Analysis Of User Satisfaction Level On Services At The Port Of Flosing Bungus City, Padang City, West Sumatra.

Chairul Insani Ilham[1], Kodrat Alam[2],& Arman Saputra[3]

Abstract

Bungus Bay Ferry Port is located in West Sumatra Province. Bungus Bay Ferry Port is a ferry port that has a very important role for the community, especially in the Mentawai Islands Regency. Because the Bungus Bay Ferry Port can improve the economy of the Mentawai Islands Regency in the transportation sector.

Based on the results of observations in the field, there are several services that have not been carried out properly, so that service users feel less satisfied and comfortable while at the Bungus Bay Ferry Port. The methods used to analyze the existing problems are the Customer Statisfaction Index, Gap analysis, and Importance Performance Analysis. Based on the results of the analysis, it was found that the passenger satisfaction index was 67.08% and there were 5 service attributes in quadrant I that had to be improved and improved in quality.

Based on the results of the analysis, it can be concluded that there are several service attributes that are not running optimally, the service attributes include safety facilities such as fire extinguishers, evacuation route instructions, evacuation gathering points, first aid facilities, complaint telephone numbers, dividing lines between gangways and lanes. vehicles, ample parking space with good circulation in and out.

Keywords: Passenger Service; Passenger Perception; Passenger Satisfaction Level.

1. Introduction

West Sumatra Province is located on the west coast of the central part of Sumatra whose capital is Padang, with an astronomical location between 00.54° N and 30.30° South Latitude and between 98.36° – 101.53° East Longitude and is traversed by the equator with the northern boundary bordering the Province of West Sumatra. North Sumatra and Riau, to the south and west are bordered by the Indian Ocean and to the east by Jambi and Bengkulu Provinces.

West Sumatra has an area of 42,297.30 km^2 and has 19 regencies/cities with the Mentawai Islands Regency having the widest area, which is 6,011.35 km^2. The Mentawai Islands Regency is a separate district from the Province of West Sumatra, which is located in the westernmost part of the island of Sumatra and is surrounded by the Indian Ocean. Access for vehicles and passengers to and from the Mentawai Islands Regency is to use the Ro-Ro ship facility as a means of crossing transportation.

Source: Google Search (2021)

Figure 1.1. Location Map of West Sumatra Province

Bungus Bay Ferry Port, located in Bungus Teluk Kabung Subdistrict, is 12 km from the city center of Padang. This ferry port is included in the Class II ferry port because it only serves 1 trip/day with 2 ships measuring 500 GT and the volume of passenger transportation is less than 1000 people/day and vehicles less than 250 units/day in this Ferry Port managed by the Land Transportation Management Center. Region III of West Sumatra Province and served by ships belonging to PT. ASDP (Persero) Padang Branch which has 4 Padang - Mentawai Routes which are pioneer crossing routes that connect Padang City with the Mentawai Islands Regency. The existence of this trajectory is very important in supporting the development of a very large economy both on a local, regional, national and even international scale. For the condition of the level of tourism, local and foreign tourist visits in the Mentawai Islands Regency each year continue to experience a significant increase because the Mentawai Islands Regency is one of the best tourist destinations in the world.

In writing this final project, the author analyzes what factors affect the level of satisfaction of service users, such as regarding the quality of meeting needs and service quality to create service user satisfaction. But there are still many of these factors that do not meet the service standards in PM 39 of 2015 such as facilities that are not maintained, the absence of telephone stickers for complaints of security disturbances, the unavailability of fire fighting facilities, evacuation routes making it difficult for service users to find evacuation routes and gathering points at the time of arrival. In an emergency, park a narrow vehicle with poor circulation. In this Pandemic period, the impact of *Covid*-19 makes passengers have to get better service than before.

