Analysis of Passenger Satisfaction Level of Departure Terminal Facilities at Sam Ratulangi International Airport Manado

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Abstract
The purpose of this research is to find out how the existing facilities are at Sam Ratulangi Manado International Airport Departure Terminal, to find out how the level of passenger satisfaction with the existing facilities at the Departure terminal at Sam Ratulangi International Airport Manado. The research method used in this study is a qualitative method and the type of research used is a case study and a quantitative method. The types of data used in this study are primary data including survey results using the CSI method regarding the level of satisfaction of passengers with departure terminal facilities, observation results and documentation results, and secondary data including articles, Decree of the Director General No. 77 of 2005, and documentation. The research is located at Sam Ratulangi International Airport Manado. The data analysis technique used includes the validity of qualitative data which consists of a credibility test, transferability test, dependability test, and confirmability test. Quantitative data validity test consisting of validity test and reliability test. And the data analysis used includes: data collection, data reduction, data presentation, conclusion drawing, and the Customer Satisfaction Index (CSI) method. From the results of the data conducted by researchers, this study resulted that the existing conditions of the departure terminal facilities at Sam Ratulangi Manado International Airport were fairly complete and had met service standards in accordance with Directorate General Decree No. 77 of 2005 concerning Technical Requirements for the Operation of Airport Engineering Facilities, it can be seen from the results of the data obtained and the results of observations that were examined by the researchers as well as the survey results obtained by the researchers that the level of passenger satisfaction with the Sam Ratulangi Airport Departure Terminal facilities in Manado.

Keywords: International Airport, Departure Terminal, Passengers, Facilities, Qualitative, Quantitative, CSI.

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INTRODUCTION
An airport or also known as an aerodrome is a facility where aircraft such as airplanes and/or helicopters can take off and land. The simplest airports have at least one runway and/or helipad (for landing helicopters), while large airports are usually equipped with various other features for both air service operators and users, such as terminal buildings and hangars. According to the Law of the Republic of Indonesia Number 1 of 2009 concerning Aviation, an airport is an area on land and/or waters with certain boundaries that is used as a place for aircraft to land and take off, board and drop passengers, load and unload goods, and place for intra-air transfer and intermodal transportation, equipped with aviation safety and security facilities, as well as basic facilities and other supporting facilities.

Along with the growth of aircraft and passenger movements, airports are trying to improve services, including Sam Ratulangi International Airport Manado. Among them is by repairing facilities on the air side, buildings, terminals to vehicle parking services for delivery and pick-up. Early February 2019 PT. Angkasa Pura I Sam Ratulangi International Airport Manado is ranked the 12th best airport in the world in terms of service. Sam Ratulangi Airport
connects Manado City with several other cities in Indonesia such as Jakarta, Makassar, Surabaya and Denpasar. Apart from domestic flight routes, Sam Ratulangi Airport also serves international flights with routes to and from other countries such as Singapore, China and Malaysia.

According to a survey of passenger satisfaction with facilities and services that were conducted at Sam Ratulangi International Airport in Manado on January 23-25 2018 sourced from the official website of Angkasa Pura I, which resulted in that facilities and services at Sam Ratulangi Manado International Airport were in the good category. From the results of observations made by researchers, even so there were still a number of complaints conveyed by passengers at Sam Ratulangi International Airport in Manado regarding the existing facilities entering the category of quite a lot. Starting from the insufficient number of trolleys, the escalator stairs which often don’t work, the internet/wi-fi access at the airport does not work, and the lack of waiting room chairs which results in some passengers having to stand, and the lack of good service from airport staff such as a lack of airport waiting room and toilet cleanliness.

From the results of a survey that was conducted at Sam Ratulangi International Airport in Manado which used the CSI method to find the level of passenger satisfaction, the complaints made Sam Ratulangi Airport in Manado still need to improve service facilities to pay attention to in order to increase service quality and increase satisfaction. The purpose of this study is as follows: To find out how the existing conditions of the facilities at the Departure Terminal of Sam Ratulangi International Airport Manado. To find out how the level of passenger satisfaction with existing facilities at the Departure terminal at Sam Ratulangi International Airport Manado.

