

Analysis of Infrastructure Service Satisfaction at Zainuddin Abdul Madjid International Airport in Central Lombok

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Abstract


This study aims to examine the level of performance and service quality affecting customer satisfaction at Zainuddin Abdul Madjid International Airport and to determine the priority factors for increasing customer satisfaction with services at Zainuddin Abdul Madjid International Airport. Customer satisfaction is a feeling that feels fulfilled, feels happy, feels safe about the services and facilities provided. The method used is quantitative with Multiple Linear Regression analysis and Analytical Hierarchy Process (AHP), simple random sampling technique was used on 96 respondents. The results showed that the value of the regression coefficient for service quality (X₂) was 0.242 and had a positive effect on customer satisfaction at Zainuddin Abdul Madjid International Airport, while service performance had no significant effect on customer satisfaction. While the results of the Analytical Hierarchy Process (AHP) show the priority factors for increasing customer satisfaction with services at Zainuddin Abdul Madjid International Airport, it can be seen from the results of a comparison of alternative factors which show that the service quality factor is in the first rank with a weight value of 0.5427 and Assurance has the lowest weight value of 0.03529. In the comparison of the criteria factors, it shows that the Assurance criterion has the lowest weighted value so it is expected that Zainuddin Abdul Madjid International Airport officers can provide clear and easy-to-understand information about service procedures to customers/ service users.


Keywords: Satisfaction, Quality, Performance, Analytical Hierarchy Process (AHP)


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1. Introduction

Lombok International Airport (airport code LOP) is located in Central Lombok Regency in West Nusa Tenggara Province. Operated by PT Angkasa Pura I, this airport was first opened on October 20, 2011, replacing the function of Mataram's Selaparang Airport. The airport, which is named after Zainuddin Abdul Madjid, a cleric from Lombok, has an area of 550 hectares with a runway of 2,750 meters. Zainuddin Abdul Madjid International Airport has been widely accessed both domestically and internationally.

Passengers and visitors to Zainuddin Abdul Madjid International Airport are increasing from year to year, due to increased mobility plus the increasing number of infrastructure developments in Lombok and tourism factors which also affect this increase. With an increasing number of passengers, the service and performance of actors in the airport business must be further improved.

Provision of facilities must also be supported by the existence of services that should be further improved. Talking about airports is a business/business engaged in the service sector, service is an important component that must be

considered, moreover the characteristics of a service business are very sensitive to the services provided by producers because the nature of the product is the same time when it is produced and consumed. Therefore the best service is one way to provide satisfaction for users of transportation services (Wilman, 2017). the comfort of prospective passengers for guaranteed safety and security while at the airport has an influence in efforts to increase customer satisfaction (Windyastari, 2019).

With regard to service, especially service quality, Zainuddin Abdul Madjid International Airport also found several complaints of dissatisfaction from several passengers and prospective passengers. Zainuddin Abdul Madjid International Airport is complained by its users because it is considered less comfortable and the quality of service is not good. So the purpose of this study were (1) to determine the level of performance and service quality affecting customer satisfaction at Zainuddin Abdul Madjid International Airport. (2) to determine the priority factors for increasing customer satisfaction with services at Zainuddin Abdul Madjid International Airport.

Heviandri et al (2009) examined the Analysis of Consumer Satisfaction with Services at Soekarno-Hatta Airport, and Its Implications for the Marketing Strategy of City Check-In terminals in Jakarta using Descriptive Analysis Methods, Clusters, Cochran, Customer Satisfaction Index (CSI) and *Importance Performance Analysis (IPAs)*. The results of this study indicate that 79.35% of airport consumers are satisfied with Soekarno-Hatta Airport services.

Darus & Mahali (2015) conducted a study entitled Analysis of Passenger Satisfaction Levels on Service Quality at Kualanamu International Airport, this study used the CSI Descriptive Analysis method. The results of the analysis using the Customer Satisfaction Index (CSI) method conducted by researchers show that Kualanamu International Airport is in the quite satisfied category with a value of 63.6%.

Mariana et al (2015) examined the level of passenger satisfaction and service performance at the domestic passenger terminal (T2) at Juanda International Airport, Surabaya. The methods used in this study are *the Customer Satisfaction Index (CSI)*, *Importance-Performance Analysis (IPA)*, *Quality Function Deployment (QFD)* and Multiple Linear Regression Analysis. The CSI analysis shows that of the 36 service attributes, the value obtained is 75.10%, which means that passengers are satisfied with the Juanda 2 terminal service.