So, based on this background, the writer will conduct a research entitled**"Analysis Of Service User Satisfaction Level With Services In The Port Of Bungus France In Padang City, West Sumatra".**

2. Research Methods

Data collection methods The
writing of this Compulsory Working Paper uses several approaches in obtaining data as reference and comparison materials. This approach is adapted to the conditions and locations where the object is located. The approach methods used in this study are:

Primary
Data Primary data is data obtained directly from the source or based on direct observations in the field. The methods used in primary data collection are:

a. Observation Method Observation
   is a way of collecting data by making direct observations carefully and in accordance with the current situation. The author uses this method by observing and taking documentation directly about the current conditions at the Bungus Bay Ferry Port, West Sumatra. The data obtained are passenger perception data using questionnaires and passenger service based on the *Customer Statisfaction Index*.

b. Calculation Method
   In this method, the task of the surveyor is to count/count the number of objects in a certain period of time by using tools (such as counters, etc.) or with the help of a straight line. The data obtained is in the form of quantitative data and is generally very accurate and can be accounted for if done properly. In this method the surveyor observes and performs calculations regarding the rise and fall of passengers and vehicles.

Secondary
Data Secondary data is data that is not collected by the researcher himself. This secondary data is obtained from various agencies related to the object of research which is then processed and recapitulated so that it becomes one standard data. Methods used to collect secondary data include:

a. Literature Method (Library)
   Methods derived from literature or books in the library of the Palembang River Lake and Crossing Transportation Polytechnic and other books related to this research.

b. Institutional
   Method This method relates to the data collected from various agencies involved in this research. The data collected from various agencies related to the research, namely:
   1) BPTD Region III West Sumatra Province
   2) PT. ASDP Indonesia Ferry (Persero) Padang Branch

Methods of Analysis

1. **Of Research Instruments The**
   instrument in this study is a scale in the form of a questionnaire compiled based on the items obtained in PM Number 39 of 2015 concerning Service Standards for Crossing Passengers. This questionnaire consists of general data statements regarding the performance and interests of service users on the quality of service at the Teluk Bungus Ferry Port.

2. **Analysis of the Instrument Trial**
   Before being used, it was first tested. Testing of research instruments needs to be carried out with the aim of knowing the level of validity and reliability of the instruments used in the study.
   a. Validity Test Validity

test is used to measure the level of validity or validity of an instrument. The results of the analysis can be seen that if the coefficient of validity/r count is positive and meets the minimum requirements equal to or > from r table n = 60 (0.2542) then the instrument is said to be valid and can be used for measurement in research data collection. This technique is processed using SPSS 25 software.

b. Reliability Test The

instrument is said to be reliable if the instrument is able to reveal reliable data and in accordance with the actual reality. The general agreement is that the reliability is considered quite satisfactory if 0.700. To determine the reliability of the instrument, the alpha cronbach statistical test was carried out in *Software.* SPSS 25

3. **Analysis of the Number of ResearchThe**

Samples samples used by the researchers were teenage passengers 15 years and over and adult passengers pedestrians at the Teluk Bungus Ferry Port. The sampling technique used by the researcher is using the table from Issac and Michael.

4. *Customer Statisfaction Index* **(CSI)**

This CSI is used to determine the level of satisfaction of consumers using the service as a whole by looking at the level of importance of the service facility instruments at the Teluk Bungus ferry port.

5. **Data Analysis Techniques Analysis of**

a. Conformity Level of Importance Variables and Performance

b. *Gap Analysis*

c. *Importance and Performance Analysis Method (IPA)* and data on the time of installing Lashing on the ship.

