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APPLICATION OF IMPORTANCE PERFORMANCE ANALYSIS IN ASSESSING THE SERVICES QUALITY OF PASSANGER FERRY SERVICES

Abstract:

The purpose of this study was to analyze the performance of services passenger ferry boat in Indonesia. Things related to be analyzed associated with indicators and sub variable of the Service Quality offered by the company to the passengers. The population of this study were those passengers that took Ferry to reach Banda Aceh from Sabang and vice versa. The questionnaire was distributed to 156 respondents who participated in this study. The finding of this study was the performance of the services provided by the Ferries have been good enough. Cartesian graph used to analyze the findings of this study described the item in quadrant 4 were the indicators to be intervened by Ferry manager serving Banda Aceh - Sabang routes. There are 6 indicators contained in quadrant 4 to be intervened by the manager Ferry, because all those 6 of these items were a source of customer frustration. So it desperately needs to be improved. The sixth item or indicators most urgent to be improved in order to increase the quality of service were passengers to be notified if there is a delay, staff have sufficient knowledge to answer passenger questions, the staff provide you with information related to the services, they should understand the passenger needs when you ask a question, roviding on time Ferry services and dependability in handling services (item number 2,4,5,7,10,11). By looking at other Cartesian graphs, we also know that the sub variables No. 1 and No. 3, the Security and Reliability are the sub-variables that need to be intervened also by Ferry service managementof Banda Aceh - Sabang route. This was because the two sub-variables were in quadrant number 4, which is the source of customer dissatisfaction

Keywords:

1.Background

Sabang Zone is located at the northern tip of Sumatera island of Indonesia. This area consists of seven large and small islands such as Weh, Nasi, Breuh, Teunom, Rubiah, Seulako and Klah Islands. Because of beauty of its tourist destination, Sabang Zone has been established as one of the marine destination by the Indonesian Government through the Government Regulation No. 50 of 2011 about tourism development in Indonesia.   With the enactment of Sabang zone as a strategic area for tourism development, then, the tourism sector is expected to become the locomotive of economic development for the region which has a population of 38.215 people.(BPS, 2014)

The tourism sector is becoming increasingly important role in advancing ecomic in the area. In recent decades, the tourism sector has experienced rapid growth and has become one of the economic sectors of the fastest growing in the world. Its growth, the tourism sector has even outpaced the growth of other economic sectors such as oil exports, food or cars. (UNWTO, 2016). The contribution of tourism to the economic prosperity depends on how tourism destination packages their offering to lure tourists. In other words tourism sector will only benefit if the tourism product offers can attract tourists to come (Costache, Sorina 2014). The benefits received will increase if the tourism service providers pay attention to the environmental aspects of the effort to create sustainable tourism.

UNWTO predicted the growth of the tourism industry from number of travelers. Theagency estimates that in 2020 the number of tourists could exceed 1.6 billion people (UNWTO, 2016).
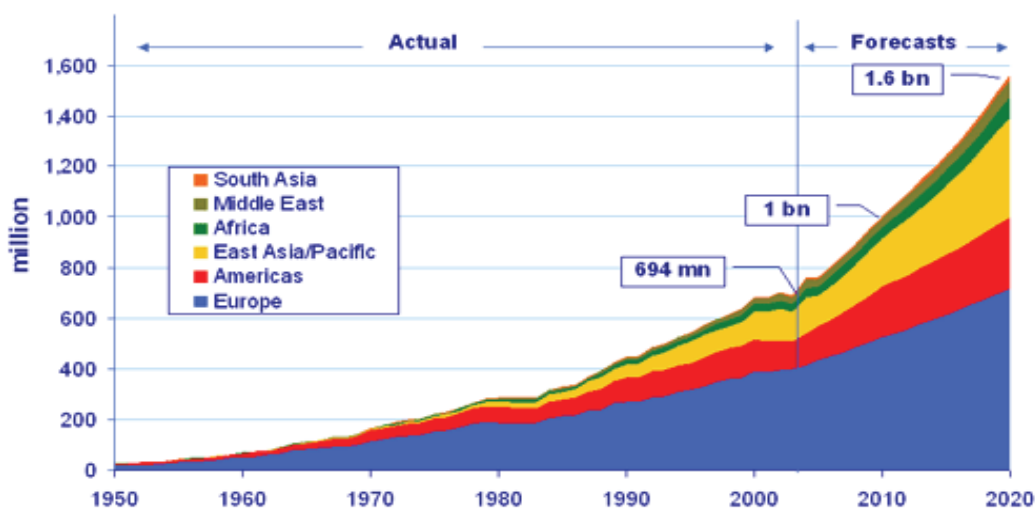