Firdausi (2019) in his journal examines the Analysis of the Level of Visitor Satisfaction with Public Facilities at Malang Abdurahman Saleh Airport. The method in this study is CSI to measure the level of satisfaction. The results showed that the level of visitor satisfaction with public facilities at Abdurachman Saleh Malang Airport was 77.43% included in the Satisfied category. Customer dissatisfaction with the performance of services and facilities showed that 23.57% of respondents stated they were dissatisfied with the reliability of equipment and facilities such as air conditioning, television and others, the ease of getting inter-modal services such as taxis, buses and others, as well as special events held by parties. airports such as, ticket promos at certain times.

Windyastari et al (2019) conducted research on the Effect of Service Quality on Aircraft Passenger Satisfaction at Syamsudin Noor Airport, Banjarmasin. The method used is the IPA and CSI methods which are processed with Microsoft Excel for windows software. The results of data processing with the IPA (*Importance Performance Analysis*) method. The results of the CSI (*Customer Satisfaction Index*) method show a consumer satisfaction level of 59.8%. This value is in the range of 51% - 65.99%, thus overall consumers are quite satisfied with the service performance at Syamsudin Noor airport, Banjarmasin.

An international airport is an airport equipped with customs and immigration facilities to handle international flights to and from other countries.

These types of airports are generally larger and often have longer runways and facilities to accommodate large

aircraft often used for international or intercontinental travel. International airports often handle domestic flights (flights that occur within one country) as well as international flights.

According to Kotler (1997) customer satisfaction is closely related to quality, quality has a direct impact on product performance, and thus customer satisfaction. To find out the problem of customer satisfaction with service quality, we must first understand the meaning of satisfaction itself. Satisfaction is a person's mood or emotional response to something.

According to Majid (2009) quality of service is a presentation of a product or service according to the applicable standards/service that meets the needs, desires, and expectations of the people served.

Meburut Tjiptono, (2007) service quality can be interpreted as an effort to fulfill consumer needs and desires and the accuracy of their delivery in balancing consumer expectations.

According to Parasuraman quoted by Tjiptono (2011) there are five main dimensions in service quality as follows:

1. Reliability (Reliability)

Relates to the company's ability to provide accurate service from the first time without making any mistakes and delivering its services in accordance with the agreed time.

2. Responsiveness.

Related to the willingness and ability of employees to help consumers and respond to their requests, as well as inform when services will be provided and then provide services quickly.

3. Guarantee (Assurance)

Employee behavior that is able to foster consumer trust in companies and companies can create a sense of security for its consumers. Assurance also means that employees are always courteous and possess the necessary knowledge and skills to handle any customer inquiries or concerns.

4. Empathy (Empathy)

Stating that the company understands the problems of its customers and acts in the interests of consumers, and provides personal attention to consumers and has comfortable operating hours.

5. Physical Evidence (Tangible)

With regard to the attractiveness of physical facilities, complete equipment/equipment, and materials used by the company are clean, and the appearance of employees is neat.

According to Kotler in Supriyati (2004) service performance is a work activity that has product value offered by a company, meaning that when a company wants to have more value in offering its products to consumers, the company must be able to provide a service that can meet consumer expectations.

2. Research Methods

Data collection methods that researchers used in this study in three ways, namely Field Research (Field Research), Libraries (Library Research), and Internet Research (Online Research). Determination of the sample in this study using simple random sampling on 96 respondents.

The principle of compilation hierarchy is to describe and describe hierarchically by breaking down the problem into individual elements. The trick is to break our complex knowledge, our thoughts, into its constituent parts, and then these into its parts, and so on.

Data processing with the AHP method will be carried out by giving weights to each respondent. This weighting will be based on the knowledge and experience of the respondents in carrying out regional development planning and are considered to have detailed knowledge of the problems faced in the framework of carrying out development. This data processing will be carried out using *the Super Decisions Software Version 2.10*.

In solving problems using the AHP method, there are several principles used (Manurung, 2010), including the following: *Decomposition*, systems that have complex problems can be broken down into smaller elements so that they are easier to understand. Shown in Figure 1 hierarchical structure.

