Sheraton Surabaya Hotel & Towers, October 17th - 19th, 2019
International Joint Conference on Science and Technology
Chapter ICST (International Conference on Science and Technology)

Public Service Quality in Sultan Babullah Airport Ternate (Case Study of Passenger Service)

E R Ahadian, M Rizal, M R A Han
Civil Engineering Study Program, Faculty of Engineering, Khairun University

Abstract. This research was conducted at Sultan Babullah Airport in Ternate. Primary data was collected by interviewing airport passengers and visitors and direct observation (filling out questionnaires), while secondary data was obtained from reports, articles and service operational standards. Data were tested using validity and reliability tests and analyzed using the mean analysis method (looking for average values). The results of data analysis show that the quality of public services at Sultan Babullah Ternate Airport is quite maximal, there are only a few service facilities that are problematic, where negative ratings from passengers are more dominant than the positive rating. Positive ratings are "Appearance of airport officers" (mean 3.90), "Cleanliness, room neatness" (mean 3.88), "Airport security" (mean 3.66). Negative assessments in the form of "Reliability of waiting room facilities (including toilets)", "Availability of seats in the pickup room", and "Ease of reaching the airport". For a negative (invalid) assessment there is no mean because invalid data is not included in reliable calculations and mean analysis. If viewed in groups, the highest level of service quality includes "Tangibility" (mean 3.70), "Assurance" (mean 3.60), "Responsiveness" (mean 3.55), "Reliability" (mean 3.38) and "Empathy" (mean 3.03).

1. Introduction

The development of a region requires transportation services that must be adequate, without the existence of transportation as a means to support the mobilization of passengers and goods, it is difficult to expect satisfactory results in an economic development effort for a country. The means of transportation is one of the means of transportation that is very important in all aspects of human activities. The more developed means of transportation, the easier the relationship between humans will be. Since long ago the mobility of human society has occurred. Transfer of population from one place to another has occurred. This population mobility is also followed by the mobility of the goods carried by them. Therefore the means of transportation since the past has been needed by humans. At present, where human and goods mobility are very high, and occur not only in one region but also between islands and even between countries, the means of transportation plays an important role.

2. Research Methods

2.1. Types of Research

The method used in this study is a case study. The purpose of the case study is to provide a description of the background, characteristics and characteristics that are typical of the case, the type of approach and its review of one case carried out intensively, deeply, and in detail. The type of study used in this study is descriptive qualitative which is obtained from primary and secondary data, where this study seeks to explain the Quality of Public Services, especially services to passengers and visitors (consumers) at Sultan Babullah Ternate Airport.

2.2. Location and Research Schedule

This research was conducted at Sultan Babullah Ternate airport from 10-18 October 2018, where random questionnaires were distributed to passengers and visitors in the Sultan Babullah Ternate airport area.

Figure 1. Location of Sultan Babullah Airport (Source: Google map)

2.3. Population and Samples

The population in this study were passengers and visitors who were at the Sultan Babullah airport in Ternate. Based on data obtained from the Sultan Babullah Ternate airport, the number of passengers who arrive and depart every day reaches hundreds or even thousands. Based on the data the number of the average passengers arriving was 1,157 people, while the number of departing passengers was 1,114 people, then the total number of passengers at dated on 1 January as many as 2,271 people.

To determine the number of samples from the data obtained then entered into the formula as follows:

$$n = N / (1+ (N \times (0.1) \wedge 2)) \quad (1)$$

Description: n = Number of samples searched
N = Total population

Then, it is known: N = 2271

Solution: n = 2271 / (1+ (2271 x (0.1) ^ 2)) = 95.78
n = 95.78 = 100 samples

So, the number of research samples is as much as 100 sample questionnaires.

2.3.1. Characteristics of Respondents

The characteristics of the respondents are represented by several types of variables themselves, including the variables Age, Gender, Education, and Occupation of the respondents are shown in table 1, 2, 3, and 4.

Table 1. Characteristics of Respondents by Age

No.	Age	Respondents	Presentation
1.	< 20	7	7%
2.	20 – 30	43	43%
3.	30 – 40	19	19%
4.	40 – 50	24	24%
5.	> 50	7	7%
Total		100	100%

Table 2. Characteristics of Respondents by Gender.