Figure 1. UNWTO's Tourism 2020 Vision

Given the tremendous increase in the number of tourists traveling from time to time, the Indonesian government is very serious to develop the tourism industry in Indonesia. The Ministry of Tourism has set a target of tourist arrivals to Indonesia in 2016 amounted to 272 million tourists. That amount consist of 12 million international

tourists and 260 million domestic tourists. (*http://travel.kompas.com/read/2016/01/01/082758727/Inilah.Target Kementerian.Pariwisata.Tahun.2016).* Sabang is expected to play a part in realizing the target of tourist arrivals. 2016 targets tourists visiting Sabang is 325 thousand domestic tourists and 25 thousand international tourists. (BPKS, 2016)

The latest regulation issued by the government was to free visa policy for 30 days to 169 countries. This regulation was signed by the President of the Republic of Indonesia, Joko Widodo, in the form of Presidential Decree No. 21 of 2016, on March 2, 2016 . Thus Sabang zone can receive foreign tourists by using free visa scheme for y 30 days. But if they want to stay in Indonesia for 60 days, Visa on Arrival facility is available for USD 35. (https://visa4indonesia.nl/visa-on-arrival/). Previously Indonesian government was also release Presidential Decree No. 105 of 2015 to omit Clearance Approval for Indonesian Territory (CAIT). With this CAIT removal policy it is expected that Yacht which come to Indonesia will increase dramatically up to 10,000 Yacht in 2017 (Raymon Lesmana, 2016).

Sabang Zone is islands connected by various modes of transportation such as ships and aircraft. But so far ships are the widely used. Of the 345,000 people who travel to Sabang zones in 2015 more than 90% traveled by using ships. Less that 10% were using the aircraft (BPKS, 2016). In the tourism industry, transportation becomes very important. The need for transportation is demanded by the rapid development of the tourism sector (Prideaux, 2000). There is a reciprocal relationship between transport and tourism, since transportation facilities can promote the tourist destination and the the advancement tourism industry can create demand for transportation that can meet the needs of travelers (Khadaroo & Seetanah, 2007; Prideaux, 2000; Sorupia, 2005). The function of the development of the transport sector itself is as a means for accessing a tourist destination (Surilansih, 2013). When the services provided by the transportation sector is bad, then it will affect the interest of tourists coming to visit Sabang.

The question in this study is whether the quality of services provided by Fast Ferry to connect the islands in Sabang Zone are in accordance with the expectations of consumers? No matter the quality of product offered as well as the range of products that can be choosed by consumers, without delivering by adequate level of service, passengers will still feel disappointed (Lawson & Weisbrod, 2005)

Based on the above questions, the research on the performance of Fast Ferry was conducted. To what extent that different types of services provided can deliver superior value corresponding to customer expectations. How can the existing value can meet customer expectations so that they are satisfied with the services provided. Throughout the authors' knowledge there has never been previous studies that discuss the IPA's of Ferry in remote tourism destination such as Sabang. Therefore, the results of this study will be very useful for the tourism ministry of Indonesia and the department of transportation of Indonesia to improve the quality of its services so that tourists who come to Sabang become more comfortable.

1.2. Formulation of The Problem

Based on the above, the authors formulate the problem posed in this study as follows:

a.   Does the quality of services related items under sub variable Assurance, Empathy, Reliability, Responsiveness, Tangibles, Comfort, Convenience and Connection on Fast Ferry services in accordance with the expectations of its passengers?

b.   Which items under which sub variable variables that need to be improved to meet the expectations of the Fast Ferry passengers?

1.3. Research Purposes

a.   To determine the quality of services related to indicator as well as sub variable of service quality such as Assurance, Empathy, Reliability, Responsiveness, Tangibles, Comfort, Convenience and Connection on Fast Ferry services in accordance with the expectations of passengers

b.   To determine which items and sub variables that need to be improved to meet the expectations of Fast Ferry passengers.

2. Literature Review

Sabang Zone is an area located on the tip of Sumatra island. Pursuant to the Act the Government of the Republic of Indonesia Number 37 Year 2000, it is composed of 13 large and small islands, has been assigned as Free Trade and Free Port zone (FTZ). For the implementation it has been established Sabang Authority Board which is responsible for developing eco-tourism. The purposes of establishing FTZ in the region is to encourage the growth of the regional economy further.(www.BPKS.go.id)

Pulau Weh, one of the main island in Sabang Zone, that has been known for diving and snorkelling attractions . More than 18 attractive diving spot available around Weh island, which attract divers from around the world to try exotic underwater nature (www.lumbalumba.com)

As a marine tourism destination, it is important for Sabang to protect its marine habitats. Therefore, the Indonesian government has set Marine Protected Areas (MPAs) di Pulau Weh untuk to protect marine resources from over-exploitation. Weh Island has two MPAs: Weh Island Marine Recreational Park (WMRP) and Weh Island Marine Protected Area (WMPA). The WMRP was established by Indonesia government in 1982 and is managed by the Natural Resources Conservation Agency in the Ministry of Forestry. The other, WMPA, was established in 2010 and is managed by the Government of Sabang's Marine Affairs and Fisheries Agency (Kusumawati & Huang, 2015).

