is caused by operational employees who only attach labels on one side, negligence in attaching house airwaybill and manifest to airlines.
(WHERE) Where does the activity take place?	At the Soekarno Hatta Airport warehouse.
(WHEN) When did the negligence of the security of the export document occur?	When operational employees process cargo at the airport warehouse and when submitting documents to the airlines.
(WHO) Who are the employees who neglect the security of export documents?	Operational employees at Soekarno Hatta Airport.
(HOW) How can the security of export documents be done and no employee negligence occurs?	It is required for field operations employees to attach cargo labels on 2 or 3 sides, attach airwaybill documents and manifest on system airlines through the website and also through airline employees directly using physical documents. This can prevent the loss of these documents in air export activities.

Table 8

IV. CONCLUSION

Based on the results of the research that the author has done, some conclusions that can be made are as follows:

- The order of priority for service improvements to air exports of PT. XYZ uses Service Quality (ServQual) Method and IPA (Importance Performance Analysis) are:
 - Attribute 6 (Assurance / Guarantee): Communicate effectively and efficiently with customers.
 - Attribute 8 (Responsiveness / Responsiveness): The ability of employees to be responsive in facing problems that arise.
 - Attribute 9 (Responsiveness / Responsiveness): The ability of employees to be responsive in managing export documents.
 - Attribute 14 (Empathy / Empathy): Responsible for the security of export documents.
- Proposed improvements using the 5W + 1H method (What, Where, When, Why, Who and How).

- Attribute 6 (Assurance / Guarantee), Effective and efficient communication with customers: The company provides periodic training and approaches to employees on how to communicate effectively and efficiently.
- Attribute 8 (Responsiveness / Responsiveness), The ability of employees to be responsive in facing problems that arise: The company provides employee training regarding work systems and coping with problems.
- Attribute 9 (Responsiveness / Responsiveness), Ability of employees to be responsive in managing export documents: There is an advocacy to employees of the export document to notify consumers that at least it takes special time to get confirmation from third parties. There is negotiation with third parties to be responsive so that employees of the document section can provide a quick response to customers.
- Attribute 14 (Empathy / Empathy), Responsible for the security of export documents: It is necessary for field operations employees to attach cargo labels on 2 or 3 sides, attach airwaybill documents and manifest on system airlines via the website and also through airline employees directly using physical documents . This can prevent the loss of these documents in air export activities.

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