3. Results And Discussion

Analysis and Problem Solving

1. **Characteristics Analysis of Respondents**

   a. Gender of Respondents

Based on the survey results, it can be seen that the passengers who were selected as respondents were 272 people and were not limited to gender. certain. Data obtained through questionnaires filled out by respondents showed that the percentage of male respondents was 57%, while the percentage of female respondents was 43%, so it can be concluded that the majority of respondents in this study were male.

   b. Educational Level of Respondents

Based on the survey results showed as many as 20% of respondents with junior high school education level, 47% high school, 10% diploma, 15% undergraduate, another 5%, and 3% for postgraduate education level. So it can be concluded that the majority of respondents in the study have the last education level of high school.

   c. Age Range of Respondents

Based on the survey results, as many as 38% of respondents with an age range of 15-25 years, ages 26-40 years by 35%, ages 41-55 years by 19%, and ages >55 years by 8%. So it can be concluded that the majority of respondents in this study with an age range of 15-25 and 26-40 years.

d. Types of Occupation of Respondents

Based on the survey results, 10% of respondents have jobs as civil servants, 1% of TNI/POLRI, 29% of private employees, 23% of entrepreneurs, 16% of farmers/laborers, 17% of students, and others 4%. So it can be concluded that the majority of respondents in the study with private employees.

e. Respondents' Travel Intensity

Based on the survey results, it was shown that 3% of respondents with an intensity of 1-2 trips, 6% of respondents' trips intensity of 3-4 times, 8% of respondents' trip intensity of 4-5 times, and intensity of >5 times of 83%. So it can be concluded that the majority of respondents in the study have been through the Bungus Bay Ferry Port, namely > 5 times.

2. Testing Analysis ofInstruments

a. Validity TestValidity

test of Performance Level

Questionnaire Code	r Count	r Table (n-2) (60-2=58)	Information
X01	0.6545	0.2542	Valid
X02	0.8016	0.2542	Valid
X03	0.5743	0 ,2542	Valid
X04	0.3941	0.2542	Valid
X05	0.4377	0.2542	Valid
X06	0.4070	0.2542	Valid
X07	0.4601	0.2542	Valid
X08	0.4832	0.2542	Valid
X09	0.4469	0.2542	Valid
X10	0.4276	0.2542	Valid
X11	0.5983	0.2542	Valid
X12	0.5315	0.2542	Valid
X13	0.4588	0.2542	Valid
X14	0.4457	0.2542	Valid
X15	0.4873	0.2542	Valid
X16	0.5055	0.2542	Valid
X17	0.4779	0.2542	Valid
X18	0.4324	0.2542	Valid
X19	0.6102	0.2542	Valid
X20	0.4329	0.2542	Valid
X21	0.4139	0.2542	Valid
X22	0, 4553	0.2542	Valid
X23	0.5142	0.2542	Valid
X24	0.5536	0.2542	Invalid

correlation calculation results to test the validity of performance measures ranged from 0.3941 to 0.8016. The number that is used as a comparison to see whether an item is valid or not is 0.2542 with r table 60.

Test the Validity of the Level of Interest

Questionnaire Code	r Count	r Table (n-2) (60-2=58)	Decision
Y01	0.6608	0.2542	Valid
Y02	0.6671	0.2542	Valid
Y03	0.6914	0.2542	Valid
Y04	0.7645	0.2542	Valid
Y05	0.7189	0.2542	Valid
Y06	0.7430	0.2542	Valid
Y07	0.7348	0.2542	Valid
Y08	0.5349	0.2542	Valid
Y09	0.4495	0.2542	Valid
Y10	0.7130	0.2542	Valid
Y11	0.7447	0.2542	Invalid
Y12	0.7001	0.2542	Valid
Y13	0.6683	0.2542	Valid
Y14	0, 7484	0.2542	Valid
Y15	0.7385	0.2542	Valid
Y16	0.6849	0.2542	Valid
Y17	0.7580	0.2542	Valid
Y18	0.7305	0.2542	Valid
Y19	0.7129	0.2542	Valid
Y20	0.6468	0 ,2542	Valid
Y21	0.6139	0.2542	Valid
Y22	0.5525	0.2542	Valid
Y23	0.6151	0.2542	Valid
Y24	0.6454	0.2542	Valid

The results of the correlation calculation for the validity test of the interest measuring instrument ranged from 0.4495 to 0.7645. The number used as a comparison to see whether an item is valid or not is 0.2542.

b. Reliability Test

Variable	Cronbach's alpha	Information
Performance	0.870	Reliable
Interest	0.948	Reliable

Based on the table above, this shows that all statement items to measure the importance and performance of ferry port services are reliable because they have an alpha value > 0.7 so that the instrument can be used for further research.