The scleractinian fauna of Weh island is also of interest for economic value especially for tourism that has been develop extensively both by local and central governmet.The reefs support a small but growing dive industry and a number of fisheries (Baird, Campbell, Fadli, Hoey, & Rudi, 2012)

Coral reefs of Weh Island are known to be generally in better condition than those on Aceh islands because of past differences in management between these two regions of northern Aceh. The reefs are important for fisheries with a range of artisenal gears used and mainly pelagic commercial fisheries. The area is known for its tourism industry with snorkeling and SCUBA diving and other recreational activities as the main attractions (Baird et al., 2012). These activities contribute income to coastal communities, in addition to farming, business, and government sectors. Coral reefs habitats and their associated fauna and flora are therefore important marine ecosystems with important ecological functions and services in the region (Rudi, 2009)

Weh Island is a volcanic island in the northwest of Sumatra, Indonesia. The capital city and the largest city is Sabang. Tourist accomodations are available in Gapang, Iboih and Sumur Tiga. Situated at the convergence of the Indian and Pacific oceans, Pulau Weh is a beautiful untouched island, well known for its ecosystem, the coral reefs around Weh are home to a great diversity of fish species, like sea turtles, sharks, rays, dolphins and pelagic staff. With more than 20 diving spots, is one of the best diving site in all Indonesia. (www.monsterdivers.com)

The northwest part of the island had been declared as wildlife protection because it is the home to many rare species on land wild the coral reefs are bursting with large and diverse variety of Indo-Pacific marine life (Kusumawati & Huang, 2015)

Source: https://www.google.co.id/maps/@5.7212989,95.1796077,10.96z?hl=id and www.monsterdivers.com

Figure 1 : Sabang Zone and Weh Island

In the area of Sabang FTZ, the main attraction is not just the attractions under the sea, but also other the attractions ranging from forest conservation, historical sites

such as Japan fortress and cultural attractions. A variety of animals found in the forest trofis this region such as macaque monkeys, wild boar, monitor lizards, toads Bufo Valhallae (frogs), differnt kinds of lizards and wide selection of colorful butterflies and birds. (www.monsterdivers.com)

Many items can be seen on underwater such as all kinds of ornamental fish, sponges and corals are very varied. Reef fishes in this region are Moray eels, reef octopus, rays, Lionfishes, Clown fishes, Scorpionfishes, Frogfishes, Stonefishes, Pipefishes, sea turtles, Angelfishes, Butterflyfishes, Sweetlips fishes, Cuttlefishes, Waspfishes, Flathead fishes, Ribbon eels, Garden eels, Giant Moray Batfish, Kuhl's Stingray and many more. (www.monsterdivers.com)

2.1 Ferry as Public Transport

In the islands and coastal regions ferry services play a lifeline role in connecting communities facilitating business, access to work and access to many social needs (Chan, Lau, Lee, & Chan, 2002; Lawson & Weisbrod, 2005) The quality of a ferry service is of critical importance to how useful it is to communities (J. J. Laird, 2012). Quality is multi-dimensional and includes amongst other things not only journey time, but also frequency, the length of the operating day, where the ferry departs from and arrives at, reliability and comfort . Strategic ferry services, particularly in the more remote areas where population levels are low, typically have low frequencies of service — 1, 2 or 3 services a day. They are also typically subsidised by the government, and as such whilst the government does not manage the service directly they are instrumental in its management. This is because the government subsidy and the conditions attached to it have a profound impact on the quality of service offered by the ferry operator (J. Laird, Nellthorp, & Mackie, 2005).

The ferry has an important role in the transport system for many coastal cities, making direct transit between the two destinations with a smaller cost than a bridge or tunnel (J. J. Laird, 2012). Pedestrian ferry with many stops, such as in Venice, sometimes identified as the water bus or water taxi (http://weserveournations.blogspot.co.id/2013/06/kapal-ferry-apa-itu.html)

2.2 Quality of Service

The quality of service is usually measured based on how well the level of service can satisfy the user expectation. That level of services should be delivered to users on a regularly (Munusamy & Chelliah, 2010).. Quality of service is something abstract and difficult to understand (Kheng & Mahamad, 2010). Parasuraman develop an instrument analyzing service quality, SERVQUAL, for measuring service quality within an organization. This analysis is believed to be the most popular method for examining the quality of service (Frost and Kumar, 2001). Good quality of service is essential for success (Kassim & Abdullah, 2010) in which good quality services will lead to customer satisfaction (Naik & Gantasala, 2010) which in turn will encourage customer loyalty, and result in higher earnings (Kheng & Mahamad, 2010)

The quality of transport services are based on the service enjoyed by customers who not only felt during the trip, but also during pre and post services. Cavana and Corbett (2007) in the journal entitled "Developing Zones of Tolerance for Managing pessenger Rail Service Quality", examines the quality of rail services in Wellington, New Zealand, using the concept of SERVQUAL) as well as input from parties management of the railway company Rail Co., so the concept of train services which they use consists of 8 dimensions, that is tangible, assurance, empathy, responsibility, reliability, com- fort, connection, and convenience.