**Theoretical Basis**

**Airport**

An airport is a facility where aircraft such as airplanes and helicopters can take off and land. The simplest airport has at least a runway or helipad (for helicopter landing), whereas large airports are usually equipped with various other facilities, both for flight service operators and for their users such as terminal buildings and hangars. The definition of an airport according to PT. Angkasa Pura I is an airfield, including all buildings and equipment which are the minimum equipment to ensure the availability of facilities for air transportation for the public. According to the Directorate General of Civil Aviation, an airport is an area on land and/or waters with certain boundaries that is used as a place for aircraft to land and take off, board passengers, load and unload goods, and place for intra and intermodal transportation, equipped with with aviation safety and security facilities, as well as basic facilities and other supporting facilities.

**Terminal**

The definition of Airport Passenger Terminal according to the 1995 LLAJ Technical Guidelines, Passenger Terminal is a road transportation infrastructure for the purposes of raising and lowering passengers, moving intra and/or between modes of transportation and arranging the arrival and departure of public vehicles. Airports or airports according to Law No. 1 of 2009 concerning Aviation, airports are areas on land and/or waters with certain boundaries that are used as a place for aircraft to land and take off, take passengers on and off, load and unload goods, and places for intra and intermodal transportation, which are equipped with aviation safety and security facilities, as well as basic facilities and other supporting facilities.
Decree of the Minister of Transportation No. 44/2002 - National Airport Order, an airport is an airport used for landing and taking off of aircraft, boarding and unloading passengers and/or loading and unloading of cargo and/or post, and is equipped with aviation safety facilities as a place for transfers between modes of transportation. Inside the departure terminal itself there is such a thing as a departure hall facility, where this hall accommodates all activities related to prospective passengers and is equipped with departure carriages, passenger waiting rooms, seats, and public facilities such as toilets. It can be concluded that an airport passenger terminal is a transportation infrastructure in the area of an airfield on land and/or waters with certain boundaries that is used as a place for aircraft to land and take off, board and drop passengers, loading and unloading of goods and/or post, and a place for intra- and inter-modal movements of transportation, which are equipped with aviation safety and security facilities, as well as basic facilities and other supporting facilities as places for transfers between modes of transportation.

Facility

According to Tjiptono (2014) facilities are physical resources that must exist before a service is offered to consumers. Facilities are something that is important in the service business, therefore the existing facilities, namely the condition of the facilities, interior and exterior design and cleanliness must be considered, especially those that are closely related to what consumers feel directly. Perceptions obtained from customer interactions with service facilities affect the quality of these services in the eyes of consumers. Facilities are part of a marketing variable that has an important role, because services delivered to customers often really need supporting facilities in delivery (Nirwana, 2014). Service companies need to develop an understanding of customer response to various aspects of facility layout. Based on the description above, it can be concluded that facilities are everything that is occupied and enjoyed by employees and is deliberately provided to be used and used and enjoyed by guests, and for its users. Several opinions basically have the same meaning and in essence, the facilities provided to consumers can make it easier to use the facilities and infrastructure that have been provided. There are still many service providers who do not realize that facilities have their own influence on the feelings and comfort of customers.