No.	Gender of Respondents	Respondents	Presentation
1.	Male	64	64%
2.	Female	36	36%
Total		100	100%

Table 3. Characteristics of Respondents Based on Latest Education

No.	Latest Education	Respondents	Presentation
1.	No School	0	0%
2.	Elementary School	0	0%
3.	Not pass Elementary School	0	0%
4.	Junior high School	4	4%
5.	High School	52	52%
6.	College	44	44%
Total		100	100%

Table 4. Characteristics of Respondents by Job

No.	Job	Respondents	Presentation
1.	Civil Servants / Pension	23	23%
2.	Entrepreneur	25	25%
3.	Housewife	13	13%
4.	Farmers	5	5%
5.	Fisherman	2	2%
6.	Police / Army / Pension	6	6%
7.	Others	26	26%
Total		100	100%

4. Validity and Reliability Results

4.1. Validity

Validity comes from the word validity which has the meaning to what extent the accuracy and accuracy of a measuring instrument in carrying out its size function. In addition, validity is a measure that indicates that the variables measured really are.

- Validity testing steps:

1. The variable groups that want to be tested for validity are Tangibility, Reliability, Responsiveness, Assurance, and Empathy as many as 24 items in the questionnaire instrument. From the value of n = 24 items can be seen in the Pearson r correlation table, then get the value of r table = 0.404 and for the number of respondents as many as 100 respondents as the study sample. For r table values can be seen in the appendix Table of Value R Product Moment
2. To test the validity can test "correlation scores of each question item, with a total variable score".
3. The criteria are a valid instrument item if the correlation value is "positive" and "greater or equal to r table".

4.1.1. Validity Test Results

Table 5. Validity Test Results

No	Question Items	r Count	r Table	Remarks
A	Tangibility			
1	Cleanliness, neatness of the room	0.516	0.404	Valid
2	Appearance of the airport attendants	0.449	0.404	Valid
3	Convenience of parking facilities	0.478	0.404	Valid
4	Airport interior appearance	0.471	0.404	Valid
B	Reliability			
1	Reliability of waiting room facilities (including toilets)	0.375	0.404	Invalid
2	Servants' skills	0.559	0.404	Valid
3	The ability to serve	0.558	0.404	Valid
4	Equipment reliability	0.614	0.404	Valid
C	Responsiveness			
1	Willingness fades in airport security	0.502	0.404	Valid
2	Willingness to assist airport officers	0.585	0.404	Valid
3	Airport tax service speed and check-in	0.585	0.404	Valid
4	Readiness of officers in preparing trolley when needed	0.591	0.404	Valid
5	The alertness of officers in serving at the door includes inspection of goods	0.685	0.404	Valid
D	Assurance			
1	The alertness of the band's officers in providing information	0.661	0.404	Valid
2	Hospitality	0.665	0.404	Valid
3	Airport staff courtesy	0.774	0.404	Valid
4	Airport security	0.646	0.404	Valid
5	Provisions of information given	0.699	0.404	Valid
E	Empathy			
1	Availability of seats in the pickup room	0.351	0.404	Invalid
2	Availability of information on departure and arrival	0.590	0.404	Valid
3	Completeness of information instructions	0.491	0.404	Valid
4	Comfort in the waiting room	0.472	0.404	Valid
5	Availability of disabled facilities	0.477	0.404	Valid
6	Ease of reaching the airport	0.313	0.404	Invalid

Source: Primary data

From the table above shows that the value of r calculated from each item in the questionnaire is valid and invalid. And based on the 5% significance distribution table r table is equal to (0.404), so the value of r count > from r table. Invalid questions consist of "Reliability of waiting room facilities (including toilets)", "Availability of seats in pickup rooms", and "Ease of reaching the airport". This invalid data has two causal factors, namely the question sentence in the questionnaire is less understood the meaning of the question, and other factors, namely the passengers and visitors have never used the facility so they do not know what to fill in the value the right level of service for the facility. Furthermore, for invalid questions not included in the calculation of reliability.

4.1.2. Reliability

Reliability shows the extent to which the measurement results with the tool can be trusted. The measurement results must be reliable in the sense that they must have a level of consistency and

stability. High and low reliability, empirically indicated by a number called the value of the reliability coefficient.