This indicator is divided into several phases based on the pre-departure services include, among others, ticket booking, ticket conformity, hygiene and environmental comfort station, hospitality officer. There are also several facilities and the others, such as restrooms, parking lots, food and beverage vendors. Phase of the service during the trip include, cleanliness and comfort carriages and toilet, hospitality officer, security quality and safety, consistency schedules, air conditioning, quality of food and beverages are sold. Whereas, for post-departure cover, arrival punctuality, cleanliness and comfort station, availability of public transport, the clarity of signs, as well as the handling of complaints.

Three new transport dimensions (comfort, connection, and convenience) are added to the original five SERVQUAL dimensions which are assurance, empathy, reliability, responsiveness, and tangibles (Cavana, Corbett, & Lo, 2007). The gap model of service quality and the concept of transport service quality showed consistency that service quality should be measured on a multidimensional basis. Some transport service quality literature pointed out that different methods could be used for measuring service quality. From this point-of-view, SERVQUAL is an instrument that could be used to fulfill the purpose of measuring perceived service quality from the customer's perspective in this industry (Cavana et al., 2007)

2.3 The concept of Quality of Service in Transport Industry.

Service quality plays an important role in the transportation industry. Moreover, today's transport becomes one of factors that support to promote a certain torism detination (Khadaroo & Seetanah, 2007, 2008; Sorupia, 2005)

Cavana & Corbett, (2005) outlines the concept of quality of ground transportation services, in this case to transport the Railways could also be adopted for other transportation mode that consist of 8 dimensions and their attributes as follow:

a.   Assurance: Courtesy officers and train station, notification about the delay, personal security at stations and trains, knowledge of officers in answering questions, is able to provide information about the company.

b.   Empathy: The hospitality in providing information, understand the needs of consumers, given priority customer needs.

c.   Reliability: Provides services on-time, meet the train schedules that have been promised, reliability in dealing with problems that arise, providing the best service

since it first. Responsiveness: Availability for help, fast and precise, the availability of staff to serve customer demand.

d.   Tangible: look neat and professional staff in stations and trains, clarity of information, cleanliness of stations and trains, stations modern appearance, overall appearance.

e.   Comfort: The availability of seating, seating comfort, convenience and carriage room temperature, comfort during the trip, the fineness of the machine.

f.   Connection: Availability field Park, easy access from / to the station, the frequency of train departures that suit their needs and Convenience: Easy access to the travel information, ease when buying tickets, comfort when buying a ticket at the

	Sources of information
Reliability[a]	SERVQUAL; Allen and DiCesare (1976); Corry (1997); Miller (1995); Nieuwenhuis (1997); Silcock (1981)
Responsiveness[a]	SERVQUAL
Assurance[a]	SERVQUAL
Safety	Silcock (1981)
Safety and security	Allen and DiCesare (1976)
Empathy[a]	SERVQUAL
Tangibles[a]	SERVQUAL
Convenience[b]	Allen and DiCesare (1976); Catling (1996); Corry (1997); Moodie (1997); Silcock (1981)
Speed[b,c]	Allen and DiCesare (1976); Arentz (1969); Pullen (1993)
Duration	Moodie (1997)
Quick	Miller (1995)
Comfort[b]	Allen and DiCesare (1976); Catling (1996); François (1997); Moodie (1997); Pullen (1993); Silcock (1981)

Notes: [a]SERVQUAL dimensions; [b]Proposed new dimensions; [c]Speed dimension renamed connection after exploratory factor analysis (Lo, 1999)

station.

Source: (Cavana et al., 2007)

Table 1: Dimension of Service Quality in Transportation Industry

2.4 Importance Performance Ana

Importance Performance Analysis (IPA) was first introduced by Martilla and James with the aim to measure the relationship between consumer perceptions and priorities of improving the quality of products / services also known as the quadrant analysis (Martilla & James, 1977). IPA is not solely measure the performance of the service quality attributes that are used, but also sorting which attributes that more important than others (Matzler & Sauerwein, 2003)

This concept has been accepted and is already widely used in various fields of study since its easy to apply this model and to show the results that can be used to improve the performance of each attributes used (Hollenhorst, Olson, & Fortney, 1992). IPA has the main function to display information relating to the factors services by consumers greatly affect their satisfaction and loyalty, and the factors that

according to consumer service needs to be improved because the current conditions are not satisfactory.