Passenger Satisfaction

Satisfaction is very important in business in service companies. According to the Big Indonesian Dictionary (KBBI), the meaning of satisfaction is a feeling of pleasure from someone who is obtained through sacrifice. Kotler cit. Wiyono (1999) in Sudarto et al. (2021) states that, Satisfaction is the level of a person's perceived state which is the result of comparing the perceived appearance or product outcome in relation to one’s expectations. Tjiptono (1997) in Candrianto (2021) also defines that, Satisfaction is the level of customer feeling that is obtained after the customer has done/enjoyed something. Meanwhile, Kotler (2014) in Candrianto (2021) explains that, Satisfaction is a person’s feeling of pleasure or disappointment that arises after comparing perceptions or impressions of work or the results of a product and their expectations. The experience of passengers using air transportation services is considered very important because it can be used as a measure of the level of passenger satisfaction with airport services. Based on the definition of satisfaction above, it can be concluded that passenger satisfaction is a condition that is felt by passengers after experiencing a performance of a product/service and comparing the service desired and expected by passengers according to and can be fulfilled through the product/service. Passenger satisfaction concerns the expectation satisfaction component in which passenger satisfaction also means the extent to which passengers’ perceptions of product/service services meet their expectations.
Customer Satisfaction Index (CSI)

The Customer Satisfaction Index (CSI) method is used to determine the level of visitor satisfaction with the results of service performance by looking at the level of importance of the service attribute (Shanty, 2015). According to Khurniyah (2016) the CSI method is used to determine the overall level of visitor satisfaction by considering the level of importance of the variables being measured. CSI provides clear data regarding the level of visitor satisfaction so that a certain time unit can carry out periodic evaluations to improve what is lacking and improve service that the customer considers a value (Widodo, 2017). Based on the definition of CSI above, it can be concluded that CSI is a measurement scale that describes the level of satisfaction of visitors (consumers) with a product or service. CSI is also used to determine the level of visitor satisfaction with the results of service performance by looking at the level of importance of service attributes.

Relevant Research

<table>
<thead>
<tr>
<th>No</th>
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<tr>
<td>1</td>
<td>Iye Yazid</td>
<td>2022</td>
<td>Analysis of the Effect of Departure Terminal Facilities on Passenger Satisfaction at Lombok Praya International Airport</td>
<td>Based on the coefficient of determination test conducted, it can be concluded that the influence of the Departure Terminal Facilities at Lombok Praya International Airport on Passenger Satisfaction is 20.7%</td>
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<td>2</td>
<td>Salsa Khoirunnisa and Septiyani Putri Astutik</td>
<td>2022</td>
<td>Analysis of Passenger Satisfaction Levels at the Domestic Terminal at Adi Soemarmo Boyolali International Airport Using the Customer Satisfaction Index Method</td>
<td>The results showed that the CSI value for Adi Soemarmo Airport in 2021 dropped to 4.23 where previously it was 4.75 in 2020. This was influenced by the accessibility variable value which was still low with an average value of 3.97</td>
</tr>
<tr>
<td>3</td>
<td>Tomi Waluyo</td>
<td>2022</td>
<td>Analysis of Passenger Satisfaction with Departure Terminal Services at Ahmad Yani Airport, Semarang</td>
<td>The level of user satisfaction at the Ahmad Yani Semarang airport departure terminal with the customer satisfaction index method can be seen by the IKP value of 52% expressing satisfaction with the performance or service in the waiting room of the Ahmad Yani airport departure terminal Semarang. From the results of the importance performance analysis in quadrant I, this can be increased because the items in quadrant I have a high level of expectations for consumers but the services provided are still low, for quadrant II to be maintained because it is in line with expectations and high performance for quadrant III and IV can be reviewed by related parties.</td>
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Source: Relevant Research

RESEARCH METHODS

Research Design

The research method used in this study is a qualitative method and the type of research used is a case study and a quantitative method. The aim is to obtain information and a clear and detailed description of the problem under study. Qualitative research methods as human instruments function to determine research focus, select informants as data sources, collect data, assess data quality, analyze data, interpret data and draw conclusions based on findings.
The qualitative method in this research is in the form of documentation and observation. Quantitative research methods can be interpreted as research methods based on a positivist philosophy, used to examine certain populations or samples, sampling techniques are generally carried out randomly, data analysis is quantitative/statistical in nature with the aim of testing established hypotheses. The quantitative method in this study was a survey using the Customer Satisfaction Index (CSI) method regarding the level of passenger satisfaction with the Sam Ratulangi Manado International Airport Departure Terminal facilities.