3. Analysis of the Number of Research Samples The

author assumes that the population is infinite and the error rate is 10%, because the service users at the Teluk Bungus Ferry Port are uncertain. So the number of respondents is 272 people, according to the author, 272 respondents already represent the population at the Teluk Bungus Ferry Port.

4. *Customer Statisfaction Index* (CSI)

No Attributes (X,Y)	Average Interest Level (MIS)	Average Satisfaction Level (MSS)	Weight Factor (WF) %	Weight Score (WS)
1	3.60	1.75	4.10	7.37
2	3.63	1.69	4.26	7.19
3	3.55	2.59	4.16	10.76
4	3.50	3.10	4.10	12.70
5	3.59	3.27	4.21	13.75
6	3.67	2.55	4.31	10.97
7	3.60	3.19	4.22	13 ,44
8	3.56	2.71	4.17	11.31
9	3.59	3.09	4.21	12.98
10	3.64	3.46	4.27	14.76
11	3.58	3.05	4, 19	12.77
12	3.70	2.68	4.34	11.59
13	3.67	3.42	4.30	14.69
14	3.59	3.15	4.21	13.24
15	3.55	3.22	4.16	13.40
16	3.61	2.22	4.24	9.41
17	3.51	2.53	4.11	10.37
18	3.49	2.29	4.09	9.34
19	3.67	2 ,84	4.30	12.20

20	3.58	2.63	4.20	11.05
21	3.55	2.33	4.16	9.67
22	3.63	2.82	4.26	11.99
23	3, 18	1.83	3.73	6.81
24	3.15	1.75	3.70	6.46
Total			268.23

CSI for services at the Bungus Bay Ferry Port;

$$CSI = \sum \frac{268.23}{4 \; x \; 100 \; \%} = 67.06\%$$

The level of satisfaction of service users on the performance of service quality at the Teluk Bungus Ferry Port is 67.06%. The criteria for customer satisfaction are in the satisfied category.

5. **Data Analysis Techniques**

   a. Analysis Conformance Level of Importance and Performance Variable

Dimensions	MeanPerformance	Mean Importance	Level Compliance(%)
Safety	2.01	3.59	55.99%
Security	3.03	3.59	84.40%
Facility / Ketejangkauan	3.09	3, 60	85.83 %
Comfort	2.96	3.62	81.77 %
Reliability/Regularity	2.38	3.47	68.59 %
Overall Average	2.69	3.57	75.41 %

Based on the data in table 5.10 it can be seen that the overall average for the suitability value of the five service dimensions at the Bungus Bay Ferry Port is 75.41%, the determination of service quality at the Bungus Bay Ferry Port is determined based on the expected score value in the form of a percentage, from the calculation results it is known that the lowest percentage of conformity is on the safety dimension that is 56.46%, then the reliability/regularity dimension is 68.59%, the comfort dimension is 81.77%, the security dimension is 84.4%, the convenience/affordability dimension is 85.83%. While the overall average level of conformity for each statement item is 75.41%, so the results are that there are still 12 (50%) service attributes at the Teluk Bungus Ferry Port whose conformity level value is still below 75.41%.

b. Analysis *Gap Performance- Importance (PI Gap)*

Dimensions	Mean Performance	Mean Importance	Conformity Level (%)
Safety	2.01	3.59	-1.58
Security	3.03	3.59	-0.58
Ease/Affordability	3.09	3.60	-0.51
Comfort	2.96	3.62	-0.66
Reliability/Regularity	2.38	3.47	-1.09
Overall Average	**2.69**	**3.57**	**-0.88**

Based on the table above is the overall average gap per dimension, it can be seen that all dimensions have negative dimensions, with the highest highest gap in the safety dimension at -1.58 and the lowest gap being in the Ease/Affordability dimension at -0.51.