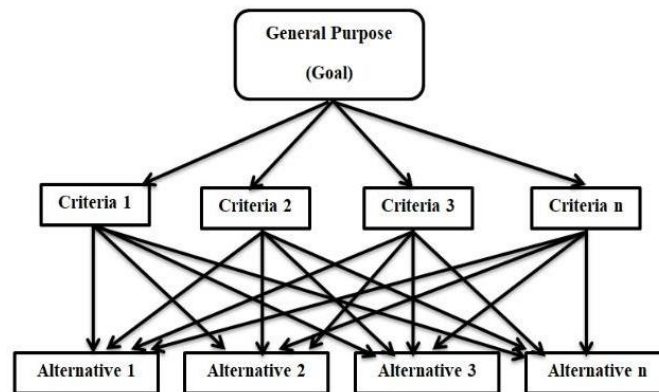


Figure 1. Hierarchical Structure.

3. Results and Discussion

3.1. Research Implementation

Based on the data obtained from the results of a survey conducted at Zainuddin Abdul Madjid International Airport using a questionnaire, the characteristics of service users in general can be obtained.

3.2. Data Respondents

1. Last education

The data collected shows the results of the distribution in the form, as many as 7 respondents had an elementary school education level, no junior high school graduates, 29 people had a high school education level, and 27 people had a Diploma education level, and 33 people had a Bachelor/S1 education level. If the percentage is 7.29% SD graduates, 30.21% SMA graduates, 28.12% Diploma graduates, and 34.38% Bachelor graduates. Distribution of respondents last education can be seen in Table 1.

Table 1. Characteristics of Respondents by Last Education

No	Last education	Number of respondents	Percentage (%)
1	ELEMENTARY SCHOOL	7	7.29
2	JUNIOR HIGH SCHOOL	0	0.00
3	SENIOR HIGH SCHOOL	29	30.21
4	Diploma	27	28.12
5	Bachelor	33	34.38
	Amount	96	100

2. Gender

Based on the data obtained from the survey conducted, it was found that 96 respondents consisted of 75 male and 21 female, with a percentage of 78.12% male and 21.88% female. Table 2 explains the characteristic of respondents based on gender.

Table 2. Characteristics of respondents based on gender.

No	Gender	Number of respondents	Percentage (%)
1	Man	75	78.12
2	Woman	21	21.88
	Amount	96	100

3. Work

Based on the data obtained, the results found that 96 respondents consisted of 31 people who are self-employed, 43 people who are private, 7 people who work as civil servants, and 15 people who are students. With a percentage of 44.79% self-employed, 33.29% private, 7.29% civil servants, and 15.63% students. Table 3 explain characteristics of respondents based on occupation.

Table 3. Characteristics of Respondents Based on Occupation

No	Work	Number of respondents	Percentage (%)
1	Self-employed	43	44.79
2	Private	31	32.29
3	civil servant	7	7.29
4	Student	15	15.63
	Amount	96	100

3.3. Research result

The results of the data that has been collected from the questionnaire distribution process are then performed multiple linear regression analysis to see the effect of service quality on customer satisfaction at Zainuddin Abdul Madjid International Airport. The data analysis method used in this study is a statistical analysis method using IBM SPSS 21 for Windows Software and data processing using the AHP method using *Super Decisions Version 2.10 Software*. Table 4 shown Multiple Linear Regression.

Table 4. Multiple Linear Regression of Customer Satisfaction

Variable	Coefficient	Sig. t
C	6.075*	0.000
Service Performance (X1)	0.053	0.493
Service Quality (X2)	0.242*	0.000
R-squared	0.813	
Adjusted R-squared	0.809	
F-Statistics	201.794	0.000
Description: * = Significant at $\alpha = 5\%$		

The results of the analysis in table 4.9 show the Adjusted R-squared value of 0.809. This shows that the performance and service quality variables can explain the customer satisfaction variable by 80.9%, the remaining 19.1% is explained by other factors outside the model.

a. F test

The F test or coefficient test is carried out to determine the effect of the independent variables jointly on the dependent variable significantly or not. Table 4.9 shows that the F-count value is 201.794 with a significance value of 0.000 t. So, it can be concluded that the variable service performance and service quality together affect customer satisfaction.

b. t test

The t test was conducted to determine the effect of each independent variable on the dependent variable. Table 4.9 shows that the service quality variable (X2) has a significant influence on customer satisfaction and the variable that

has no significant effect is service performance.