**Time and Place of Research**

Research on Analysis of Passenger Satisfaction Levels for Departure Terminal Facilities at Sam Ratulangi International Airport Manado, was carried out at Sam Ratulangi International Airport Manado. This data collection starts from March 20 to April 10, 2023.

**Population**

The population is a generalization area consisting of objects/subjects that have certain qualities and characteristics that are applied by researchers to study and then conclusions are drawn (Sugiyono, 2019). Based on this explanation, the researcher determined the study population, namely passengers at Sam Ratulangi International Airport, Manado, North Sulawesi.

**Sample**

The sample is part of the population which is the source of data in research, where the population is part of the number of characteristics possessed by the population. In this study, researchers used 100 samples/respondents. Researchers measured the level of passenger satisfaction with 16 questions submitted to 100 respondents. As for some of the criteria for respondents, namely: Passengers aged at least 17 years and Passengers who are at the departure terminal (in the waiting room/boarding lounge)

**Research Instruments**

The research instrument is a tool used to collect data or information that is useful for answering research problems. Research data can be grouped into two types, namely primary data and secondary data. In this study researchers used two of these data:

1. **Primary Data.** Primary data is the main data or main data used in research, the main data can be described as the type of data obtained directly from the first party, namely respondents or informants. The primary data in this study are the results of a survey using the CSI method regarding the level of passenger satisfaction with the departure terminal facilities, observation results and documentation results.

2. **Secondary Data.** Secondary data is information obtained indirectly from sources or respondents but from third parties. Secondary data in this study are in the form of articles, Director General Decree No. 77 of 2005, monthly airport operational reports of Sam Ratulangi International Airport Manado and documentation.

**Data Collection Technique**

1. **Documentation.** At this stage, the documentation becomes a complementary material to the observation and survey methods. In this study, the documentation is in the form of photographs of facilities at the departure terminal and monthly airport operational reports of Sam Ratulangi International Airport, Manado. The documentation sheet is attached to Appendix I which refers to the Decree of the Directorate General No. 77 of 2005.
2. Observation. Observation is a data collection technique by direct observation of the research object in order to complete the necessary data as a research reference. At this stage the researcher is directly involved with the activities carried out by the passengers as a source of research data. The observation sheet is attached to Appendix II sheet which refers to the Decree of the Directorate General No. 77 of 2005.

3. Surveys. At this stage the researcher used a survey with the CSI method in which passengers or samples were asked for responses regarding the level of passenger satisfaction with the departure terminal facilities. The survey questions are attached to annex III which refers to the Decree of the Directorate General No. 77 of 2005.

RESEARCH RESULTS AND DISCUSSION
Existing condition of existing facilities at the Departure Terminal at Sam Ratulangi International Airport Manado

Based on the results of observations made by researchers based on the Decree of the Directorate General No. 77 of 2005. The results of the study show that the Sam Ratulangi Manado International Airport Departure Terminal facilities are appropriate and valid as they should be. The facilities that have been discussed in the presentation of the questionnaire data are able to prove their important role as a tool to support passenger satisfaction or airport service users, if the terminal facilities at an airport are functioning optimally, passenger satisfaction is difficult to achieve. The following is data on the facilities available at the Sam Ratulangi Manado International Airport departure terminal.

1. Activities on the Departure Kerb. From the results of observational data and documentation carried out and taken by researchers that in the area of the Departure Kerb during rush hour you can see cars passing by taking passengers who want to depart, in this Departure Kerb there is a drop zone of temporary stops.

2. Departure Hall. In the Departure Hall, the results of observation and documentation describe the condition of the Departure Hall which looks clean, and there are notification banners and trolleys that can be used by passengers.