IPA combines measurements of factors of importance and satisfaction levels in two-dimensional graph that facilitate explanation of the data and get a practical proposal. IPA chart interpretation is very easy, where graphics IPA is divided into four quadrants based on the importance-performance measurement as shown in Figure 1.(Matzler, Bailom, Hinterhuber, & Renzl, 2004)
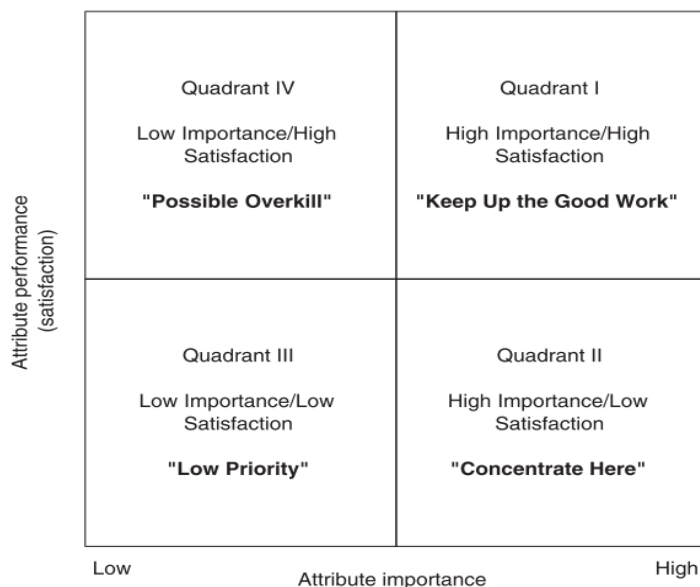

Figure 1 Quadrant of IPA

Here's an explanation for each quadrant (Matzler et al., 2004)

a.   First Quadrant, "Keep up the good work" (high importance and high satisfaction)

Factors which is located in this quadrant are considered as an additional factor for

customer satisfaction so that management is obliged to ensure that the performance of the institution under its management can continue to maintain the achievements that have been achieved.

b.   Second Quadrant, "Concentrated here" (High importance and Low Satisfaction performance). Factors that lies in this quadrant is regarded as a very important factor by the consumer but by the time the condition is not satisfactory so that management is obliged to allocate adequate resources for improve the performance of these factors. Factors that lies in this quadrant is a priority for improvement.

c.   Third Quadrant, "Low Priority" (low importance and low satisfaction)

Factors that lies in this quadrant have low levels of satisfaction and once considered too important to the consumer, so that the management does not need to prioritize or too give attention to these factors.

d.   Fourth Quadrant, "possible overkill" (low importance and high satisfaction). Factors which is located in this quadrant are considered not too important so that management needs to allocate resources associated with these factors to other factors that have a higher priority handling that still need improvement, such as the fourth quadrant.

2.5 Previous Research Findings

Research related to service quality in the field of transport has been done by some previous researchers. One of research result this field that were widely quoted which was done by Cavana & Corbett (2007) titled Developing Zones of Tolerance For Managing Passenger Rail Service Quality. The respondent were passenger of trains in New Zealand (Cavana et al., 2007). Cavana & Corbett in this study expands the dimensions Servqual initiated by Parasuraman from 5 to 8 dimensions by citing the opinions of experts in previous research. They add three dimensional transport items, namely comfort, connection, convenience on five dimensions of SERVQUAL were used (assurance, tangible, empathy, reliability, responsiveness).

Table 1. Attributes services Quality Railway Transport

Dimension	Items
Assurance	1. Courtesy – staff on train 4. Being informed if there are delays 10. Personal safety at station 16. Personal safety on train 29. Courtesy – staff at ticket office 30. Having the knowledge to answer your questions 37. Providing you with information about Tran Metro
Empathy	31. Dealing with you in a caring fashion when you make inquiries 32. Understanding your needs when you make inquiries 38. Having your best interests at heart
Reliability	23. Maintaining the frequency of trains as scheduled in timetables 24. Providing on time train services 34. Dependability in handling your service problems 35. Performing services right the first time
Responsiveness	3. Willingness to help you 28. Prompt service 36. Availability of staff in handling your requests
Tangibles	2. A neat, professional appearance – staff on train 6. Clarity of information given in timetables 7. Clarity of timetables given at stations 12. Cleanliness of station 13. Modern appearance – station 18. Cleanliness of train 19. Overall appearance – train 33. A neat, professional appearance – staff in ticket office
Comfort	17. Availability of seating – train 20. Comfortable seats on train 21. Comfortable temperature on train 22. Smoothness of ride on train 27. Traveling time on train
Connection	11. Adequacy of parking facilities 14. Ease of access to your home station 15. Ease of access to the nearest station at your working place/school 25. Frequency of trains that meet your needs 26. Trains running at suitable times so you can catch connecting transport services
Convenience	5. Ease of access to travel information 8. Ease of buying tickets 9. Convenient office hours at ticket office

Source : (Cavana et al., 2007)

2.6 Research Hypothesis

a.   It is suspected that the quality of services related to Assurance, Empathy, Reliability,

b.   Responsiveness, Tangibles, Comfort, Convenience and Connection on night bus services in accordance with the expectations of passengers

c.   Presumably there are more than 50% of the sub variables examined in this study that need to be improved to meet the expectations of a night bus passengers.