1) Determining the level of conformity between the level of performance and the level of importance of the quality of the attributes studied by comparing the performance score and the importance score.
    The level of conformity formula used:

$$Tki = Xi \; x \; \frac{100\%}{Yi}$$

Description:
Tki = Conformity Level
   Xi = Performance appraisal score (*Performance*)
   Yi = Score of Importance Assessment (*Importance)*
The total score of each item.

No	Description	Dimensions	Xi	Yi	Tki (%)
1	Safety facilities such as fire extinguishers, evacuation route instructions, evacuation gathering points are adequate and functioning properly.	Safety	476	978	48.61
2	Health facilities (first aid kits) are adequate and functioning properly.		460	988	46.56
3	Directions in the form of signs that are easy to read and find		704	966	72.96

4	Security/order officers wear uniforms that are easy to recognize	Security	843	952	86.35
5	Security facilities such as CCTV and audio speakers are available sounds clear and functions well		890	976	91.09
6	There is a sticker on the telephone number for complaints of security disturbances that are easy to find		694	999	69.48
7	Lighting lights that illuminate every corner of the port such as in the gangway, weighbridge and ready-to-load parking areas		867	979	88.61
8	Officers at the counter who are alert and quick in serving ticket purchases.and prompt	Ease/ Affordability	738	968	76.12
9	Friendlyport officers in providing services with easy-to-find uniforms		840	976	86.07Vehicl e
10	weighing equipment facilities that function properly good		941	991	95.05
11	Waiting room is clean and odorless equipped with air conditioning that works well	Comfort	829	973	85.20
12	WC/Bathroom in k a clean and odorless		728	1006	environmen t72.43praye r room
13 The	and its equipment are clean, odorless, and comfortable		930	998	93.19
14	Canteen is clean and odorless		857	976	87.74
15	Lighting lamps that illuminate until to every corner of the waiting room and in WC		877	965	90.70
16	Separate lanes (Gangway) for passengers and vehicles that are spacious and adequate		605	983	61.5
17	Information boards regarding fares and departure/arrival schedules that are easily found	Reliability/ Regularity	687	954	72.08
18	Information board for advanced transportation and port layout/layouts that are easily found		622	949	65.61

19	Information on travel disturbances through audio and visual speakers that function well and are easy to find		772	998	77.38Ample
20	parking space for vehicles and smooth circulation for vehicles to enter and exit		716	975	73.46Alert
21	baggage/porter service officers wear uniforms and are easily recognizable		633	965	65.63Alert
22	ground officers p in assisting the process of ships arriving / anchoring as well as departing ships		767	988	77.69
23	Information boards on trajectory maps that are easy to find		497	866	57.22
24	Advanced transportation information, types of transportation, locations and directions, schedules and destinations		476	858	55 ,56
TOTAL			17449	23227	

2) For quadrant analysis, which is to calculate the average level of importance and performance for each attribute with the formula:

$$\underline{Xi} = \frac{\sum_{i=1}^{k} Xi}{n}$$

$$\underline{Yi} = \frac{\sum_{i=1}^{k} Yi}{n}$$

Description:
$\underline{Xi}$ = Average weight rating level iith performance attribute
$\underline{Yi}$ = Average weight of the ith importance attribute assessment
n = Number of respondents
Average Value of Interest and Performance Rating of Each Item

No Instrument (Xi, Yi)	Average Score (Xi)	Average Score (Yi)
1	1.75	3.60
2	1.69	3.63
3	2.59	3.55
4	3.10	3.50