3. Trolleys. Sam Ratulangi International Airport in Manado has a trolley facility that passengers can use when carrying luggage. Trolley facilities at Sam Ratulangi International Airport Manado number 234 and are in good condition and functioning properly. Based on the results of observational data that has been carried out by researchers that it has been adjusted with the Decree of the Directorate General No. 77 of 2005.

4. Check-in Area. It can be seen from the results of observational data and documentation carried out and taken by researchers that during peak hours the check-in area is sufficient to accommodate the large number of passengers who are checking-in.

5. Check-in counters. From the results of observation and documentation, it can be seen that the check-in counter contains the items needed for the check-in process so that the check-in process is not too long so that passengers do not have to queue long when check-in takes place. This already meets the standards in the Decree of the Directorate General No. 77 of 2005.

6. Baggage Scales. According to the results of the documentation data and observation data, the researchers found that all luggage weighing facilities were functioning properly and properly. At Sam Ratulangi Manado International Airport there is a baggage scale facility which is placed together with the check-in counter. Sam Ratulangi Airport in Manado also has 24 baggage scales.

7. Departure Lounge. The Departure Waiting Room at Sam Ratulangi International Airport Manado has adequate seat facilities, toilets, shopping shops, cellphone chargers, and a
playroom for children so that passengers are happy and comfortable waiting for their departure schedule in this departure waiting room.

8. Signs. Based on the results of observations and documentation carried out and taken by researchers at Sam Ratulangi International Airport, Manado has signs in the departure hall, check-in area and waiting room, these signs aim to make it easier for passengers to find information about areas in the airport.

9. Seating. From the results of observations and documentation carried out and taken by researchers that Sam Ratulangi Manado International Airport has seating facilities located at the Departure Terminal in the form of check-in area, departure lobby and waiting room.

10. Custom Immigration Quarantine. From the observation and documentation data taken by the researchers, they met the standards in the Decree of the Directorate General No. 77-2005.

11. Public Facilities. From the results of observational data and documentation carried out and taken by researchers that all public facilities are functioning properly and are clean. Public facilities at Sam Ratulangi International Airport in Manado include toilets and prayer rooms. Toilets are in the departure hall area, check-in and waiting room, and for prayer rooms are in the departure hall area and waiting room.

12. Terminal Room Lighting. Based on the results of observational data and documentation conducted and taken by researchers, the lighting in the Sam Ratulangi Manado International Airport Departure Terminal room includes the departure hall, check-in area, waiting room and corridor, all lighting facilities function properly.

13. Air Conditioning. Air conditioning at Sam Ratulangi International Airport has good air conditioning with 21 AC facilities based on the results of observational data and research documentation data.

14. Elevators and Escalators. Sam Ratulangi Manado International Airport is equipped with lift and escalator facilities in the Departure Terminal to support airport service operations. Based on the results of the data obtained by researchers in the form of observation and documentation data, the elevator and escalator facilities function properly and are in good condition.

15. Data on the number of Wi-fi in the Terminal. The total number of wi-fi at Sam Ratulangi Manado International Airport is 11 points. But not all of the 11 wi-fi works properly. According to information from AP1 staff at Sam Ratukangi Airport in Manado, a large number of them only have a low capacity to access the internet and it is impossible for all passengers who are at the departure terminal to use it because of the capacity of each wi-fi. Therefore wi-fi can only be used limitedly.

Level of Passenger Satisfaction with Existing Facilities at the Departure Terminal at Sam Ratulangi International Airport Manado

Data processing carried out by researchers regarding the level of passenger satisfaction is to measure the level of passenger satisfaction by using the Customer Satisfaction Index (CSI). CSI is used to determine the overall level of passenger satisfaction by looking at the level of importance of each question variable for Departure Terminal facilities.