3. Research Methods

This research is descriptive conclusive research, which aims to analyze the quality of service of Ferry transportation in Aceh

3.1 Population and Sample

The population was all the passangers who use the Ferry services in Banda Aceh and Sabang, Pulau Weh. The sample in this study were passangers between the ages of 15-60 years in the last 3 months minimum has 1 time use the services of Ferry. While the respondents were selected by enumerators who were at Ulee Lheu Port and Balohan Both in Banda Aceh and Sabang. The number of samples taken is 156 customers who meet the above criterias. Sample distribution proportionally, which refers to the number of passengers travel during regular time and holiday time.

The number of respondent defined by using Slovin sampling method   asfollows:

$$n = \frac{N}{1+N\alpha^2}$$

(Sugiyono, 2009)

Description: n   =   Sample Size, N = Population size, α2 = Percent leeway inaccuracy due to sampling error that can be tolerated, in this case 7.5%

Respondent defined by using a non - probability, purposive sampling methode, where not all members of the population have the same opportunity to be the respondent.

3.2 Data Analysis Techniques

Data analysis techniques used in this research was the use of the concept of Important Performance Analysis (IPA) both for items and sub variables studied. Data processing supported by statistical software SPSS version 22.

4. Analysis And Discussion

4.1 Test of Validity and Reliability

Validity and reliability test results indicated that all the questions tested were valid and reliable as shown in Table 2 and Table 3.

Tabel 2

Reliability Test

Cronbach's Alpha	N of Items	Cut Off	Relaibility
0,849	31	0,6	Reliabel

Since the value of Cronbach' Alpha was more than 0,6, it means that all questions used in this research were reliable.

Tabel 3. Validity Test

No	Items	Pearson Score	Cut Off N=150 and Alpha 5%	Validity
1	Courtesy – staff on Ferry	,625**	0,210	Valid
2	Being informed if there are delays	,659**	0,210	Valid
3	Personal safety on Ferry	,580**	0,210	Valid
4	Having the knowledge to answer your questions	,636**	0,210	Valid
5	Providing you with information about the Ferry	,633**	0,210	Valid
6	Dealing with you in a caring fashion when you make inquiries	,619**	0,210	Valid
7	Understanding your needs when you make inquiries	,556**	0,210	Valid
8	Having your best interests at heart	,559**	0,210	Valid
9	Maintaining the frequency of Ferry as scheduled in timetables	,581**	0,210	Valid
10	Providing on time Ferry services	,515**	0,210	Valid
11	Dependability in handling your service problems	,603**	0,210	Valid
12	Performing services right the first time	,569**	0,210	Valid
13	Willingness to help you	,567**	0,210	Valid
14	Prompt service	,547**	0,210	Valid
15	Availability of staff in handling your requests	,261*	0,210	Valid
16	A neat, professional appearance – Ferry Crew	,504*	0,210	Valid
17	Clarity of timetables given at the passanger port	,425**	0,210	Valid
18	Modern appearance – passanger port	,532**	0,210	Valid
19	New comfort features on Ferry	,512**	0,210	Valid
20	A neat, professional appearance – staff in ticket office	,563**	0,210	Valid
21	Availability of seating – Ferry	,644**	0,210	Valid
22	Cleanliness on the Ferry	,290**	0,210	Valid
23	Punctuality of time arrival	,603**	0,210	Valid

4.2 Results of Importance Performance Analysis (IPA) per Items

Table 3 shows the results of the calculation of the value of the average level of satisfaction and priority handling for each factor.