5	3.27	3.59
6	2.55	3.67
7	3.19	3.60
8	2.71	3.56
9	3.09	3.59
10	3.46	3.64
11	3.05	3.58
12	2.68	3.70
13	3.42	3.67
14	3.15	3 ,59
15	3.22	3.55
16	2.22	3.61
17	2.53	3.51
18	2.29	3.49
19	2.84	3.67
20	2.63	3.58
21	2.33	3, 55
22	2, 82	3.63
23	1.83	3.18
24	1.75	3.15
Total	**64.15**	**85.39**

3) Calculating the average rating of importance and performance for all attributes with the formula:

$$\underline{Xi} = \frac{\sum_{i=1}^{k} Xi}{n}$$

$$\underline{Yi} = \frac{\sum_{i=1}^{k} Yi}{n}$$

Information:

$\underline{Xi}$ = Average weight of the i-th performance attribute assessment

$\underline{Yi}$ = Average weight of the i-th importance attribute assessment

n = Number of attributes

Average Value of Importance and Performance Level Assessment For Overall Item

No Instrument (Xi, Yi)	Average Score (Xi)	Average Score (Yi)
1	1.75	3.60
2	1.69	3.63
3	2.59	3.55
4	3.10	3, 50
5	3.27	3.59
6	2.55	3.67
7	3.19	3.60
8	2.71	3.56
9	3.09	3.59
10	3.46	3.64
11	3.05	3.58
12	2.68	3.70
13	3.42	3.67
14	3.15	3.59
15	3.22	3.55
16	2.22	3.61
17	2.53	3.51
18	2.29	3.49
19	2.84	3.67
20	2.63	3.58
21	2.33	3.55
22	2.82	3.63
23	1.83	3.18
24	1.75	3.15
Total	**2.67**	**3.56**

4. Closing

a. Conclusion

Based on the results of the analysis and discussion that have been described previously, the following conclusions can be drawn:

1) Customers Statisfaction Index

    From the results of the analysis using the *Customer Statisfaction Index, it was* found that the percentage of passenger ratings of the services of the Teluk Bungus Ferry Port is 67 0.08% and included in the satisfied category.

2) Gap Analysis

    Based on the results of the analysis, it was found that the value of the level of conformity in the safety dimension is the lowest value of the other five dimensions, which is 56.46% and the value *(PI gap)* on the safety dimension is -1.94, and items that are in the dimension safety, namely health facilities (first aid kits) have been functioning properly with avalue *gap* (-1.94) and safety facilities such as fire extinguishers, evacuation route instructions, are adequate and functioning properly with avalue *gap* (-1.55).

    Then for the analysis of the PI gap per item, all attributes get negative values, the lowest gap value is in the attribute of vehicle weighing equipment that functions properly -0.18 which is in the reliability/regularity dimension. Meanwhile, the highest gap is in the attributes of health facilities (first aid kits) that are adequate and functioning well. -1.94 contained in the safety attribute. All dimensions that exist in the Minimum Service Standards interact with each other, so they cannot be separated in an effort to improve quality. Therefore, the manager of the Bungus Bay Ferry Port must improve the existing services at the port.

    The summary of the results of the analysis of the PI gap assessment of the service quality of the Bungus Bay Ferry Port for the five dimensions shows that the service quality at the Bungus Bay Ferry Port is considered by service users to be good, with a gap of -0.88 for services at the Bungus Bay Ferry Port, although from the measurement results research that compares the average *performance* and *importance of* the gap value of the five dimensions of each service produces a negative value, but according to Parasuraman (1991) if the result of the gap < -1 means good, and the result > -1 means that the quality of service provided is not good. In principle, the data obtained through the instrument is used to calculate the gap score from the average dimension of port service quality analysis.

3) Gap Analysis

    Attributes that are in quadrant A based on the results of the study are important service attributes and get the highest importance rating. This does not mean that the service quality attributes that are in quadrant B, C, and D are unimportant, but managers must focus more on making improvements to quadrant A. Attributes that are in quadrant A include facilities.

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