Table 6. Reliability Test Results

No	Question Items	r Count	r Table	Remarks
A	Tangibility			
1	Cleanliness, neatness of the room	0.911	0.433	Reliable
2	Appearance of the airport attendants	0.911	0.433	Reliable
3	Convenience of parking facilities	0.911	0.433	Reliable
4	Airport interior appearance	0.911	0.433	Reliable
B	Reliability			
1	Reliability of waiting room facilities (including toilets)	0.911	0.433	Reliable
2	Servants' skills	0.911	0.433	Reliable
3	The ability to serve	0.911	0.433	Reliable
4	Equipment reliability	0.911	0.433	Reliable
C	Responsiveness			
1	Willingness fades in airport security	0.911	0.433	Reliable
2	Willingness to assist airport officers	0.911	0.433	Reliable
3	Airport tax service speed and check-in	0.911	0.433	Reliable
4	Readiness of officers in preparing trolley when needed	0.911	0.433	Reliable
5	The alertness of officers in serving at the door includes inspection of goods	0.911	0.433	Reliable
D	Assurance			
1	The alertness of the band's officers in providing information	0.911	0.433	Reliable
2	Hospitality	0.911	0.433	Reliable
3	Airport staff courtesy	0.911	0.433	Reliable
4	Airport security	0.911	0.433	Reliable
5	Provisions of information given	0.911	0.433	Reliable
E	Empathy			
1	Availability of seats in the pickup room	0.911	0.433	Reliable
2	Availability of information on departure and arrival	0.911	0.433	Reliable
3	Completeness of information instructions	0.911	0.433	Reliable
4	Comfort in the waiting room	0.911	0.433	Reliable
5	Availability of disabled facilities	0.911	0.433	Reliable
6	Ease of reaching the airport	0.911	0.433	Reliable

The reliability test results show that all data can be trusted, because according to the conditions specified is the value of r count is greater than r table.

4.2. Mean Analysis of Service Quality for Babullah Sultan Airport Ternate

Data analysis was processed using the mean analysis method using Microsoft Excel. Data that is processed is only valid and reliable data. If the data is invalid and not reliable, the data is not included in the calculation of mean analysis. The data can be in accordance with the perceptions of respondents, then from the results of the analysis of the data obtained mean and percentage of each answer variable given by the respondent. The mean analysis scale is 1-5 where 1 (SJ: Very Ugly), 2 (J: Bad), 3 (N: Normal), 4 (B: Good), 5 (SB: Very Good).

Table 7. Mean Analysis of Service Quality for Sultan Babullah Airport Ternate

No	Question Items	mean	SD	Rank	
				based on aspects	general
A	Tangibility	3.7	0.1		1
1	Cleanliness, neatness of the room	3.88	0.87	2	2
2	Appearance of the airport attendants	3.9	0.67	1	1
3	Convenience of parking facilities	3.55	0.89	3	10
4	Airport interior appearance	3.45	0.77	4	12
B	Reliability	3.38	0.16		4
1	Reliability of waiting room facilities (including toilets)	3.41	0.67	2	14
2	Servants' skills	3.49	0.66	1	11
3	The ability to serve	3.24	0.74	3	18
4	Equipment reliability	3.13	0.68	4	22
C	Responsiveness	3.55	0.05		3
1	Willingness fades in airport security	3.41	0.71	4	15
2	Willingness to assist airport officers	3.59	0.71	3	8
3	Airport tax service speed and check-in	3.72	0.7	1	3
4	Readiness of officers in preparing trolley when needed	3.39	0.83	5	16
5	The alertness of officers in serving at the door includes inspection of goods	3.63	0.75	2	7
D	Assurance	3.6	0.04		2
1	The alertness of the band's officers in providing information	3.56	0.8	4	9
2	Hospitality	3.68	0.74	1	4
3	Airport staff courtesy	3.64	0.7	3	6
4	Airport security	3.66	0.78	2	5
5	Provisions of information given	3.44	0.74	5	13
E	Empathy	3.03	0.1		5
1	Availability of information on departure and arrival	3.18	0.77	2	19
2	Completeness of information instructions	3.16	0.77	3	20
3	Comfort in the waiting room	2.42	1	4	21
4	Availability of disabled facilities	3.36	0.93	1	17

Source: Primary data

Ranking Description:

- Overview per aspect (which is given blue) is the ranking order based on items in each group (Tangibility 4 items, Reliability 3 items, Responsiveness 5 items, Assurance 5 items, and Empathy 4 items).