Table 3 Average Level of Satisfaction And Handling Priority For Various Factors

No	SERVICE QUALITY	PERFORMANCE AVERAGE	IMPORTANT AVERAGE
1	Courtesy – staff on Ferry	3,51	4,11
2	Being informed if there are delays	3,95	4,16
3	Personal safety on Ferry	3,98	4,17
4	Having the knowledge to answer your questions	3,85	4,17
5	Providing you with information about the Ferry	4,10	4,11
6	Dealing with you in a caring fashion when you make inquiries	4,11	4,15
7	Understanding your needs when you make inquiries	4,01	4,15
8	Having your best interests at heart	3,85	4,10
9	Maintaining the frequency of Ferryes as scheduled in timetables	3,70	4,15
10	Providing on time Ferry services	3,91	4,17
11	Dependability in handling your service problems	3,78	3,83
12	Performing services right the first time	3,85	4,14
13	Willingness to help you	3,81	4,14
14	Prompt service	3,90	4,18
15	Availability of staff in handling your requests	3,96	4,13
16	A neat, professional appearance – staff on Ferry	3,94	4,11
17	Clarity of timetables given at stations	3,81	4,07
18	Modern appearance – station	3,79	3,96
19	New comfort features on – Ferry	3,90	4,19
20	A neat, professional appearance – staff in ticket office	4,11	3,99
21	Availability of seating – Ferry	3,75	3,91
22	Cleanliness on the Ferry	3,79	3,99
23	Punctuality of time arrival	3,75	4,04
24	Comfortable temperature on Ferry	3,79	4,01
25	Adequacy of parking facilities at the port	4,13	4,07
26	Frequency of Ferryes that meet your needs	3,65	4,08
27	Ferryes running at suitable times so you can catch connecting transport services	3,78	4,11
28	Ease of access to travel information	3,75	4,18
29	Convenience at the waiting room	3,74	4,18
30	Equipped with clean toilet	3,77	4,18
31	Convenient office hours at ticket office	3,81	4,20
	Overall Average	**3,86**	**4,10**

From the calculation of average performance and expectation in the table above, can be made cartesius diagram, as shown below:
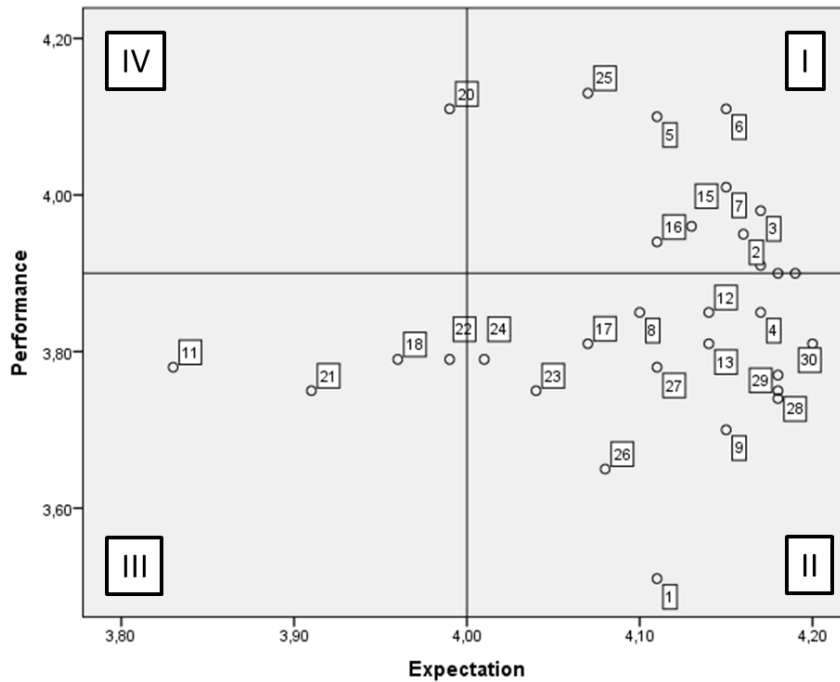
Figure 3: Distribution of Quadrant Importance Performance Analysis per Items

Quadrant 1: Keep Up The Good Work. Item No: 2,3,5,6,7,16,15,25

In Figure 3 shows the general respondents stated that there are eight items associated with the passanger Ferry Services are in Quadrant 1 (Maintain Performance) or in general it can be concluded that the quality of service at this time are in accordance with the wishe s of consumers. For this thecompanies   do not need to do anything to improve the service to their customers, but only to maintain what had been done.

Quadrant 2: Concentrate Here. Item No: 1,4,8,9,12,13,17,23,24,26,27,29,30

There are 14 items that belong to this quadrant. The management of passanger Ferry can see that this is the priority to be focus on. The task is to increase the performance of those 14 items so they can meet the customer preferences. . The item in this quadrant are a source of customer frustration. These items should be enhanced to improve the service quality level.

Quadrant 3: Low Priority. Item No: 11,18,21

Although the performance of quality of service for the 3 items in this quadrant are relatively low, but the improvement of the performance of those three items are not necessarily   to be done Immediately, because customers expectations on those three items are also low. Improved performance on items in this quadrant, just wasting the company money.

Quadrant 4: Possible Overkill. Item No: 20

The items in this quadrant should be intervened by management. The reduction of the quality services associates from that item will not degrade the performance of quality of services provided to their customers. Ther is onle one item belong to this quadrant.

4.2 Results Importance Performance Analysis (IPA) per Sub Variables

For simplification purposes, the calculation of IPA may also be done by sub variables studied, which amounts to 8 (eight) sub variables ranging from Assurance to Convenience.