1. Determine the Mean Importance Score (MIS) and Mean Satisfaction Score (MSS). Mean Importance Score (MIS) is the average score of the importance of an attribute derived from the average importance of each consumer. While the Mean Satisfaction Score (MSS) is the average reality of an attribute derived from the average interest of the facility felt by passengers. From the results of the data obtained, the researcher explained that the MIS value explained interest (I) and the MSS value explained satisfaction (P). The question from the interest indicator (I) that gets the highest score is question 5 regarding "The check-in
counter table is designed according to capacity, so that it accommodates all the equipment needed for the check-in counter". It can be concluded that if the check-in counter desk facility is in accordance with capacity so that it can accommodate all the equipment needed so that the check-in process runs quickly, passengers no longer wait too long to queue at the check-in counter, therefore the value of question 5 is get the highest score from the results of the questionnaire filled out by research respondents. Questions from the Satisfaction indicator (P) that get the highest score, namely question 11 regarding the availability of complete toilet facilities (such as sitting/squatting toilets, sanitary ware, water, soap, tissue, hand dryer, mirror, trash can and air freshener) and cleanliness according to standards. It can be concluded that passengers are satisfied with the availability of complete facilities in the toilet at Sam Ratulangi International Airport Manado, which can be seen from the results of the average value of the questionnaire filled out by respondents.

2. Calculate Weight Factors (WF). Weight factors (WF) or weighted factors. This weight is the percentage of the MIS score per question to the total MIS of all questions.

3. Calculating Weight Score (WS). Weight Score (WS) or weighted score is the multiplication of WF with the average level of satisfaction or Mean Satisfaction Score (MSS). WSi = Wfi x MSS

4. Determine the Customer Satisfaction Index (CSI). The CSI percentage value is calculated by dividing the weighted score by the maximum scale used. So it can be concluded that from the results of the CSI calculations carried out by the researcher, the results were 91% with the criteria according to (Widodo, 2018), namely very satisfied. Passengers who are at the Sam Ratulangi Manado International Airport Departure Terminal are very satisfied with the existing facilities at the Departure Terminal, the existing facilities at Sam Ratulangi Manado International Airport have met service standards in accordance with Directorate General Decree No. 77 of 2005 can be seen from the results of the survey and CSI calculations that researchers did.

CONCLUSION

The existing condition of the Sam Ratulangi Manado International Airport Departure Terminal facilities is fairly complete, and far from lacking. Because the existing facilities already meet International Airport standards and the Decree of the Directorate General No. 77 of 2005 concerning Technical Requirements for the Operation of Airport Engineering Facilities. It can be seen from the facility data that the author has included in chapter IV and also from the results of the author’s observations by looking directly at the existing conditions of all passenger Departure Terminal facilities at the time of the study. Some evidence of observation and documentation has been attached in the attachment sheet. The results of the survey were obtained by the author and calculated to get the result that the Passenger Satisfaction Level with the existing facilities at the Passenger Departure Terminal obtained a Customer Satisfaction Index (CSI) value of 91% which was in the very satisfied category.

Based on the results of the research and the results of the calculations obtained, the researcher intends to provide suggestions that hopefully can be useful for institutions and further researchers, namely as follows: For Sam Ratulangi International Airport Manado, From the results that the authors have obtained the Level of Passenger Satisfaction with Departure Terminal Facilities in Sam Ratulangi International Airport Manado has been very good as seen from the CSI results but for that it is hoped that from the results of this study PT. Angkasa Pura I, which manages Sam Ratulangi International Airport in Manado, continues to improve the existing conditions of the existing facilities at the passenger departure terminal so that passenger satisfaction is maintained with the facilities at the departure terminal and becomes material for increasing passenger satisfaction. For further researchers, it is hoped that the results of this study can add insight related to the level of passenger satisfaction with departure
terminal facilities at Sam Ratulangi Manado International Airport and it is hoped that future researchers will examine more sources or other references related to the level of passenger satisfaction with departure terminal facilities so that the results of their research even better, and it is hoped that future researchers will use more efficient methods.

BIBLIOGRAPHY


Undang-Undang No 1 Tahun 2009 Tentang Penerbangan.