Based on the results of data analysis using IBM SPSS Statistics 21 for Windows Software, the results of the regression equation are obtained as follows:

$$Y = 6.075 + 0.053X_1 + 0.242X_2 + e$$

The regression equation above shows that there is a relationship between the independent variable and the dependent variable partially, from the equation it can be concluded as follows:

- A positive constant value indicates that if the independent variable increases, then the customer satisfaction variable will increase. If the service performance and service quality variables are 0 (zero), a customer satisfaction value of 6.075 units will be obtained.
- The service performance regression coefficient (X_1) is 0.053, meaning that if the service performance variable (X_1) increases by 1% assuming the service quality variable (X_2) and constanta (α) is 0 (zero), then customer satisfaction at Zainuddin Abdul Madjid International Airport in Central Lombok Regency increased by 0.053%.
- The service quality regression coefficient (X_2) is 0.242, meaning that if the service quality variable (X_2) increases by 1% assuming the service performance variable (X_1) and constanta (α) is 0 (zero), then the level of customer satisfaction at Zainuddin Abdul Madjid International Airport in Central Lombok Regency increased by 0.242%. This shows that the existing service quality variable (X_2) contributes positively to customer satisfaction, so that the higher the quality of service such as the availability of information and safety facilities provided by the airport, the more customer satisfaction will be felt. Table 5 shown the result Value of *Consistency Ratio* (CR) using *Super Decisions Version 2.10 Software*.

Table 5. Value of *Consistency Ratio* (CR)

Results	
Empathy	0.09010
Security	0.12202
Reliability (<i>Reliability</i>)	0.07856
Comfort	0.23685
Certainty (<i>Assurance</i>)	0.03529
Safety	0.15880
Appearance Physique (<i>Tangibles</i>)	0.09468
Response (<i>Responsiveness</i>)	0.18370

Consistency Ratio (CR) value of respondent's data at above is 0.07256 or 7.2%. This shows that the respondent's data is acceptable Because mark CR Which generated not enough from 0.1 or CR < 10%, Where Comfort has the highest weight value of 0.23685, Empathy has a weight value of 0.09010, Security has a weight value of 0.12202, Reliability (*Reliability*) has a weight value of 0.07856, Safety (*Safety*) has weight value of 0.15880, Appearance Physique (*Tangibles*) own mark weight as big 0.09468, *Responsiveness* has a weight value of 0.18370, and Certainty (*Assurance*) own mark the lowest weight of 0.03529. Table 6 shown Alternative Rankings.

Table 6. Alternative Rankings



Graphic	Alternatives	Total	Normal	Ideal	ranking
	Service Performance	0.2286	0.4573	0.8426	2
	Service quality	0.2714	0.5427	1.0000	1

Table 6 shown the results using Software Super Decisions Version 2.10 to find out how much the alternative factors influence Infrastructure Service Satisfaction at Zainuddin Abdul Madjid International Airport based on ranking, it is

known that the service quality factor is in the first rank with a weight value of 0.5427 which shows that the higher the quality of services such as the availability of information and safety facilities provided by the airport, the more increasing customer satisfaction at Zainuddin Abdul Madjid International Airport.

Service performance is in second place with a weight value of 0.4573, indicating that service performance is quite good, such as ticket processing speed and fast, precise and friendly service thereby increasing customer satisfaction at Zainuddin Abdul Madjid International Airport.

4. Conclusion and Suggestion

4.1. Conclusion

Based on the results of the research and discussion that has been carried out, it can be concluded as follows:

1. Service quality has a positive effect on customer satisfaction at Zainuddin Abdul Madjid International Airport, while service performance has no significant effect on customer satisfaction.
2. The priority factors for increasing customer satisfaction with services at Zainuddin Abdul Madjid International Airport can be seen from the results of a comparison of alternative factors which show that the service quality factor is in the first rank with a weight value of 0.5427 and service performance is in the second rank with a weight value of 0.4573. While the priority factors in the comparison of each criterion, namely Comfort has the highest weight value of 0.23685, Empathy has a weight value of 0.09010, Security has a weight value of 0.12202, Reliability has a weight value of 0.07856, Safety has a weight value of 0.15880, Physical Appearance (Tangible) has a weight value of 0.09468, Responsiveness has a weight value of 0.18370, and Assurance has the lowest weight value 0.03529.

4.2. Suggestion

Based on the results of the research that has been done, some suggestions can be given as follows:

1. Improved service performance is expected to be even better, such as ticket processing speed and fast, precise and friendly service so as to increase customer satisfaction at Zainuddin Abdul Madjid International Airport.
2. In the comparison of the criteria factors shows that the Comfort criterion has the highest value so that the availability of lighting, air circulation facilities and other supporting facilities is expected to increase passenger comfort at Zainuddin Abdul Madjid International Airport.

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