Table 4

Important Performance Analysis (IPA) Per Sub Variables

No	SERVICE QUALITY	PERFORMANCE AVERAGE	IMPORTANT AVERAGE
1	Assurance	3,88	4,14
2	Empathy	3,99	4,13
3	Reliability	3,81	4,07
4	Responsiveness	3,84	4,15
5	Tangibles	3,91	4,06
6	Comfort	3,77	3,99
7	Connection	3,86	4,09
8	Convenience	3,77	4,19
	Overall Average	3,85	4,10

From the calculation of average performance and expectation on the table above, we can develop cartesius diagram, as shown below:
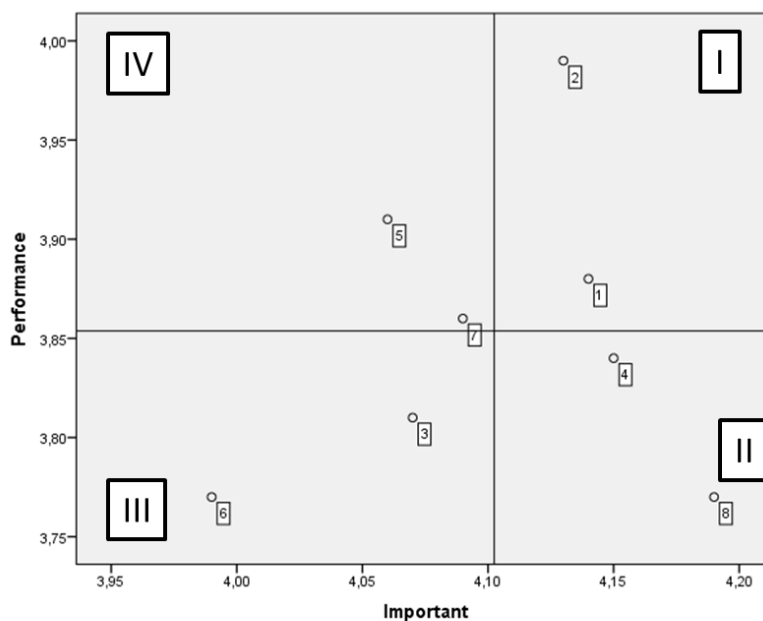

Figure 4: Quadrant of Importance Performance Analysis per Sub Variables

In Figure 4,the position of 8 sub variables spread over in 4 quadrants. Explanation for each quadrant respectively can be seen in the following section.

Quadrant 1: Keep Up The Good Work. Sub Variables No: 1,2 In Figure 4 above shows there are two sub-variables, namely sub-variables No. 1 (Assurance) and Sub-Variable No 2 (Empathy) which fills quadrant No. 1. In general it can be concluded that the quality of service associated to sub variables No. 1 (Assurance) and Sub-Variable No 2 (Empathy) are in accordance with the expectations of consumers. For the management of Ferry does not need to do anything to improve the existing level of the service associates to those two sub variables.

Quadrant 2: Concentrade Here. Sub Variables No: 4 and 8

Sub variables in this quadrant should be intervened by the management of Passanger Ferry. The two sub-variables in this quadrant are   source of customer frustration on the performance of service quality provided by Ferry to their customers. Those two sub- variables are most urgent to be enhanced to increase the service quality. They are Responsiveness and Convenience

Quadrant 3: Low Priority. Sub Variables No: 3 and No.6

Although the performance of quality of service for 2 sub variables that exist in this quadrant are relatively low, but the improvement of the performance of those two sub variables are not necessarily to be done Immediately, because customers expectation on those sub-variables are also low. To improve the performance on items in this quadrant, just wasting the company money.

Quandrant 4: Possible Over Kill. Sub Variables No: 5 and No. 7

This is the Possible Over Kill quadrant. . Sub variables in this quadrant should be intervened by the management of Passanger Ferry. The management need to analyse components belong to this quadrant to save company money.The reduction of the specifications of the two sub-variables in this quadrant, will not degrade the quality of services provided to their customers.

5. Conclusions and Suggestions

5.1 . Conclusions

a.   From the Cartesian graph per items, items that are in quadrant 4 is indicators that need to be enhanced. The items in this quadrant should be intervened by management of passanger Ferry. Fortunately only one item available in this quadrant which is item no 20 which is A neat, professional appearance – staff in ticket office. That item in this quadrant is a source of

customer frustration and reduce the performance of service quality provided by Ferry services to its customers. The item should be enhanced to improve the service quality.

b.   Sub variables in this quadrant should be intervened by the management of Passanger Ferry The two sub-variables in this quadrant are source of customer frustration on the performance of service quality provided by Ferry to their customers. Those two sub- variables are most urgent to be enhanced to increase the service quality. They are Tangible and Connection.

5.2 . Suggestions

a.   Management of the passanger Ferry services , should improve the performance of the services, especially those related to the performance and appearance of ticketing staff in ticket counter.

b.   The sub-variables that need to be improved very much are Tangible and Connection. It means the companies should   add frequency of Ferryes that meet customer needs, since this item has the lowest score given by respondent.

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