- General (which is given a red color) is the overall ranking sequence of 21 items.
- General (which is colored yellow) is a ranking sequence based on 5 variables (Tangibility, Reliability, Responsiveness, Assurance, and Empathy).

5. Conclusions

After conducting research on the Quality of Public Services at Babullah Ternate Sultan Airport through distributing questionnaires to respondents who were passengers and visitors who were in the airport area, several conclusions were obtained, namely:

- The boundaries of the values are: 1 (SJ: Very Ugly), 2 (J: Bad), 3 (N: Normal), 4 (B: Good), 5 (SB: Very Good). In the research that has been carried out on Service Quality at Sultan Babullah Ternate Airport, and from the table of the results of the mean analysis and discussion it can be concluded that service quality per item with the highest level at Sultan Babullah Ternate airport is "Airport officer appearance" (mean 3.90), followed by "Cleanliness, room neatness" (mean 3.88), "Airport tax and check in service speed" (mean 3.72), "Airport staff hospitality" (mean 3.68), "Airport security" (mean 3.66).
- If reviewed in groups, Service Quality with the highest level is in "Tangibility" (mean 3.70), followed by "Assurance" (mean 3.60), "Responsiveness" (mean 3.55), "Reliability" (mean 3.38), and "Empathy" (mean 3.03) with the lowest level or the least value for the quality of service.

6. Acknowledgments

Authors would like to gratefully acknowledge the Ministry of Research, Technology and Education of Indonesia for supporting fund of the Competitive Research of Higher Education, Universitas Khairun in 2019. Authors like also thanks to Department of Civil Engineering, Engineeering Faculty, Universitas Khairun for supporting this research.

References

[1] Afifuddin, M. 2009, Analysis of the Influence of Quality of Service to Customer Satisfaction at PT. Persero Angkasa Pura 1 At Ahmad Yani Airport Semarang, Thesis, Post-Open University Open University, Jakarta.
[2] Agus, Prasetyo (2015). Performance Review of Juanda Airport Surabaya Cargo Terminal Services. Journal of Civil Engineering / Volume 9, No. 3 - 2015 ISSN 1978 - 5658 (https: // downloads //, accessed September 1, 2018.
[3] Azwar, Saifuddin, 2010, Research Methods, Learning Library, Yogyakarta.
[4] Hastono, Yuli Sudoso, 2008, Public Services at Medan Polonia Airport, Thesis, USU Graduate School, Medan
[5] Keban, Yeremias T. 2008, Public Administration, Concepts, Theories and Issues, Gava Media, Jokjakarta.
[6] Lovelock, Christoper, 1994, Product Plus, How to Product and Service Competitive Advantage, Mc Graw-Hill Inc., New York.
[7] Moenir, H.A.S, 2002, Management of Public Services in Indonesia, Bumi Aksara, Jakarta.
[8] Pamudji, 1999, State Administration Ecology, Jakarta, Bina Aksara.
[9] Ratminto and Winarsih, Atik Septi, 2010, Management of Services (Development Conceptual Models, Application of Citizens, Charters and Service Standards Minimal), Learning Library, Yogyakarta.
[10] Sedarmayanti, 2009, Human Resource Management, Bureaucracy Reform and Management of Civil Servants, PT. Refika Aditama, Bandung
[11] Skelcher, Chris, 1992, Managing for Service Quality, Long Man Group, U.K.Lpd, London.
[12] Sugondo, Tumin, 2008, The Effect of Service Quality on Loyalty Users of PT. Antar Lintas Sumatera (ALS) Medan, Thesis, USU Graduate School, Medan.

[13] Sukemi, Tri Henny, 2008, Quality of Health Services at Simpur Puskesmas Tanjung District Karang City Center Bandar Lampung, Thesis, Postgraduate University Open, Lampung.
[14] Tangkilisan, Hessel Nogi S, 2005, Public Management, Grasindo, Jakarta
[15] Tjiptono, Fandy, 1997, Marketing Strategy, Edition II, Andi Offset, Yogyakarta.
[16] Yamit, Zulian, 2001, Production and Operations Management, Edition III, Ekonisia, Jogjakarta.